# VERIFICATION REPORT AND CERTIFICATION STATEMENT

## WMI Power Private Limited

## 5.5 MW Bundled Wind Power Project by WMI Cranes Ltd

**SGS Climate Change Programme**
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| **Date of Issue:** | **Project Number:** |
|---|---|
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| **Project Title:** | |
| 5.5 MW Bundled Wind Power Project by WMI Cranes Ltd | |
| **Organisation:** | **Client:** |
| SGS United Kingdom Limited | WMI Power Private Limited |

**Summary:**

SGS United Kingdom Ltd has performed the Voluntary Emission Reduction verification of the project "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd". The verification includes confirming the implementation of the monitoring plan of the registered PDD with UNFCCC Reference No. 2682 and the application of the monitoring methodology as per AMS I.D version 13 dated 14/12/2007. A site visit was conducted to verify the data submitted in the monitoring report.

The project activity involves the installation of 07 wind mills consisting of 02 WTGs of 1.25 MW capacity each and 05 WTGs of 0.6 MW capacities each to generate electricity. The generated electricity is being supplied to NEWNE (Integrated Northern Eastern Western North Eastern) and Southern Grid. Thus the project activity contributes to reduction in consumption of fossil fuels which would otherwise been consumed in fossil fuel dominated grid connected electricity generation plants.

SGS confirms that the project is implemented in accordance with the validated and registered CDM Project Design Document (version 9 dated 04/06/2010). The monitoring system is in place and the emission reductions are calculated without material misstatements. The Monitoring Report, Emission Reduction calculation sheet, VCS PD and other relevant information further meets all the requirements of the Voluntary Carbon Standard 2007.1 Verification Protocol contained in Sections 2.4 – 2.14 of the VCS 2007.1. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in **15,645** tCO2e during period 21/10/2007 to 14/06/2010.

| **Subject:** | | **Indexing Terms** |
|---|---|---|
| VCS 2007.1 Verification | | |
| **Voluntary Team:** | | |
| Vikas Bankar – Lead Assessor and Local Assessor<br>Vikas Bankar – Sectoral Scope Expert | | ☒ No Distribution (without permission from the Client or responsible organisational unit) |
| **Technical Review:** | | |
| Date: 05-07-2011<br>Name: S. Sathis Kumar | | ☐ Limited Distribution |
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## Abbreviations

| | |
|---|---|
| AMS | Approved Methodology for Small Scale Projects |
| CAR | Corrective Action Request |
| CDM | Clean Development Mechanism |
| CEA | Central Electricity Authority |
| CL | Clarification Request |
| CMS | Central Monitoring system |
| CO2 | Carbon Di-oxide |
| CT | Current Transformer |
| DOE | Designated Operational Entity |
| EB | Executive Board |
| EPC | Engineering Procurement and Construction |
| FAR | Forward Action Request |
| GHG | Greenhouse Gases |
| GPS | Global Positioning System |
| GUVNL | Gujarat Urja Vikas Nigam Limited |
| HTSC | High Tension Service Connection |
| I/O | Input/Output |
| ISO | International Organization for Standardization |
| JMR | Joint Meter Reading |
| kWh | Kilo Watt-hour |
| MP | Monitoring Plan |
| MR | Monitoring Report |
| MSEDCL | Maharashtra Electricity Distribution Company Limited |
| MSETCL | Maharashtra Electricity Transmission Company Limited |
| MW | Mega Watt |
| MWh | Mega Watt-hour |
| NEWNE | Northern Eastern Western North Eastern |
| PDD | Project Design Document |
| PLF | Plant Load Factor |
| PP | Project participant |
| PPA | Power Purchase Agreement |
| PT | Potential Transformer |
| QA/QC | Quality Assurance/Quality Control |
| SCADA | Supervisory Control and Data Acquisition |
| SISL | Suzlon Infrastructure Services Limited |
| TNEB | Tamil Nadu Electricity Board |
| tCO2e | Tonnes of Carbon Di-oxide Equivalent |
| UNFCCC | United Nation Framework Convention on Climate Change |
| VCS | Voluntary Carbon Standards |
| VCU | Voluntary Carbon Units |
| WTG | Wind Turbine Generator |

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# 1. Introduction

## *1.1 Objective*

WMI Power Private Limited has commissioned an independent verification by SGS United Kingdom Limited of its reported greenhouse gas emission reductions from the "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" project as per VCS 2007.1 guidelines. The verifiers have reviewed the GHG data collected to date for the period between 21/10/2007 up to 14/06/2010.

The purpose of this verification exercise is to independently review the objective evidence:

- Whether the project has resulted in emission reductions as declared by the organisation or GHG project's GHG assertion;
- The data reported is accurate, complete, consistent, transparent and free of material error or omission.

## *1.2 Scope and Criteria*

This engagement covers verification of emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" project.

SGS' 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. SGS' examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the project's GHG emission reductions for the defined reporting period.

## *1.3 VCS Project Description*

The proposed VCS project activity is an electricity generation project through Wind Turbine Generators (WTG) and supplying electricity to the NEWNE and Southern regional grid. The project activity involves 07 wind mills consisting of 02 WTGs of 1.25 MW capacity each and 05 WTGs of 0.6 MW capacities each and total capacity of the project activity is 5.5 MW.

| **Serial No.** | **Number of WTG** | **Capacity of each WTG (MW)** | **Location** |
|---|---|---|---|
| 1 | 2 | 1.25 | Sakri Taluka, Dhule District in the state of Maharashtra |
| 2 | 2 | 0.6 | Sankarankoil Taluka, Tirunelveli district in the state of Tamil Nadu |
| 3 | 3 | 0.6 | Surajbari, Kutch district in the state of Gujarat |
| **Total** | **7** | **5.5** | **-** |

The project will result in replacing the same amount of electricity from western regional grid (now integrated Northern Eastern Western North Eastern (NEWNE) Grid and southern regional grid which would otherwise have been generated by fossil fuel dominated grid connected power plants. The project activity was already commissioned and working in satisfactory condition. This has been checked and confirmed by the verification team during the site visits to the project activity.

