



**Verification and certification report form for  
CDM project activities  
(Version 03.0)**

*Complete this form in accordance with the instructions attached at the end of this form.*

**BASIC INFORMATION**

<b>Title and UNFCCC reference number of the project activity</b>	Wind Power Project in Karnataka India (UNFCCC Ref. No. 7434) <sup>1</sup>
<b>Scale of the project activity</b>	<input type="checkbox"/> Large-scale <input checked="" type="checkbox"/> Small-scale
<b>Version number of the verification and certification report</b>	01
<b>Completion date of the verification and certification report</b>	31/03/2021
<b>Monitoring period number and duration of this monitoring period</b>	Monitoring period No.: 01 01/01/2013 to 31/12/2020(inclusive of both days)
<b>Version number of the monitoring report to which this report applies</b>	03
<b>Crediting period of the project activity corresponding to this monitoring period</b>	01/01/2013 – 31/12/2022(Fixed)
<b>Project participants</b>	M/s Malaxmi Wind Power
<b>Host Party</b>	India
<b>Applied methodologies and standardized baselines</b>	AMS-I.D: grid connected renewable electricity generation - version 17 <b>Standardized Methodology:</b> Not Applicable
<b>Mandatory sectoral scopes</b>	1: Energy industries (renewable-/ non-renewable sources)
<b>Conditional sectoral scopes, if applicable</b>	NA
<b>Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD</b>	28,059 tCO <sub>2</sub> e
<b>Certified amount of GHG emission reductions or GHG removals for this monitoring period</b>	GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012: 0 tCO <sub>2</sub> e GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards: 25,833 tCO <sub>2</sub> e
<b>Name and UNFCCC reference number of the DOE</b>	LGAI Technological Center, S.A. (Applus+ Certification) UNFCCC Ref. No.: E-0032
<b>Name, position and signature of the approver of the verification and certification report</b>	Mr. Agustín Calle de Miguel Applus+ Certification CDM Technical Manager Signature:

<sup>1</sup> [https://cdm.unfccc.int/Projects/DB/KBS\\_Cert1348557004.05/view](https://cdm.unfccc.int/Projects/DB/KBS_Cert1348557004.05/view)

## SECTION A. Executive summary

M/s Malaxmi Wind Power is the promoter of the project activity. The project activity involves installation of 2100 kW Wind Generator (WTG) in the Karnataka state of India.

The purpose of the project activity is to generate clean form of electricity through renewable wind energy sources. The electricity generated from the project activity is supplied to the Gulbarga Electricity Supply Company Limited (GESCOM) which is connected to Southern Grid (Now Indian Grid).

During the reported monitoring period 01/01/2013 to 31/12/2020(first and last date included) the project activity has supplied 28,198.12 MWh of electricity, and thus contributing to the GHG reductions of 25,833 tCO<sub>2e</sub>.

**1. Verification Scope:** The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the DOE. The verification is based on the submitted monitoring report, the validated and registered PDD as well as its validation report, the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the EB and any other information and references relevant to the project activity's resulting emission reductions. These documents are reviewed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance. Based on the requirements in the CDM validation and verification standard for project activities, Version 02.0 for the project activity, Applus+ Certification has applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion. The verification considers both quantitative and qualitative information on emission reductions. The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

## **2. Methodology:**

LGA Technological Center, S.A. (Applus+ Certification) – Hereinafter referred as Applus+ Certification - approach to the verification is a two-stage process.

In the 1<sup>st</sup> stage, Applus+ Certification completed a strategic review and risk assessment of the projects activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

Applus+ Certification used a Periodical Verification Checklist which, based on the risk-based assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

## **3. Desk Review**

In the 2<sup>nd</sup> stage, using the Verification Checklist, Applus+ Certification verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a site visit and a desk review of the Monitoring Report. This Verification Report describes the findings of this assessment.

The Monitoring Report version 01 submitted by the PP was made publicly available on the UNFCCC website before the verification activities started. The published MR was assessed based on all the relevant documents. The aim of the assessment in the desk review was to:

- Verify the completeness of the data and the information presented in the MR;
- Check the compliance of the MR with respect to the monitoring plan depicted in the registered PDD and verify that the applied methodology was carried out. Particular attention to the frequency of

measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures was paid;

- Evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

#### **4. Assessment team**

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. (Applus+ Certification) has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center, S.A. (Applus+ Certification).

The composition of audit team shall be approved by the LGAI Technological Center, S.A. (Applus+ Certification) ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect
Dr. Atul Takarkhede	LA/TE	YES	YES	NA
Mr. Simon Shen	TR	YES	YES	NA

The curriculum vitae of the DOE's Verification team members is provided in Appendix 2 of this report.

#### **5. Review of Documentation:**

The Monitoring Report version 01 submitted by the PP was made publicly available on the UNFCCC website before the verification activities started. The published MR was assessed based on all the relevant documents. A cross-check between information provided and information from other sources has been done. A complete list of documents reviewed is available in Appendix 3 of this report.

#### **6. On-site Assessment and follow-up Interviews:**

As a part of the verification, the on-site inspection has been performed by the assessment team. The objective of the on-site assessment is to:

- Confirm the implementation and operation of the project;
- Review the data flow for generating, aggregating and reporting the monitoring parameters;
- Confirm the correct implementation of procedures for operations and data collection;
- Cross-check the information provided in the MR documentation with other sources;
- Check the monitoring equipment against the requirements of the PDD and the approved methodology, including calibrations, maintenance, etc.
- Review the calculations and assumptions used to obtain the GHG data and ER;
- Identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.

The details are mentioned in section D.2 of this report.

## **7. Quality of Evidences**

Sufficient evidence covering the full verification period in the required frequency is available to verify the figures stated in the final MR. The source of the evidences will be discussed in Appendix 3 of this report. Specific cross-checks have been done in cases that further sources were available. The monitoring report's figures were checked by the assessment team against the raw data. The data collection system meets the requirements of the monitoring plan as per the methodology.