### *1.4 Level of Assurance*

The parameters and values presented in the monitoring report were assessed through review of detailed project documentation and electricity generation records, interviews with Operations and Maintenance personnel, check of log books, and observations of monitoring and reporting practices and assessment of the reliability of measuring equipment.

Information which was not available during the site visits was reported as Clarification Request (CL) or Corrective Action Request (CAR), following submission of additional information, monitoring and operational records, and the reconsolidation of all reported data was assessed again.

### *1.5 Project Activity and Period Covered*

This engagement covers emissions and emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the following project and period.

| | |
|---|---|
| Title of Project Activity: | 5.5 MW Bundled Wind Power Project by WMI Cranes Ltd |
| UNFCCC Registration Number: | 2682 |
| Monitoring Period Covered in this Report: | 21/10/2007 to 14/06/2010 |
| Project Participants: | WMI Power Private Limited |
| Location of the Project Activity: | Maharashtra Site:<br>Village : Kaltek, Taluk : Sakri, District: Dhule, State: Maharashtra<br>Gujarat Site:<br>Village : Kumbhariya, Taluk : Surajbari, District: Kutch, State: Gujarat<br>Tamil Nadu Site:<br>Village : Vellalankulam, Taluk : Sankarankoil, District: Tiruneveli, State: Tamil Nadu |

# 2. Methodology

## 2.1 General Approach

SGS' approach to the verification is a two-stage process.

In the first stage, SGS 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.

At the end of this stage, SGS produced a Verification Checklist which, based on the risk assessment of the parameters, data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

Using the Verification checklist, SGS 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.

## 2.2 Verification Team for this Assessment

| **Assessment Team** | |
|---|---|
| **Name** | **Role** |
| Vikas Bankar | Lead Assessor |
| Vikas Bankar | Local Assessor |
| Vikas Bankar | Sectoral Scope Expert |

| **Technical Review Team** | |
|---|---|
| **Name** | **Role** |
| Sathis kumar | Technical Reviewer |
| Sathis kumar | Sectoral Scope Expert |

## 2.3 Means of Verification

### 2.3.1 Review of Project Documentation

The validated registered PDD, the monitoring report submitted by the client and additional background documents related to the project performance were reviewed. A complete list of all documents reviewed is attached in section 8 of this report.

### *2.3.2 Onsite Inspections*

As part of the verification, the following on-site inspections have been performed by the assessment team.

| ***Location:*** Dhule district, Maharashtra State | ***Date:*** 13/11/2010 |
|---|---|
| ***Coverage*** | ***Source of Information / Persons Interviewed*** |
| Electricity Generation Records (Credit Reports, JMRs, Invoices) | Mr. Kailash K Donde – Manager (Suzlon Infrastructure Services Limited)<br>Mr. Anant Ladukar – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Reliability & accuracy of readings considered for emisison reduction calculations, Calibration procedure | Mr. Kailash K Donde – Manager (Suzlon Infrastructure Services Limited)<br>Mr. Anant Ladukar – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Monitoring and measuring system<br>• Collection of measurements<br>• Observations of established practices<br>• Data Verification of monitoring parameters | Mr. Kailash K Donde – Manager (Suzlon Infrastructure Services Limited)<br>Mr. Anant Ladukar – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| QA/QC procedures, data management, internal audits to mainatin data quality & reliability, maintenance Practices | Mr. Kailash K Donde – Manager (Suzlon Infrastructure Services Limited)<br>Mr. Anant Ladukar – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Consideration of monitoring period, monitoring methodology and emisison reduction calculations | Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant)<br>Mr. Anant Ladukar – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |

| ***Location:*** Tirunelveli district, Tamil Nadu State | ***Date:*** *22*/11/2010 |
|---|---|
| ***Coverage*** | ***Source of Information / Persons Interviewed*** |
| Electricity Generation Records (Stament of Energy Generation) | Mr. V. Ramesh – Senior Engineer (RRB Energy Limited)<br>Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Reliability & accuracy of readings considered for emisison reduction calculations, Calibration procedure | Mr. V. Ramesh – Senior Engineer (RRB Energy Limited)<br>Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Monitoring and measuring system<br>• Collection of measurements<br>• Observations of established practices<br>• Data Verification of monitoring parameters | Mr. V. Ramesh – Senior Engineer (RRB Energy Limited)<br>Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| QA/QC procedures, data management, internal audits to mainatin data quality & reliability, maintenance Practices | Mr. V. Ramesh – Senior Engineer (RRB Energy Limited)<br>Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Consideration of monitoring period, monitoring methodology and emisison reduction calculations | Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |

| ***Location:*** Kutch District, Gujarat State | ***Date:*** 21/12/2010 |
|---|---|
| ***Coverage*** | ***Source of Information / Persons Interviewed*** |
| Electricity Generation Records (Credit Reports, JMRs, Invoices) | Mr. Malhar Desai – Senior Manager – Service (RRB Energy Limited)<br>Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Reliability & accuracy of readings considered for emisison reduction calculations, Calibration procedure | Mr. Malhar Desai – Senior Manager – Service (RRB Energy Limited)<br>Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Monitoring and measuring system<br>• Collection of measurements<br>• Observations of established practices<br>• Data Verification of monitoring parameters | Mr. Malhar Desai – Senior Manager – Service (RRB Energy Limited)<br>Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| QA/QC procedures, data management, internal audits to mainatin data quality & reliability, maintenance Practices | Mr. Malhar Desai – Senior Manager – Service (RRB Energy Limited)<br>Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |
| Consideration of monitoring period, monitoring methodology and emisison reduction calculations | Mr. Dipak Shirsath – MITCON Consultancy & Engineering services Ltd.(Project Consultant) |

### *2.3.3 Review of Monitoring Results and Verification of the Correct Application of Monitoring Methodology*

***Monitoring Parameters for Maharashtra and Gujarat Sites:***

**"Net generation from all the WTGs of the promoter at a particular site connected to same feeder (EG** $_{(Net\ export\ by\ project\ activity)}$**)"** is a calculated parameter and it is being directly used for emission reduction calculations. This parameter is apportioned value of difference between total power exported to grid by all WTGs connected to a particular feeder relevant to the project activity and total power imported from grid by all WTGs connected to the same feeder belonging to project activity. The project participant has considered this parameter from credit reports[/7/] for emission reduction calculations. These credit reports are checked for consistency in values reported in the monitoring report considered in emission reductions calculations. This has been cross-checked from invoices[/7/] which are raised by the project participant to MSEDCL/GUVNL. Also these values from credit reports are further cross-checked from calculated value of net electricity supplied to grid by apportioning procedure mentioned in the registered PDD[/2/] for Maharashtra Site. Both the data i.e. value of this parameter from credit reports and calculated values are found to be consistent. The same approach has been reported and it is being reflected from emission reduction excel sheet[/11/]. The values of this parameter are **9,433** MWh (for Maharashtra site) and **4,998** MWh for Gujarat site).

However, apportioning procedure wasn't demonstrated by the PP for Gujarat state. Thus **CAR #2** was raised. In response, the PP clarified that the controller end data for all the WTG connected to the wind farm (Gujarat site) is not available with the PP even after follow-up with the EPC contractor for the project activity, hence the PP doesn't demonstrated apportioning procedure demonstrated in section B.7.2 of the registered PDD[/2/]. ER calculations are mainly based on the values of net electricity supplied to the grid mentioned in credits reports[/7/] and this has been cross-checked from the invoices[/7/] raised for the project activity. These controllers' readings (for Gujarat site) could have been used in apportioning calculations which could have been another source of cross-checking net electricity supplied to grid as per credits reports. Non-availability of controller readings doesn't impact on the emission reduction calculations at all. In the absence of the controller readings data for the Gujarat site, apportioning procedure is not done and it is deviation from the registered monitoring plan. This is the deviation from the registered monitoring plan for the Gujarat site and it doesn't impact on the emission reduction calculations for the project activity in any way; thus the proposed deviation by the project participant is accepted. Thus **CAR #2** was closed out.

**"The summation of total Electricity Generated (MWh) at the controller from all the wind turbines of the project proponent at a particular site (**$\sum$**EG** $_{n,\ y}$**)"** is a measured parameter. This parameter is a summation of electricity generated by all windmills of the project activity. This parameter is being measured online by controller meter installed at each WTG and monitored through Central Monitoring System (CMS). Daily report of electricity generation by the project activity is being sent to the project participant by EPC contractor for the project activity and it is being recorded monthly. Electricity generation by all WTGs of the project activity reported in emission reduction excel sheet[/11/] and this has been checked and confirmed from credit reports[/7/] for the project activity. It is found appropriate and thus is accepted. This parameter is being used to apportionate net power export and import by all WTGs connected to a particular feeder relevant to the project activity. The value of this parameter is **9,471** MWh (for Maharashtra site). Controller readings are not available with the PP for Gujarat site even after follow-up with the EPC contractor for the project activity; this has been discussed through **CAR #2** as above.

Controller meters installed at individual WTG are microprocessor based intelligent controller controlling entire operation of turbine and it is calculating energy generation with basic signal of CT and PT connected to through I/O gateway. Thus calibration is not possible for controller meters. **CAR #3** was raised to ask the PP to provide evidence for the above mentioned fact. In response, the PP had submitted letter from SISL (Ref. WMIPPL/CDM/01) dated 04/01/2011[/10/] which confirms that the controller meter does not require any calibration. This has been checked and confirmed from the sectoral expert involved in the project activity. This is found to be appropriate and is accepted. Thus **CAR #3** was closed out.

**"The summation of total Electricity Generated (MWh) from all the wind turbines at the site and connected to a particular feeder as measured at the individual controllers (**$\sum$**EG** $_{m,\ y}$**)"** is a measured

parameter. This parameter is a summation of electricity generated by all windmills connected to a particular feeder relevant to the project activity including WTGs involved in the project activity. This parameter is being measured online by controller meter installed at each WTG and monitored through Central Monitoring System (CMS). Monthly recorded data of this parameter maintained by SISL has been cross-checked from their system (for Maharashtra site). It is found to be appropriate and thus is accepted. This parameter is being used to apportionate net power export and import by all WTGs connected to substation meters relevant to the project activity. The value of this parameter is **230,155** MWh (for Maharashtra site). The controller readings are not available with the PP for Gujarat site even after follow-up with the EPC contractor for the project activity; this has been discussed through CAR #2 as above. Calibration is also not possible for the controller meters and has been discussed above.

**"Total export as measured at the substation feeder of all wind turbines connected to the same feeder (EG $_{JMR, export}$)"** is a measured parameter. This parameter is total power exported to grid by all WTGs connected to a particular feeder relevant to the project activity. This parameter is used to calculate the net generation from all WTGs (**EG**$_{JMR, export}$ – **EG** $_{JMR, import}$) at the common metering point. This net generation from all WTGs is being apportioned to calculate net power exported to grid by the project activity based on fraction of electricity generation by WTGs in the project activity ($\sum$**EG** $_{n, y}$) and electricity generation by all WTGs connected to feeder relevant to the project activity ($\sum$**EG** $_{m, y}$)**.**. The parameter power exported to grid is being measured online by tri-vector meters installed at substation yard where all WTGs are connected. The power exported to grid is being measured jointly in presence of SISL/RRB representatives and MSEDCL/GUVNL officials and accordingly JMRs are prepared and signed by both. JMRs are being taken at main meters installed at substation and check meters are also found to be installed for the case of main meter failure. Export values reported in emission reduction excel sheet[/11/] have been checked and confirmed from JMRs[/8/] submitted for the project activity. It is found to be appropriate and it is accepted. Calibration/test reports[/9/] of check and main meters are checked and they are found satisfactory for the monitoring period of the project activity. The value of this parameter is **222,779** MWh (for Maharashtra site). Export values of this parameter are for the Gujarat site is not available as EPC contractor hadn't provided JMR for the Gujarat site even after the follow-up; this has been discussed through CAR #2.