## **8. Reporting of Findings**

As an outcome of the verification process, the assessment team can raise different types of findings.

Where a non-conformance arises the assessment team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- a) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- b) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- c) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

The assessment team shall raise a Clarification Request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

All CARs and CLs raised during verification shall be resolved prior to submitting a request for issuance.

Forward Action Requests (FARs) may be raised during verification for actions where the monitoring and reporting require attention and/or adjustment for the next verification period. All the CARs/CLs/FARs are being discussed in Appendix 4 of this report

## **9. Internal Quality Control**

As a final step of verification, the final documentation including the verification report has to undergo an internal quality control by the Technical Reviewer. Each report has to be finally approved either by the DOE's Technical Manager or the Deputy. In case one of these two persons is part of the assessment team, the approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the request of issuance is submitted to CDM EB along with the requisite documents.

**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/document review	On-site inspection	Interviews	Verification findings
1.	Lead Auditor/ Technical Expert	OR	Takarkhede	Atul	True Quality Certifications Private Limited- Outsourced entity	Yes	Yes	Yes	Yes

**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	EI	Shen	Simon	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustín	Applus+ Certification

## 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	Human errors: Readings from Meters (if not automatic)	LOW	Human error is likely to occur if the monitoring personnel are not trained well or inexperienced in data recording procedures and monitoring processes.	All the personal are well trained to monitor and collect data and thus risk associated with Human error is minimized. Assessment team checked the training records to confirm that all the personal are well trained to handle the activities related to monitoring. Assessment team checked the training records for the complete monitoring period and confirm that the personal are well trained to monitor and collect data for the project activity.
2	Human error: Quantification of emission reduction	LOW	Use of spreadsheets without adequate data control, changes/updates, version tracking, traceability and security	All the JMRs (Monthly meter reading reports) sheets and the invoices for the complete monitoring period are checked and thus the assessment team confirms that the ER value is conservative and correct.

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

In line with Guidelines for Application of materiality in verifications, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. There are no material errors, overestimation of ER, omission or misstatement.

**SECTION D. Means of verification****D.1. Desk/document review**

The verification was performed primarily based on the review of the monitoring report and the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment used including calibration requirements, and the QA/QC procedures, and an evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of emission reduction.

The initial MR Version 01 submitted by the project participant and additional background documents related to the emission reductions are reviewed as an initial step of the verification process. The subsequent step involved the identification of corrective action requests, clarification requests and Forward action request (CAR, CL and FAR) which are presented in Appendix 4 of this report. As a result of these findings, the MR is revised & submitted by PP. A complete list of all documents and records reviewed is as attached in Appendix 03 of this report.

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

Duration of on-site inspection: 02/03/2021				
No.	Activity performed on-site	Site location	Date	Team member
1.	<p>The verification team conducted visit to the project site to confirm the information and to resolve issues identified in the document review. An on-site assessment was conducted as a part of verification activity and involved:</p> <p>1) an assessment of the implementation and operation of the CDM project activity as per the registered PDD</p> <p>2) a review of information flows for generating, aggregating and reporting of the monitoring parameters</p> <p>3) interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the Monitoring Plan</p> <p>4) a cross-check between information provided in the MR and data from other sources</p> <p>5) a check of the monitoring equipment including calibration performance, and observations of monitoring practices against the requirements of the PDD and the applied methodology</p> <p>6) a review of calculations and assumptions made in determining the GHG data and ERs, and</p> <p>7) an identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters</p>	Village Konchigere Bellary, Karnataka, India	02/03/2021	Dr. Atul Takarkhede

**D.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Prasad	Y. Harish Chandra	PP representative	02/03/2021	As mentioned above in section D.2 of this report	Dr. Atul Takarkhede
2.	Sadanandan	Rajith	Site In charge	02/03/2021	As mentioned above in section D.2 of this report	Dr. Atul Takarkhede
6.	Kulkarni	Rahul	Consultant, EKI Energy Service Ltd.	02/03/2021	As mentioned above in section D.2 of this report	Dr. Atul Takarkhede

**D.4. Sampling approach**

No sampling is used as the verification team has visited site along with the substations. The verification team has reviewed all the documents like commissioning certificates, JMR (monthly reports) sheets, invoices etc.



### 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	00	01	00
Compliance of the project implementation and operation with the registered PDD	00	01	00
Post-registration changes	00	00	00
Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines	00	00	00
Compliance of monitoring activities with the registered monitoring plan	00	01	00
Compliance with the calibration frequency requirements for measuring instruments	00	01	00
Assessment of data and calculation of emission reductions or net removals	00	01	00
Assessment of reported sustainable development co-benefits	00	00	00
Global stakeholder consultation	00	00	00
Others (please specify)	00	00	00
<b>Total</b>	<b>00</b>	<b>05</b>	<b>00</b>

## SECTION E. Verification findings

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

<b>Means of verification</b>	The verification team has determined whether the monitoring report was completed using the valid version of the applicable monitoring report form. The verification team has checked whether all the sections of the monitoring report follows the guidelines provided in the template.
<b>Findings</b>	CAR 01 was raised during the verification process and closed successfully. Please refer Appendix 4 for the complete closure of the CAR.
<b>Conclusion</b>	The MR was web hosted in version 01 of the MR form which is the current and active version in the UN platform. PP uses the latest version of the MR template available on the UNFCCC website i.e. version 07.0. The monitoring report has been prepared as per the instructions provided in the template. DOE has made the version 01 of the monitoring report covering the monitoring period 01/01/2013 to 31/12/2020 (both the days included) <sup>2</sup> publicly available through its dedicated interface on the UNFCCC CDM website on 19/01/2021 i.e. before undertaking the site visit for the verification. The verification team has concluded that the monitoring report was completed using the valid version of the applicable monitoring report form and is followed the guidelines contained in the template.