Since start date of monitoring period i.e. 21/10/2007 and end date of monitoring period 14/06/2010 are the intermediate dates i.e. these are not the dates on which JMR (at substation) are being prepared. Hence, in order to have apportioning, half monthly JMR is not available for the months of October 2007 and June 2010. Thus the PP has considered values of parameters $\sum$**EG** $_{n, y}$, $\sum$**EG** $_{m, y}$, **EG**$_{JMR, export}$ and **EG** $_{JMR, import}$ only for the period of 01/11/2007 to 31/05/2010 for the demonstration of apportioning procedure. This approach is found to be appropriate and it is accepted.

**CAR #3** was raised to ask the project participant to submit calibration certificates of energy meters installed for the project activity. In response, the project participant had submitted calibration certificates[/9/] of main meter and check meter installed at substation in Maharashtra and Bulk meters in Gujarat state. This has been checked and a delay in calibration was observed. Thus the PP was asked to apply maximum permissible error conservatively in the emission reduction calculations inline with EB 52 Annex 60. The PP applied maximum permissible error (0.2%) for the months of Oct 2007, May – July 2009 conservatively for WTGs at Maharashtra sites and maximum permissible error (0.5%) is applied for the months of April 2008 to April 2009, April – May 2010 conservatively for WTGs in Gujarat sites. This is found to be inline with para 4 (a) of EB 52 Annex 60 and it is accepted; thus **CAR #3** was closed out.

**"Total import as measured at the substation feeder of all wind turbines connected to the same feeder (EG $_{JMR, import}$)"** is a measured parameter. This parameter is total power imported from grid by all WTGs connected to a particular feeder relevant to the project activity. This parameter is used to calculate the net generation from all WTGs (**EG** $_{JMR, export}$ – **EG** $_{JMR, import}$) at the common metering point. This net generation from all WTGs is being apportioned to calculate net power imported from grid by the project activity based on fraction of electricity generation by WTGs in the project activity ($\sum$**EG** $_{n, y}$) and electricity generation by all WTGs connected to feeder relevant to the project activity ($\sum$**EG** $_{m, y}$)**.** The parameter power imported from grid is being measured online by tri-vector meters installed at substation yard where all WTGs are connected. The power imported from grid is being measured jointly in presence of SISL/RRB representatives and MSEDCL/GUVNL officials and accordingly JMRs are prepared signed by both. JMRs are being taken at main meters installed at substation and check meters are also found to be installed for

the case of main meter failure. Import values reported in emission reduction excel sheet[/11/] have been checked and confirmed from JMRs[/8/] submitted for the project activity. It is found to be appropriate and it is accepted. Calibration/test reports[/9/] of check and main meters are checked and they are found satisfactory for monitoring period of the project activity. The value of this parameter is **870** MWh (for Maharashtra site). Import values of this parameter are for the Gujarat site is not available as EPC contractor hadn't provided JMR for Gujarat site even after follow-up and same has been discussed through CAR #2.

Initially the PP was considered total export and import as measured at the substation feeder for complete month of October 2007 and June 2010 in demonstration of apportioning procedure. Thus the PP was asked to clarify how this inline with start and end date of monitoring period of the project activity through CAR #2. In response, the PP had neglected export and import values for the month of October 2007 and June 2010 as the separate JMR for the period from 21/10/2007 to 31/10/2007 and period from 01/06/2010 to 14/06/2010 are not available, hence the PP has not considered the electricity generation during that period. This is conservative and thus it is accepted; thus CAR #2 was closed out.

***Monitoring Parameters for Tamil Nadu Sites:***

**"Net generation from the individual WTG (EG** $_{(Net\ export\ by\ project\ activity)}$**)"** is a calculated parameter and it is being directly used for emission reduction calculations. This parameter is being calculated as difference of total export from the WTG at TNEB meter (EG $_{JMR,\ export}$) and total import from the WTG at TNEB meter (EG $_{JMR,\ import}$)**.** The values of net generation from individual reported in ER sheet[/11/] is checked and confirmed from JMRs[/8/] submitted for the project activity by the project participant. This has been cross-checked from invoices[/7/] which are raised by the project participant to TNEB. The value of this parameter is **5,494** MWh.

Initially the PP was considered net generation from individual WTG for complete month of October 2007 and June 2010 for emission reduction calculations for the project activity. Thus the PP was asked to clarify the appropriateness of this inline with the start and end date of the monitoring period for the project activity through **CAR #2**. In response, the PP had considered net generation inline with start and end date of monitoring period for the project activity. This is found to be appropriate and it is accepted; thus **CAR #2** was closed out.

**"Total export from the WTG at TNEB meter (EG** $_{JMR,\ export}$**)"** is a measured parameter. This parameter is being measured through tri-vector interface meter installed at each HTSC connected to one WTG. The power exported to the grid is being measured jointly in presence of the PP's representatives and TNEB officials and accordingly JMRs are prepared signed by both. This parameter is being used to calculate net electricity supplied to the grid by the project activity. Export values reported in ER sheet[/11/] is checked and confirmed from JMRs[/8/] submitted for the project activity by the project participant. Calibration/test reports[/9/] of HTSC meters are checked and they are found satisfactory for the monitoring period of the project activity. The value of this parameter is **5,529** MWh.

**CAR #3** was raised to ask the project participant to submit calibration certificates of energy meters installed for the project activity. In response, the project participant had submitted calibration certificates[/9/] of HTSC meters installed at each WTGs. Same has been checked and delay in calibration was observed for some intermediate period. Thus the PP was asked to apply maximum permissible error conservatively inline with EB 52 Annex 60. PP applied maximum permissible error (0.5%) for months of March – December 2008, December 2009 to June 2010 conservatively for WTGs in Tamilnadu sites. This is found to be inline with para 4 (a) of EB 52 Annex 60 and it is accepted; thus **CAR #3** was closed out.

**"Total import from the WTG at TNEB meter (EG** $_{JMR,\ import}$**)"** is a measured parameter. This parameter is being measured through tri-vector interface meter installed at each HTSC connected to one WTG. The power exported to the grid is being measured jointly in presence of the PP's representatives and TNEB officials and accordingly JMRs are prepared signed by both. This parameter is being used to calculate net electricity supplied to the grid by the project activity. Import values reported in ER sheet[/11/] is checked and confirmed from JMRs[/8/] submitted for the project activity by the project participant. Calibration/test reports[/9/] of HTSC meters are checked and are found satisfactory for the monitoring period of the project activity. The value of this parameter is **55** MWh.

The proposed project activity has been registered with a CDM (UNFCCC Ref No. 2682) and it is concluded that applied methodology AMS I.D version 13 dated 14/12/2007 has been correctly followed by the project participant.

### *2.3.4 Determinations of the Reductions in GHG Emissions*

| **Parameter** | **Reported Value** (Period From 21/10/2007 to 14/06/2010) | **Verified Value** (Period From 21/10/2007 to 14/06/2010) |
|---|---|---|
| ***Monitoring Parameters for Maharashtra and Gujarat Sites:*** | | |
| Net generation from all the WTGs of the promoter at a particular site connected to same feeder ($EG_{(Net\ export\ by\ project\ activity)}$)", MWh | Not Reported | Maharashtra: 9,433<br>Gujarat: 4,998 |
| The summation of total Electricity Generated (MWh) at the controller from all the wind turbines of the project proponent at a particular site ($\sum EG_{n,y}$), MWh | Not Reported | Maharashtra: 9,471<br>Gujarat: Not Available* |
| The summation of total Electricity Generated (MWh) from all the wind turbines at the site and connected to a particular feeder as measured at the individual controllers ($\sum EG_{m,y}$), MWh | Not Reported | Maharashtra: 230,155<br>Gujarat: Not Available* |
| Total export as measured at the substation feeder of all wind turbines connected to the same feeder ($EG_{JMR,export}$), MWh | Not Reported | Maharashtra: 222,779<br>Gujarat: Not Available* |
| Total import as measured at the substation feeder of all wind turbines connected to the same feeder ($EG_{JMR,import}$), MWh | Not Reported | Maharashtra: 870<br>Gujarat: Not Available* |
| Weighted average Grid Emission Factor ($EF_{Grid}$), $tCO_2e/MWh$ | 0.83 | 0.81 |
| ***Monitoring Parameters for Tamil Nadu Sites:*** | | |
| Net generation from the individual WTG ($EG_{(Net\ export\ by\ project\ activity)}$), MWh | Not Reported | 5,494** |
| Total export from the WTG at TNEB meter ($EG_{JMR,export}$), MWh | Not Reported | 5,529 |
| Total import from the WTG at TNEB meter ($EG_{JMR,import}$), MWh | Not Reported | 55 |
| Weighted average Grid Emission Factor ($EF_{Grid}$), $tCO_2e/MWh$ | 0.76 | 0.72 |
| Emission reductions, $tCO_2e$ | 15,883 | 15,645 |

**Controller readings for Gujarat sites are not available as already discussed through CAR #2*

***Net generation from individual WTG will not match with difference of export and import values as daily power generation readings are considered (subtracted/added) in values of net generation from individual WTG.*

### *2.3.5 Review of Additional Data from Other Sources if Appropriate*

The proposed project activity has used **"Weighted average Grid Emission Factor ($EF_{Grid}$)"** as ex-post parameter for the calculation of emission reductions as per the CDM registered PDD[/2/] and it would be monitored every year as per latest information available from CEA. The grid emission factor has been taken from "CO2 Baseline Database for the Indian Power Sector", Version 06 which was publically available in March 2011[/17/] published by Central Electricity Authority (CEA). This has been cross-checked from the web-link http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm. The value of emission factor as 0.81 $tCO_2e$ /MWh for NEWNE Grid and 0.72 $tCO_2e$ /MWh for Southern Grid was used for the calculation of emission reductions and this is found inline with the CDM registered PDD[/2/], hence accepted. It is also observed that this value of emission factors as 0.81 $tCO_2e$ /MWh (for NEWNE) and 0.72 $tCO_2e$ /MWh (for Southern Grid) for year 2007-2008 is found to be most conservative emission factor as compared to the other years of the monitoring period and hence it is accepted.

Initially the project participant wasn't considered conservative grid emission factor in emission reduction calculations for the project activity. Thus **CL #4** was raised to ask the PP to clarify why most conservative grid emission factor was not considered in ER calculations. Also the PP wasn't referring to the latest CEA database available. In response, the PP considered weighted average grid emission factor from CEA database version 06 and is found to be latest available CEA database for consideration of the grid emission factor for ER calculations of the project activity. In response, the PP had considered value of weighted average grid emission factor as 0.81 $tCO_2e$ /MWh for NEWNE Grid and 0.72 $tCO_2e$ /MWh for Southern Grid and same was used for the calculation of emission reductions and this is found inline with registered PDD[/2/], hence accepted. It is also observed that this value of 0.81 $tCO_2e$ /MWh (for NEWNE) and 0.72 $tCO_2e$ /MWh (for Southern Grid) for year 2007-2008 is found to be most conservative emission factor as compared to the other years of the monitoring period. Thus **CL #4** was closed out.

## *2.4 Reporting of Findings*

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

In general, where insufficient or inaccurate information is available and clarification or new information is required the team shall raise a Clarification Request (CL) specifying what additional information is required.

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

I. the verification is not able to obtain sufficient evidence for the reported emission reductions or part of the reported emission reductions. In this case these emission reductions shall not be verified and certified;

II. the verification has identified misstatements in the reported emission reductions. Emission reductions with misstatements shall be discounted based on the verifiers ex-post determination of the achieved emission reductions

The verification process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a CL may result in a CAR. Information or clarifications provided as a result of CL may also lead to a CAR.

A FAR can be raised during verification for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

Corrective Action Requests and Clarification Requests are detailed in Verification Checklist. The Project Developer is given the opportunity to "close" outstanding CARs and respond to CLs and Observations.

### *2.5 Internal Quality Control*

Following the completion of the assessment process and a recommendation by the Assessment Team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

## 3. Verification Findings

### *3.1 Remaining Issues, including any Material Discrepancy, FARs from Previous Validation*

There are no issues pending from the previous validation report

This is the first verification under VCS and there were no issues pending from revision 1 of the validation report dated 13/10/2009, authorised signatory date 20/10/2009[/9/] This version of the validation report was submitted to EB at the time of CDM registration of the project activity and was considered by the UNFCCC as the first complete request for registration submission.