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

This is 1<sup>st</sup> periodic verification of the project activity. No FAR was raised during validation.

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

<b>Means of verification</b>	The verification team determined the conformity of the actual implemented project activity and its operation with the registered project design document. DOE has, by means of a desk review and an on-site visit, assessed whether all physical features of the proposed CDM project activity proposed in the registered PDD are in place, and that the project participants have operated the CDM project activity as per the registered PDD.
<b>Findings</b>	CAR 02 was raised during the verification process and closed successfully. Please refer Appendix 4 for the complete closure of the CAR.
<b>Conclusion</b>	The verification team has reviewed the commissioning certificates to conclude that the capacity of the project is same as mentioned in the registered PDD. The

<sup>2</sup> [https://cdm.unfccc.int/Issuance/MonitoringReports/mr\\_for\\_date.html?date=2021/01/29](https://cdm.unfccc.int/Issuance/MonitoringReports/mr_for_date.html?date=2021/01/29)

capacity does not change after the registration of the project activity as confirmed by the assessment team during verification site visit. The wind turbine installed is in continuous operation. The situation of continuous operation is confirmed during site visit and evident from Breakdown log sheets. No major breakdown was found. Scheduled & preventive maintenance were carried out as per manufacturer specification for the power plant. No unforeseen activity observed during the present verification that can alter the applicability or additionality of the applied methodology. The details are checked by the assessment team from the plant log records and found correct. Assessment team also checked the implementation status of the project activity and confirm that the detail as presented in the MR is correct. The project commissioning date and location is described below along with the latitude and longitude.

Assessment team has checked the latitude and longitude via GPS meter during onsite visit. The same is then crosschecked with Google earth software to confirm the latitude and longitude of the power plant. The details are given below;

Loc no	Location	GPS coordinates	Date of commissioning
SND 101	Village: Konchigere District: Bellary State: Karnataka	N 15° 23' 54.1" E 76° 53' 08.9"	31/03/2011

The assessment team checks the above details during the verification site visit & review of commissioning certificate. The same are found in-line with registered PDD. The detail also forms the part of Monitoring report and thus acceptable to the assessment team.

Assessment team checked the technical specification and details of the power plant during the onsite visit. The details are checked from the manufacturer technical specification as well from the physical visit. The detail as mentioned in the registered PDD is correct and the same is mentioned in the MR version 03. The detail is as follow:

Technical Specifications of S 88 WTG

Sr. no.	Item	Description
1.	Make	Suzlon
2.	Model no.	S88
3.	Rating in KW	2100
4.	Hub Height	80 m
5.	Rotor Type	3 bladed, Upwind/Horizontal axis
6.	Rotor diameter	88m
7.	Rotor Swept area	6082 m <sup>2</sup>
8.	Cut-in wind speed	4.0 m/s
9.	Rated wind speed	14 m/s
10.	Cut-out wind speed	25 m/s
11.	Regulation	Active Pitch-Regulated
12.	Pitch System Type	Electrical

Based on the documentary evidence of commissioning certificate and physical verification DOE concludes that the project was implemented as per the registered PDD.

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

##### E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents<sup>3</sup>

<sup>3</sup> Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

Not applicable for present Monitoring period.

#### E.4.2. Corrections

Not applicable for present Monitoring period.

#### E.4.3. Changes to the start date of the crediting period

There is no change in start date of crediting period. The crediting period date is 01/01/2013 – 31/12/2022 (Fixed)<sup>4</sup>.

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

Not applicable for present Monitoring period.

#### E.4.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

Not applicable for present Monitoring period.

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

Not applicable for present Monitoring period.

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

Not applicable for present project activity.

#### E.5. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

<b>Means of verification</b>	The verification team determined whether the registered monitoring plan is in accordance with the applied methodology AMS-I.D: grid connected renewable electricity generation - version 17 including applicable tools.
<b>Findings</b>	No finding was raised on the registered monitoring plan.
<b>Conclusion</b>	The verification team is able to confirm that the monitoring plan contained in the registered PDD is in accordance with the approved methodology applied by the project activity, i.e. AMS-I.D: grid connected renewable electricity generation - version 17 and its applicable tools. The same is followed onsite and thus assessment team confirms that project activity comply with the requirement of Approved methodology and registered PDD.

#### 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

<b>Means of verification</b>	The assessment team checked the registered PDD to confirm the ex-ante fixed parameter mentioned in the current monitoring report. Assessment team also interviewed personal onsite whether monitoring has been to check further regarding the ex-ante values used for emission reduction calculation.
<b>Findings</b>	No finding was raised on the registered monitoring plan.
<b>Conclusion</b>	$EF_{grid,OM,y}$ , $EF_{grid,BM,y}$ , $EF_{CO2,grid,y} = EF_{grid,CM,y}$ were mentioned as ex-ante fixed parameter. Assessment team checked the values, source of data, choice of data, purpose of the data mentioned in the MR from the registered PDD and confirms that the similar approach was considered for the current monitoring period also.

<sup>4</sup>[https://cdm.unfccc.int/Projects/DB/KBS\\_Cert1348557004.05/view](https://cdm.unfccc.int/Projects/DB/KBS_Cert1348557004.05/view)

	<p>The values of <math>EF_{grid,OM,y}</math>, <math>EF_{grid,BM,y}</math>, <math>EF_{CO2,grid,y} = EF_{grid,CM,y}</math> were considered from the CO<sub>2</sub> baseline database (Version 06.0) published by Central Electricity Authority (CEA), Govt. of India. The default value as mentioned in the registered PDD and MR are same. The value of combined margin in India is being given by CEA and thus assessment team conclude that the value is correct and appropriate. The default value in turn is used for baseline calculation as per the formula given in the registered PDD for the current monitoring period.</p> <p><math>EF_{grid,OM,y} = 0.96708</math> tCO<sub>2</sub>e/MWh (Confirmed and checked as per the registered CDM PDD)</p> <p><math>EF_{grid,BM,y} = 0.76340</math> tCO<sub>2</sub>e/MWh (Confirmed and checked as per the registered CDM PDD)</p> <p><math>EF_{CO2,grid,y} = EF_{grid,CM,y} = 0.91616</math> tCO<sub>2</sub>e/MWh (Confirmed and checked as per the registered CDM PDD)</p>
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### E.6.2. Data and parameters monitored

Means of verification	The assessment team checked the registered PDD to confirm the ex-post parameter mentioned in the current monitoring report. Assessment team also interviewed the personal onsite to check further regarding the ex-post parameter monitoring and confirms that the same is in line with the registered PDD. AMS-I.D: grid connected renewable electricity generation - version 17 which was the applied methodology during the registration of the project is also checked to ensure that monitoring parameter as mentioned in the registered PDD and current MR are in compliance with the methodology.												
Findings	CAR 03 was raised during the verification process and closed successfully. Please refer Appendix 4 for the complete closure of the CARs.												
Conclusion	<p>As per the approved monitoring plan, following parameters are monitored by the PP:</p> <p><b>EG<sub>BL,y</sub>:</b> Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y. This is calculated figure for Emission Reductions calculation.</p> <p>The parameter (EG<sub>BL, y</sub>) is calculated using the difference of electricity exported, imported and transmission losses as follows:</p> <p><b>EG<sub>BL,y</sub> = (EG<sub>export,y,Karnataka</sub> - EG<sub>import,y,,Karnataka</sub> - EG<sub>T-E,y,,Karnataka</sub>)</b></p> <p>The data source of the monitoring parameter is monthly Joint Meter Readings recorded in Form B (JMRs) which is taken on monthly basis by the representative of PP and ESCOM.</p> <p><b>EG<sub>export,y,Karnataka</sub></b> = The Electricity exported by the project activity ( in kWh) <b>EG<sub>import,y,,Karnataka</sub></b> = The Electricity Imported by the project activity ( in Kwh) <b>EG<sub>T-E,y,,Karnataka</sub></b> = The total transmission losses for the project activity</p> <p>The data source of the monitoring parameter is monthly Joint Meter Readings recorded in Form B which is taken on monthly basis by the ESCOM official and PP representative at grid interconnection point which under control of ESCOM. The electricity exported to and Import from grid is measured by bi-directional Trivector meter (main meter and check meter) installed at substation (interconnection). These meters are sealed and are in the custody of ESCOM. At the end of each billing cycle PP receive the export, import and Net electricity export value in the Form B (JMRs) which is the source for emission reduction calculation at this present verification. The net electricity is therefore can be crosschecked from the invoices which is as per the requirement of registered PDD and applied methodology. The details of meter installed at interconnection point is given below:</p> <table><tr><td>Particulars</td><td>Main Meter</td><td>Check Meter</td></tr><tr><td>Meter Sr. No.</td><td>11068507</td><td>11068509</td></tr><tr><td>Make</td><td>L &amp; T</td><td>L &amp; T</td></tr><tr><td>Accuracy Class</td><td>0.2S</td><td>0.2S</td></tr></table> <p>Assessment team checked all the values of the electricity exported and electricity</p>	Particulars	Main Meter	Check Meter	Meter Sr. No.	11068507	11068509	Make	L & T	L & T	Accuracy Class	0.2S	0.2S
Particulars	Main Meter	Check Meter											
Meter Sr. No.	11068507	11068509											
Make	L & T	L & T											
Accuracy Class	0.2S	0.2S											

	imported from the Monthly Joint Metering Reports (JMRs) issued by State electricity board. The electricity meters are under the custody of the ESCOM and calibrated by ESCOM as per their standard procedures. The procedure is acceptable to the assessment team and the same is in line with registered PDD and applied methodology.
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### E.6.3. Implementation of sampling plan

<b>Means of verification</b>	The verification assessed whether the compliance of the sampling efforts and surveys with the registered sampling plan in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities" if PP had applied a sampling approach to determine data and parameters monitored.
<b>Findings</b>	There is no CAR/CL raised in this section.
<b>Conclusion</b>	PP did not apply sampling plan to determine data and parameters monitored during this monitoring period. The verification team has checked all the documents such as JMR (Monthly meter Readings) report, invoice etc. and hence sampling plan was not required. The verification team hereby confirms that are checked all the documents