The start date of the monitoring period was mentioned as 14/10/2007 in monitoring report version 01 dated 14/10/2010[/6/]. This start date of monitoring period was not found inline with VCS policy announcement dated 19/05/2008 http://www.v-c-s.org/program-documents/vcs-2007.1[/5/] and clause 5.2.1 of VCS 2007.1, which mentions that the earliest crediting period start date should be no later than 28/03/2006 or two years prior to the completion of the project validation whichever is later", thus **CAR #1** was raised. In response, the project participant provided an email clarification dated 08/10/10[/23/], received from the VCS Association to confirm that "*Validation is deemed to have been completed when the validation report that is submitted to the CDM EB to request registration has been issued. The issue date of the version of the validation report submitted to the CDM EB to request registration shall be within two years of the project start date".*

The PP considered 21/10/2007 as the start date of the crediting period and therefore the monitoring period. It was confirmed that the date of completion of validation is 20/10/2009, based on the final approval and signature date in the validation report dated 13/10/2009 deemed complete by the UNFCCC; thus two years prior to the completion of validation is 21/10/2007. Also this date is later to 28/03/2006, thus date 21/10/2007 as start date for the monitoring period considered for present monitoring period is found appropriate. This was also verified through the revised excel spreadsheet for emission reductions[/11/] and revised monitoring report version 3.1 dated 02/07/2011[/6.5/], thus it is accepted. Thus **CAR #1** was closed out.

Corrective action requested for material discrepancy related to the ER calculation (i.e. CAR #2), monitoring equipment and calibration (i.e. CAR #3) and emission factor of an electricity system (i.e. CL #4) are already discussed above in section 2.3.3 and 2.3.5 of this verification report.

Monitoring report version 01[/6/] didn't include complete monitoring parameters as mentioned in section B.7.1 of the registered CDM PDD[/2/]. Thus **CAR #8** was raised. Also the PP was asked to mention the complete calibration details for the monitoring period considered for the project activity. In response, the PP submitted the revised monitoring report[/6.5/] with incorporation of complete monitoring parameters in section D of the monitoring report[/6.5/] which was found to be consistent with section B.7.1 of the registered PDD. Also the complete calibration details for the project activity are included Annexure 1 of the monitoring report[/6.5/]. This is found to be appropriate and it is accepted. Thus **CAR #8** was closed out.

The revised monitoring report[/6.5/] mentioned the name of the project participant as WMI Power Private Limited which is not consistent with the name mentioned in the registered PDD. The registered PDD mentions the name of the project participant as WMI Cranes Limited in section A.3 of the PDD. Thus **CAR #9** was raised to ask the PP to clarify the inconsistency observed. In response, the PP submitted a Court order for name change dated 22/12/2009 and Certificate of Incorporation dated 17/08/2009[/21/], it is understood that "WMI Cranes Limited" has demerged and "WMI Power Private Limited" is a resulting company. This is found to be appropriate and is accepted. Thus **CAR #9** was closed out.

**Validation of Clauses 1.5, 1.12, 1.13, 1.14, 8.1 and 8.2:**

As per VCS guidelines, the VCS PD for the project is validated for the required validation clauses[/12/] as below:

The VCS PD has mentioned the GPS co-ordinates for the project activity and has been validated from the data provided by EPC contractor and is accepted. This is in line with section 1.5 of the VCS PD and is accepted.

**CL #6** was raised to ask the PP to clarify how clause 1.5 of VCS PD has been fulfilled by the project participant inline with paragraph 7 of VCS program update dated 21st January 2010 and paragraph 4.1.4 (a) of VCS program Normative document version 1.2 dated 21st January 2010. In response, the project participant has included GPS coordinates of the windmills involved in the project activity in section A.3 of the monitoring report. These are checked and confirmed during the site visit conducted for the project activity and same is again further crosschecked against Google earth, and are found to be appropriate. Thus para 7 of VCS program update dated 21st Jan 2010 and para 4.1.4 (a) of VCS program Normative document version 1.2 dated 21st January, 2010 are found to be fulfilled. Thus **CL #6** was closed out.

The project activity involves electricity generation by wind energy as a renewable energy source; the project was not implemented to create GHG emission primarily for the purpose of its subsequent removal or destruction. This was confirmed during the site visits and found inline with clause 1.12 of VCS PD and hence accepted by the verification team.

The project has not created another form of environmental credit as per clause 1.13 of VCS PD template. The project participant provided the letter of undertaking[/13/] stating that the project activity has not created any form of environmental credits and the project participant will not claim GHG credits from this project activity under more than one GHG programme for the same period. This was confirmed by the undertaking from the project participant[/13/]. Thus this is in line with the clause 1.13 of VCS PD.

The project is registered with CDM programme (UNFCCC Ref. No.2682) and is checked from the UNFCCC web site[/4/]; thus clause 1.14 of VCS PD projects rejected under other GHG programme was not applicable to this project activity.

The commissioning certificates[/16/] for all 7 windmills from electricity inspectorate have been checked and purchase orders[/15/] for all windmills involved in the project activity have been checked for the ownership of the project activity. This was as per clause 8.1 of VCS PD Proof of Title and was acceptable to the verification team.

The project activity is registered with the CDM programme (UNFCCC Ref. No.2682) and currently claiming VCS benefits for the monitoring period 21/10/2007 to 14/06/2010 prior to CDM crediting period start date 15/06/2010. The project activity has not taken part in any other emissions trading programmes and the reductions or removals generated by the project has or will not be used in the program or jurisdiction for the purpose of demonstrating compliance for the period for which the PP is claiming VCUs. This was confirmed by the undertaking[/14/] by the project participant. Hence, this was found in line with the VCS 2007.1 requirement as per clause 8.2 of VCS PD template and hence accepted by the verification team.

### *3.2 Project Implementation*

Project activity was implemented and equipment installed as described in the registered PDD version 09 dated 04/06/2010[/2/].