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

Means of verification	The verification team determined whether the calibration of the measuring equipment that has an impact on the claimed emission reductions is conducted by the PP at a frequency specified in the registered monitoring plan																																								
Findings	CAR 04 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.																																								
Conclusion	<p>Assessment team checked the calibration details of the installed meters and found that meters are calibrated as per the frequency mentioned in the registered PDD for the monitoring period. There was delay in calibration of meter from January 2013 to May 2014, May 2015 to April 2016, April 2017 to August 2017 &amp; July 2019 to August 2020. 01/2013 01/04/2016 to 07/06/2017 and from 29/05/2019 to 16/06/2019. PP has applied maximum permissible error factor of 0.2% to the values of both electricity export and Import as conservative approach. Hence acceptable to DOE.</p> <p>The calibration details of the meters installed at interconnection point of grid (substation) is given below:</p> <table><tr><td>Particulars</td><td>Main Meter</td><td>Check Meter</td></tr><tr><td>Meter Sr. No.</td><td>11068507</td><td>11068509</td></tr><tr><td>Make</td><td>L &amp; T</td><td>L &amp; T</td></tr><tr><td>Accuracy Class</td><td>0.2S</td><td>0.2S</td></tr></table> <table><tr><td>Main Meter Sr. No.</td><td>Check Meter Sr. No.</td><td>Date of Calibration</td><td>Next due date of calibration</td></tr><tr><td>11068507</td><td>11068509</td><td>04/05/2011</td><td>03/05/2012</td></tr><tr><td>11068507</td><td>11068509</td><td>22/05/2014</td><td>21/05/2015</td></tr><tr><td>11068507</td><td>11068509</td><td>27/04/2016</td><td>26/04/2017</td></tr><tr><td>11068507</td><td>11068509</td><td>21/08/2017</td><td>20/08/2018</td></tr><tr><td>11068507</td><td>11068509</td><td>19/07/2018</td><td>18/07/2019</td></tr><tr><td>11068507</td><td>11068509</td><td>23/08/2020</td><td>22/08/2021</td></tr></table> <p>The accuracy of meters is 0.2s and calibration frequency is annually. The same is verified with the calibration report and registered PDD. Assessment team confirms that all the energy meters (both main and check meter) installed at the substation are of accuracy class of 0.2s and are tested by testing division of Electricity Distribution Company (ESCOM) as meters under custody ESCOM which is as per the national regulation and thus traceability of the Calibration is also confirmed by the assessment team. Thus, acceptable to the assessment team</p>	Particulars	Main Meter	Check Meter	Meter Sr. No.	11068507	11068509	Make	L & T	L & T	Accuracy Class	0.2S	0.2S	Main Meter Sr. No.	Check Meter Sr. No.	Date of Calibration	Next due date of calibration	11068507	11068509	04/05/2011	03/05/2012	11068507	11068509	22/05/2014	21/05/2015	11068507	11068509	27/04/2016	26/04/2017	11068507	11068509	21/08/2017	20/08/2018	11068507	11068509	19/07/2018	18/07/2019	11068507	11068509	23/08/2020	22/08/2021
Particulars	Main Meter	Check Meter																																							
Meter Sr. No.	11068507	11068509																																							
Make	L & T	L & T																																							
Accuracy Class	0.2S	0.2S																																							
Main Meter Sr. No.	Check Meter Sr. No.	Date of Calibration	Next due date of calibration																																						
11068507	11068509	04/05/2011	03/05/2012																																						
11068507	11068509	22/05/2014	21/05/2015																																						
11068507	11068509	27/04/2016	26/04/2017																																						
11068507	11068509	21/08/2017	20/08/2018																																						
11068507	11068509	19/07/2018	18/07/2019																																						
11068507	11068509	23/08/2020	22/08/2021																																						

### 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</b>	The verification team assessed whether the data and calculations of GHG emission
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<b>verification</b>	reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of baseline GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
<b>Findings</b>	CAR 05 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.
<b>Conclusion</b>	<p>Baseline emissions include only CO<sub>2</sub>e emissions from electricity generation with fossil fuel-based power plants by renewable-wind energy. The Calculation of baseline emissions for the monitoring period is presented properly in the MR and the same is checked by the assessment team and found correct. Baseline emission is calculated below as per the formula given in registered PDD.</p> <p>As per the approved methodology AMS I.D version 17 baseline emissions for the project activity are the product of electrical energy baseline <math>EG_{BL,y}</math> expressed in MWh of electricity produced by the renewable energy generating unit multiplied by the grid emission factor.</p> <p> <math>BE_y = EG_{BL,y} \times EF_{CO_2,grid,y}</math>  Emission factor of the grid (<math>EF_{CO_2,grid,y}</math>) = 0.91616 tCO<sub>2</sub>e/MWh  Therefore,  <math>BE_y = 128,198.12 \text{ MWh} \times 0.91616 \text{ tCO}_2/\text{MWh}</math>  <math>= 25,833 \text{ tCO}_2\text{e. (Round down)}</math> </p>

#### E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

<b>Means of verification</b>	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of project GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
<b>Findings</b>	No findings raised
<b>Conclusion</b>	The project emissions are regarded as zero according to the applied methodology and registered PDD.

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

<b>Means of verification</b>	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	The leakage emissions are regarded as zero according to the applied methodology and registered PDD.

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

<b>Means of verification</b>	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	<p>Emission reductions in this monitoring period are:</p> <p>Total Baseline Emissions: 25,833 tCO<sub>2</sub>e tCO<sub>2</sub>e</p> <p>Total Project Emission: 0 tCO<sub>2</sub>e</p> <p>Total Leakage: 0</p> <p>Total Emission Reduction: Emission reduction calculation is done based on following formula,</p> <p>Emission reduction (<math>ER_y</math>) = Baseline Emission (<math>BE_y</math>) – Project Emission (<math>PE_y</math>) –</p>

	Leakage Emission (LE <sub>y</sub> ) = 25,833 tCO <sub>2</sub> – 0 - 0 tCO <sub>2</sub> =25,833 tCO <sub>2</sub> e (Round Down)
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#### 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>	The verification team has determined the emission reductions achieved during this monitoring period with the estimated value and reason for increase if any.
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	The actual emission reduction achieved by the activity in the monitoring period is 25,833 tCO <sub>2</sub> e. The estimated emission reductions in the in the registered PDD for 365 days is 3,505 tCO <sub>2</sub> e. The current monitoring period contains 2922 days. Thus, the value is calculated based on pro-rata basis from the estimated value in the registered PDD. The estimated value for the present monitoring period is 28,059 tCO <sub>2</sub> e. The emission reduction value in the monitoring period is 7.9% lower as compared to the estimated values for the monitoring period. The calculation is checked by the assessment team in the actual emission reduction sheet and found correct.

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

<b>Means of verification</b>	The verification team has determined the emission reductions achieved during this monitoring period with the estimated value and reason for increase if any.
<b>Findings</b>	No findings were raised.
<b>Conclusion</b>	The actual Emission Reduction (ER) value achieved in the monitoring period is 7.9% lower than the estimated emission reductions during the current monitoring period. Such variation has been due to lower electricity generation based on low wind availability. Hence accepted by verification team.

#### 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>	The verification team has determined the CER achieved during first commitment period and second commitment period
<b>Findings</b>	There is no CAR/CL raised in this section.
<b>Conclusion</b>	1.GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012: 0 tCO <sub>2</sub> e 2.GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards: 25,833 tCO <sub>2</sub> e

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

<b>Means of verification</b>	Not applicable for the present monitoring period
<b>Findings</b>	Not applicable for the present monitoring period
<b>Conclusion</b>	Not applicable for the present monitoring period

#### E.10. Global stakeholder consultation

<b>Means of verification</b>	Not applicable for the present monitoring period
<b>Findings</b>	Not applicable for the present monitoring period
<b>Conclusion</b>	Not applicable for the present monitoring period

## SECTION F. Internal quality control

As a final step of verification, the final documentation including the verification report has to undergo an internal quality control by the Technical Reviewer. Then each report has to be finally approved either by the DOE's Technical Manager or the Deputy. In case one of these two persons is part of the assessment team, the approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the request of issuance is submitted to CDM EB along with the requisite documents. Internal quality control ensures impartiality and quality of the report.

## SECTION G. Verification opinion

Applus+ Certification has been engaged by M/s Malaxmi Wind Power to perform the 1<sup>st</sup> periodical verification of the "Wind Power Project in Karnataka India" (UN reference number: 7434).

The management of M/s Malaxmi Wind Power is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project's Monitoring Plan in the registered PDD version 07.1 dated 16/11/2012 and the applied methodology AMS-I.D: grid connected renewable electricity generation - version 17.

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- the project is operated as planned and described in the project design document approved by the EB;
- the monitoring plan is as per the applied methodology;
- the monitoring in Monitoring Report is as per the PDD and the monitoring plan approved by the EB;
- the development and maintenance of records and reporting procedures are in accordance with the registered monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably, however, delay in calibration observed which is addressed in line with para 366 (a) of CDM validation and verification standard for project activities, version 02.0;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.

In our opinion, the GHG emission reductions for "Wind Power Project in Karnataka India" for the monitoring period 01/01/2013 to 31/12/2020; as reported in Monitoring Report, prepared on the basis of the project's Monitoring Plan are fairly stated.

Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: From 01/01/2013 to 31/12/2020;

Verified emissions in the above reporting period:

Leakage emissions	0 tCO <sub>2</sub> equivalents
Project emissions	0 tCO <sub>2</sub> equivalents
Baseline emissions	25,833 tCO <sub>2</sub> equivalents
Emission reductions	25,833 tCO <sub>2</sub> equivalents

## SECTION H. Certification statement

Same as above



## Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
ER	Emission Reductions sheet
FAR	Forward Action Request
JMR	Joint Meter reading
GHG	Greenhouse gas(es)
GWP	Global Warming potential
PP	Project Participant
PPA	Power purchase agreement
GESCOM	Gulbarga Electricity Supply Company Limited

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

1. **Dr. Atul Takarkhede**, counts with 10 years of experience in field of Environmental Auditing, consulting and accreditation. He is an Expert in ISO 9001-14001, CO2/GHG Reporting, Carbon Foot Print, Energy, Water and Waste Management Reporting for organizations environmental performance. His professional portfolio is mainly related with carrying out EIA, conducting QA/QC of EIA Reports; Conducting Environmental/water Audits; NABET requirements appliance. Furthermore, he counts with solid experience on CDM-VCS-GS consultancy and auditing. He has Ph.D. (Environmental Science) from Institute of Science, RTM Nagpur University, Nagpur, and he has already published different technical reports related to environmental science. Currently he is associated with True Quality Certifications Private Limited and is empanelled with APPLUS certification to carry out GHG audit.
2. **Mr. Simon Shen** (Master's Degree in Thermal Energy Engineering, Bachelor's Degree in Environmental Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and review with Applus+, apart from the years of experience working as GHG Auditor and ISO 9001/14001 in TUV SUD for 3.5 years before he joined Applus+. Mr. Simon Shen has extensive experience also as former Applus+ Shanghai CDM Technical Manager.

### Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	NA	Commissioning certificates	Commissioning Certificate of the Wind Power Plant.	Project participant
2.	NA	Contract of the project participant with the DOE	Contract document signed between PP and DOE	Project participant
3.	NA	CDM PS and VVS-version 02.0	CDM validation and verification standard for project activities, Version 02.0 CDM project standard for project activities, Version 02.0	UNFCCC
4.	NA	Form B/Joint Meter Reading (JMR)	Joint Meter Reading (JMR) for the complete monitoring period issued by State Utility	Project participant
5.	NA	Invoices	Invoices for the complete monitoring period raised by PP towards State Utility	Project participant
6.	NA	MR version 01  MR version 03	MR version 01 dated 28/01/2021  MR version 03 dated 30/03/2021	Project participant
7.	NA	ER sheet version 01 ER sheet version 02	ER version 01 dated 28/01/2021 ER version 02 dated 30/03/2021	Project participant
8.	NA	Actual geo-coordinates	Actual coordinates for the project activity via GPS meters	Project participant
9.	NA	Break Down details of plant	Log book records onsite	Project participant
10.	NA	Application of materiality	Guidelines for Application of materiality in verifications version 2.0	UNFCCC
11.	NA	Registered documents of the project activity	Registered CDM PDD version 07.1 dated 16/11/2012	UNFCCC website
12.	NA	Approved methodology	AMS I.D: grid connected renewable electricity generation - version 17	UNFCCC
13.	NA	Calibration certificates	Calibration certificates of all meter associated with current monitoring period	PP

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

**Table 1 Remaining FAR from validation and/or previous verifications**

<b>FAR ID</b>	xx	<b>Section no.</b>	E.2	<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
<i>No FAR is remaining from validation or previous verifications.</i>				
<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