### *3.3 Completeness of Monitoring*

The monitoring of the project activity is found to be in conformity with monitoring methodology described in AMS I.D version 13 dated 14/12/2007[/3/] and the monitoring plan indicated in the CDM Registered PDD[/2/] of the project activity.

The required monitoring systems have been installed and operational. The meters comply with appropriate quality standards applicable for the used technology. The accuracy class of the meters installed for the project activity is found to be as per Power Purchase Agreement for the project activity.

The sustaining records such as credit reports, JMRs and invoices for the project activity were found to be sufficient to enable verification of emission reductions.

### 3.4 Accuracy of Emission Reduction Calculations

The calculation of emission reductions is found to be correct. However, considerable difference was observed between estimated emission reductions as per the CDM registered PDD[/2/] and actual emission reductions for the present monitoring period. The estimated emission reductions are 8,906 $tCO_2$ per year as per the CDM registered PDD[/2/]. The pro-rata estimated emission reductions for the specific period 21/10/2007 to 14/06/2010 were therefore 23,619 $tCO_2$ (considering 968 days of the monitoring period). However, actual emission reductions for the same monitoring period are verified as 15,645 $tCO_2e$.

**CL #5** was raised to ask the PP to discuss the comparison between the estimated emission reductions as per the registered PDD and the actual emission reductions for the present monitoring period with appropriate arguments in the Monitoring Report. In response, the PP clarified that actual emission reductions are lower than estimated emission reduction in the registered PDD[/2/]. During the site visits to the project activity, it was clarified that actual PLF for the windmills in the project activity is lower as compared to PLF considered at the time of estimation during the validation stage of the project activity. The PLF is based on the nature dependent wind velocity and the variation in the PLF is acceptable. It is verified that there is no increase in emissions reduction compared to estimated emissions reduction. Thus **CL #5** was closed out.

The details of the reported and the verified values for all parameters are listed above in section 2.3.4.

### 3.5 Quality of Evidence to Determine Emission Reductions

Critical parameters used for the determination of the Emission Reductions are discussed above in section 2.3.3 above. All the data recorded are in compliance with the monitoring report.

### 3.6 Management and Operational System and Quality Assurance

The proposed project activity has an EPC contract with Suzlon Energy Limited/RRB Energy Limited for operation and maintenance and monitoring purpose. The companies involved in the project have ISO 9001:2008 quality assurance systems procedure, which establishes the operational and management structure implemented. Therefore the assessment team can confirm that the management system of the project is in place; with the responsibilities properly identified and in place.

**CL #7** was raised to ask the project participant to submit ISO certificates of EPC contractors involved in the project activity. In response, the PP has submitted ISO 9001 certificates of SISL and RRB Energy Limited[/19/]. This has been checked and was found to be appropriate. Also the PP submitted Training records along with list of attendees by SUZLON and RRB and Internal Audit reports[/20/]. This is found to be appropriate and it is accepted; thus **CL #7** was closed out.

## 4. Calculation of Emission Reductions

| *Parameter* | **Reported Value (Period From 21/10/2007 to 14/06/2010)** | **Verified Value (Period From 21/10/2007 to 14/06/2010)** |
|---|---|---|
| ***Monitoring Parameters for Maharashtra and Gujarat Sites:*** | | |
| Net generation from all the WTGs of the promoter at a particular site connected to same feeder ($EG_{(Net\ export\ by\ project\ activity)}$)", MWh | Not Reported | Maharashtra: 9,433<br>Gujarat: 4,998 |
| The summation of total Electricity Generated (MWh) at the controller from all the wind turbines of the project proponent at a particular site ($\sum EG_{n,y}$), MWh | Not Reported | Maharashtra: 9,471<br>Gujarat: Not Available* |
| The summation of total Electricity Generated (MWh) from all the wind turbines at the site and connected to a particular feeder as measured at the individual controllers ($\sum EG_{m,y}$), MWh | Not Reported | Maharashtra: 230,155<br>Gujarat: Not Available* |
| Total export as measured at the substation feeder of all wind turbines connected to the same feeder ($EG_{JMR,export}$), MWh | Not Reported | Maharashtra: 222,779<br>Gujarat: Not Available* |
| Total import as measured at the substation feeder of all wind turbines connected to the same feeder ($EG_{JMR,import}$), MWh | Not Reported | Maharashtra: 870<br>Gujarat: Not Available* |
| Weighted average Grid Emission Factor ($EF_{Grid}$), $tCO_2e/MWh$ | 0.83 | 0.81 |
| ***Monitoring Parameters for Tamil Nadu Sites:*** | | |
| Net generation from the individual WTG ($EG_{(Net\ export\ by\ project\ activity)}$), MWh | Not Reported | 5,494** |
| Total export from the WTG at TNEB meter ($EG_{JMR,export}$), MWh | Not Reported | 5,529 |
| Total import from the WTG at TNEB meter ($EG_{JMR,import}$), MWh | Not Reported | 55 |
| Weighted average Grid Emission Factor ($EF_{Grid}$), $tCO_2e/MWh$ | 0.76 | 0.72 |
| Emission reductions, $tCO_2e$ | 15,883 | 15,645 |

**Controller readings for Gujarat sites are not available as already discussed through CAR #2*

***Net generation from individual WTG will not match with difference of export and import values as daily power generation readings are considered (subtracted/added) in values of net generation from individual WTG.*

Kindly note that initially project participant was considering monitoring period from 14/10/2007 to 14/06/2010 and the project participant was asked to check the monitoring period as per clause 5.2.1 in VCS 2007.1 Guidelines[/5/]

through **CAR #1**. In response to findings raised, Project participant changed monitoring period from 21/10/2007 to 14/06/2010 and found inline with clause 5.2.1 in VCS 2007.1 Guidelines[5].

The values are verified for each parameter and emission reductions are calculated by considering the net electricity supplied to grid by the project activity and emission factor of an electricity system. The total emission reductions over the monitoring period are 15,645 t CO2e.