**Table 2 CL from this verification**

<b>CL ID</b>	01	<b>Section no.</b>	-	<b>Date:</b> DD/MM/YYYY
<b>Description of CL</b>				
-				
<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

**Table 3 CAR from this verification**

<b>CAR ID</b>	01	<b>Section no.</b>	E.1	<b>Date :</b> 05/03/2021
<b>Description of CAR</b>				
<p>During Desk review following discrepancies has been found in monitoring report:</p> <ul style="list-style-type: none"> <li>Monitoring period not clear about inclusion of first &amp; last dates.</li> <li>In Section B.1 of Monitoring report, information on the implementation and actual operation of the project activity, including relevant dates (e.g. construction, commissioning, start of operation) are missing. Moreover, supporting related to the same is also not submitted to the assessment team. Correction Sought.</li> <li>Project participant has mentioned the technical details of WTGs in Section B.1 of MR. However, supporting evidences like technical equipment's details provide by manufacture, power purchase agreement, O &amp; M Agreement, etc. are not submitted to DOE for verification. Corrective action is sought for the same.</li> </ul>				
<b>Project participant response</b>				<b>Date:</b> 20/03/2021
<p>Monitoring period is from 01/01/2013 to 31/12/2020 (inclusive of first and last date), necessary corrections have been done in all relevant sections of revised MR (Version 02 dated 20/03/2021)</p> <p>Necessary information related to implementation and actual operation of the project activities like commissioning, signing of PPA with GESCOM, is now added to section B.1 of revised MR (Version 02 dated 20/03/2021). Also submitting herewith copy of commissioning certificate and PPA to DoE for verification. The project activity is in operation without any major breakdown during this monitoring period, since PP has signed O&amp; M agreement with Suzlon, Submitting herewith copy of the same.</p> <p>Technical details of WTG is mentioned as per product brochure by equipment supplier (Suzlon), submitting herewith copy of the same to DoE.</p>				
<b>Documentation provided by project participant</b>				
<p>Revised MR (Version 02 dated 20/03/2021)</p> <p>Copy of commissioning certificate</p>				

Copy of Power Purchase Agreement Copy of O & M agreement signed between PP & Suzlon Copy of product brochure (S- 88 , 2.1 MW Technical Overview by Suzlon)	
<b>DOE assessment</b>	<b>Date: 23/03/2011</b>
<ul style="list-style-type: none"> <li>PP has now rectified the monitoring period from 01/01/2013 to 31/12/2020 (inclusive of first and last date)</li> <li>Information on the implementation and actual operation of the project activity, including commissioning date is now included in Section B.1 of revised monitoring report. PP has also submitted the commissioning. Verification team has checked the same and confirms that commissioning date of WTG i.e. 31/03/2011 is correct.</li> <li>PP has now included the technical details of WTGs in Section B.1 of revised monitoring report and also submitted the manufacturer's technical details of the WTG. The same is found consistent with the registered CDM PDD. PP has also submitted the copy of Power purchase agreement (PPA). PPA is signed with Gulbarga Electricity Supply Company Limited on 29/03/2011. However, O &amp; M agreement is still not submitted for verification. CAR open</li> </ul>	
<b>Project participant response</b>	<b>Date: 30/03/2021</b>
Submitting herewith copy of O & M agreement signed between PP & Suzlon (valid till 30/03/2022) to DoE for verification.	
<b>Documentation provided by project participant</b>	
Copy of O & M agreement (valid till 30/03/2022)	
<b>DOE assessment</b>	<b>Date: 31/03/2011</b>
PP has now submitted the O & M Agreement signed with the Suzlon which is valid upto 30/03/2022. Suzlon is providing O & M services to project participant. CAR closed.	

<b>CAR ID</b>	02	<b>Section no.</b>	E.3.	<b>Date:</b>	05/03/2021
<b>Description of CAR</b>					
Project Participant requested to provide operation logbook/breakdown details records to DOE in orders to verify any plant shutdown happen or affects the calculation of GHG emission reduction or net anthropogenic GHG removal. Further, breakdown details of the plant are missing in the MR. Corrective action is sought.					
<b>Project participant response</b>					<b>Date: 20/03/2021</b>
No major breakdown instances happened during this monitoring period (01/01/2013 to 31/12/2020), Submitting herewith scheduled maintenance / minor breakdown/ stoppage details of WTG to DoE. The same is also mentioned in section C of the revised MR (version 02 dated 20/03/2021)					
<b>Documentation provided by project participant</b>					
Revised MR (version 02 dated 20/03/2021) Breakdown details					
<b>DOE assessment</b>					<b>Date: 23/03/2011</b>
PP has included the breakdown details in Section C of revised monitoring report. However, operation logbook/breakdown still not submitted to DOE. CAR Open					
<b>Project participant response</b>					<b>Date: 30/03/2021</b>
Submitting herewith breakdown down details to DoE for verification.					
<b>Documentation provided by project participant</b>					
Copy of Daily Generation Report / breakdown details					
<b>DOE assessment</b>					<b>Date: DD/03/2011</b>
PP has submitted the plant logbook/breakdown to DOE. Verification team confirms that there is no major breakdown during the current monitoring period which might affect the applicability of methodology or might cause material errors in emission reductions. CAR closed.					

<b>CAR ID</b>	03	<b>Section no.</b>	E.6.2	<b>Date :</b> 05/03/2021
<b>Description of CAR</b>				
<p>Following observation are made regarding the monitoring part of the project:</p> <ul style="list-style-type: none"> <li>• <math>EG_{BL,y}</math> value as mentioned in the MR is reserved till supporting is submitted. Moreover, JMR/Invoices are not provided to DOE for the complete monitoring period.</li> <li>• <math>EG_{export,y,Karnataka}</math> value as mentioned in the MR is reserved till supporting is submitted.</li> <li>• <math>EG_{import,y,,Karnataka}</math> value as mentioned in the MR is reserved till supporting is submitted</li> <li>• <math>EGT_{-E,y,,Karnataka}</math> value as mentioned in the MR is reserved till supporting is submitted</li> </ul>				
<b>Project participant response</b>				<b>Date:</b> 20/03/2021
<p><math>EG_{BL,y}</math> = Quantity of net electricity supplied to the grid  <math>EG_{export,y,Karnataka}</math> = The Electricity exported by the Project activity  <math>EG_{import,y,,Karnataka}</math> = The Electricity imported by the Project activity  <math>EGT_{-E,y,,Karnataka}</math> = The total transmission losses for the Project Activity</p> <p>The net electricity supplied by the WTG's installed in Karnataka is calculated as the difference between Export and the import readings and the Transmission Losses as follows:  <b><math>EG_{BL,y} = (EG_{export,y,Karnataka} - EG_{import,y,,Karnataka} - EGT_{-E,y,,Karnataka})</math></b></p> <p>The source of data is Form – B issued by state utility (GESCOM) on monthly basis and the value is crossed checked against the invoices. Submitting herewith Form – B and invoices applicable to this monitoring period (01/01/2013 to 31/12/2020) to DoE for verification.</p>				
<b>Documentation provided by project participant</b>				
<p>Revised MR (version 02 dated 20/03/2021)  Revised ER sheet ( with correction factor in case of delayed calibration)  Form – B and invoices applicable to this monitoring period (01/01/2013 to 31/12/2020)</p>				
<b>DOE assessment</b>				<b>Date:</b> 23/03/2021
<p>PP has still not submitted the JMRs and Invoice for the month May 2019, April 2020 and from June 2020 to Dec 2020. Furthermore, the export and import data is not consistent in ER sheet for the month March 2018 to May 2018. Emission reduction calculation spread sheet is thus revered for corrective action.  CAR open</p>				
<b>Project participant response</b>				<b>Date:</b> 30/03/2021
<p>Submitting herewith all pending B-Form and invoices to DoE for Verification.  Necessary corrections done in ER sheet w.r.t values mentioned in B-form &amp; invoices for all measured parameters.  Submitting herewith revised ER sheet and MR (version 03 dated 30/03/2021)</p>				
<b>Documentation provided by project participant</b>				
<p>Revised MR (version 03 dated 30/03/2021)  Revised ER sheet  Form – B and invoices applicable to this monitoring period (01/01/2013 to 31/12/2020)</p>				
<b>DOE assessment</b>				<b>Date:</b> 31/03/2021
<p>PP has now submitted remaining JMRs and Invoice to DOE. Verification team has checked export Import data with monthly JMRs and also cross checked with the invoices and confirms that net electricity export to grid used to calculate emission reductions are correct. PP has also corrected for the month March 2018 to May 2018. Emission reduction calculation spread sheet is thus revered for corrective action.  CAR closed.</p>				

<b>CAR ID</b>	04	<b>Section no.</b>	E.7	<b>Date :</b> 05/03/2021
<b>Description of CAR</b>				
<p>The details of monitoring equipment including Serial Number of meter, make, date of last calibration, and validity are not provided in the MR. Moreover, Calibration certificates for the complete monitoring period are also missing.</p> <p>Further, as actual ER sheet is not submitted the delayed calibrated period (if any) cannot be confirmed. Corrective action is sought for the same.</p>				
<b>Project participant response</b>				<b>Date :</b> 20/03/2021
<p>The details of monitoring equipment (energy meters) are now mentioned in section D.2 of the revised MR (version 02 dated 20/03/2021).</p>				

The calibration details are also mentioned in section C of revised MR. Meter calibration done by concerned MRT (GESCOM) division, PP has no control on calibration frequency, hence applied delayed calibration factor (wherever applicable) for ER calculation, which is conservative.	
<b>Documentation provided by project participant</b>	
Revised MR (version 02 dated 20/03/2021)	
Revised ER sheet (applied correction factor where delayed in calibration)	
<b>DOE assessment</b>	<b>Date: 23/03/2021</b>
PP has now included the details of monitoring equipment (energy meters) in section D.2 of the revised MR and also mentioned the calibration date and validity of calibration in section C of revised MR. PP has also submitted the calibration certificates of all meters used during the current monitoring period. Verification team has checked the certificates and found delayed in calibration of meters from January 2013 to May 2014, May 2015 to April 2016, from April 2017 to August 2017 and from July 2019 to Aug. 2020. Meter calibration done by MRT (GESCOM) division; PP has no control on calibration of meter. Hence PP has applied maximum permissible error factor 0.2% for the delayed period in export and import of electricity which is conservative and acceptable to DOE.	
CAR closed.	

CAR ID	05	Section no.	E.8.1	Date: 05/03/2021
Description of CAR				
ER sheet is not submitted to the assessment team and hence the ER value is thus reserved.				
Project participant response			Date: 20/03/2021	
Submitting herewith revised ER sheet (applied correction factor where delayed in calibration)				
Documentation provided by project participant				
Revised ER sheet (applied correction factor where delayed in calibration)				
DOE assessment			Date: 23/03/2021	
Export and Import data in ER sheet is not consistent with JMRs form the month March 2018 to May 2018 and thus ER sheet is reversed for corrective action. CAR Open.				
Project participant response			Date: 30/03/2021	
Necessary corrections done for export , import values in the revised ER sheet. Export , import data in ER sheet is now consistent with B-form & invoices submitted to DoE				
Documentation provided by project participant				
Revised MR (version 03 dated 30/03/2021) Revised ER sheet				
DOE assessment			Date: DD/03/2021	
PP has corrected the export and import data in ER sheet. CAR 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>				
<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

**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"><li>• Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN);</li><li>• Make structural and editorial improvements.</li></ul>
02.1	11 January 2018	Editorial revision to correct the numbering of appendices in the instructions.
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		