The emission reduction is calculated as follows:

***For Maharashtra and Gujarat site:***

Baseline emission = Net electricity supplied to grid (MWh) x Emission Factor of NEWNE Grid (tCO2/MWh)

= 14,431 x 0.81

= 11,689 t CO2e

***For Tamil Nadu site:***

Baseline emission = Net electricity supplied to grid (MWh) x Emission Factor of NEWNE Grid (t CO2/MWh)

= 5,494 x 0.72

= 3,956 t CO2e

Total Baseline Emissions for the project activity = Baseline Emissions $_{(MAH, GUJ)}$ + Baseline Emissions $_{(Tamil Nadu)}$

= 11,689 + 3,956

= 15,645 t CO2e

Project emission and leakage emissions are zero.

Emission Reduction = Baseline emissions – Project emissions – Leakage Emissions

= 15,645 – 0 – 0

= 15,645 t CO2e

Thus total emission reductions for monitoring period from 21/10/2007 to 14/06/2010 are 15,645 t CO2e.

Vintage wise verified emission reductions are as follows:

| ***Period*** | ***Net generation from all the WTGs of the promoter at a particular site connected to same feeder (MWh)*** | ***Verified Emission Reductions (VCU)*** |
|---|---|---|
| 21/10/2007 to 31/12/2007 | 282 | 224 |
| 01/01/2008 to 31/12/2008 | 7,997 | 6,281 |
| 01/01/2009 to 31/12/2009 | 8,412 | 6,578 |
| 01/01/2010 to 14/06/2010 | 3,235 | 2,562 |
| **Total** | **19,926** | **15,645** |

## 5. Recommendations for Changes in the Monitoring Plan

Registered PDD, Version 09 dated 04/06/2010[/2/] mentions that energy meters of accuracy class of 0.2s will be implemented for the project activity. However, during the site visits to the project activity, it is observed that accuracy class of the meters in Maharashtra and Gujarat is 0.2s and same in Tamil Nadu is 0.5s. This is found to be inline with the requirements of The Gadget of India (Registered NO. DL (N) – 04/0007/2003 – 15) dated 26/07/2010[/22/] (page 10) which clearly mentions that for voltage of 650 V up to 33 kV, energy meters with accuracy class of 0.5s or better is recommended. Hence it is concluded that energy meters with accuracy class of 0.5s is acceptable in the state of Tamil Nadu as energy meters are found to be installed at WTG where generation voltage is 690 V. However, registered PDD[/2/] is inconsistent with the same and RMP is proposed for the same during 1st CDM verification; thus **FAR #10** is raised.

## 6. Overview of Results

Is the project documentation in accordance with the requirements of VCS2007.1

*Yes. The results of the compliance assessment are recorded in the verification checklist which is used as an internal report only.*

Have on-site inspections been performed that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observations of established practices and testing of the accuracy of monitoring equipment?

*Yes. The assessment team has visited the sites and undertook interviews, collected data, audited the implementation of procedures, checked calibration certificates and checked data, inter alia.*

*The results of the site visits are recorded in the verification checklist which is used as an internal report only.*

*The evidence has been checked and collected. The revised monitoring report is attached with this verification report.*

Has data from additional sources been used? If yes, please detail the source and significance.

*Yes, CO2 emission factor for grid i.e. weighted average grid emission factor has been considered as ex-post parameter and it will be monitored every year throughout the crediting period. The value is taken from version 06 of "$CO_2$ Baseline Database for Indian Power sector" which was publically available in March 2011 published by Central Electricity Authority, Ministry of Power, Government of India. It is also observed that this value of 0.81 tCO2e /MWh (for NEWNE grid) and 0.72 81 tCO2e /MWh (for Southern Grid) for year 2007-2008 is conservative emission factor as compared to the other years of the monitoring period and hence is accepted.*

Please review the monitoring results and verify that the monitoring methodologies for the estimation of reductions in anthropogenic emissions by sources have been applied correctly and their documentation is complete and transparent.

*Yes. The monitoring methodology has been correctly applied and the monitoring report and supporting references are complete and transparent.*

Have any recommendations for changes to the monitoring methodology for any future crediting period been issued to the project participant?

*No recommendation has been given to project participant regarding the change in the monitoring methodology for the current verification.*

Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the VCS project activity, based on the data and information using calculation procedures consistent with those contained in the registered project design document and the monitoring plan.

*The data used in anthropogenic emission reduction calculation is consistent with those contained in the registered PDD and monitoring plan. The emission reduction was 23,619 tCO2 for the period 21/10/2007 to 14/06/2010 as per the estimation made in the PDD. The actual emission reduction has been verified as 15,645 tCO2 for the same period. The variation in the estimated and actual emission reduction is discussed in the section 3.4 of the report.*

Identify and inform the project participants of any concerns related to the conformity of the actual project activity and its operation with the registered project description document. Project participants shall address the concerns and supply relevant additional information.

*"No such non conformity of the actual project activity and its operation with the registered project description document has been observed."*

## 7. Verification and Certification Statement

SGS United Kingdom Ltd has been contracted by WMI Power Private Limited to examine the greenhouse gas (GHG) emission reductions reported from the "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" for the period, 21/10/2007 to 14/06/2010 equating to 15,645 tonnes of CO2 equivalents. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported for the period and the verification testing conducted against the GHG Assertion.

The management of the WMI Power Private Limited is responsible for the preparation, calculation and determination of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project Monitoring Report version 3.1 dated 02/07/2011. The development and maintenance of records and reporting procedures are in accordance with the monitoring report.

It is SGS' responsibility to express an independent GHG verification opinion on the GHG emissions from the project for the period 21/10/2007 to 14/06/2010 and on the calculation of GHG emission reductions from the project based on the verified emissions for the same.

The verification approach was based on the requirements as defined in Voluntary Carbon Standard VCS 2007.1. 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. Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the project's GHG emission reductions for the period 21/10/2007 to 14/06/2010. We planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that the amount of GHG emission reductions for the period 21/10/2007 to 14/06/2010, prepared on the basis of the Monitoring Report version 3.1 dated 02/07/2011, are fairly stated. We conducted our verification with regard to the client's GHG PDD and monitoring report which included at "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" project plan, baseline applied and baseline GHG emissions or removals, Monitoring and Verification Plan, GHG Emission reduction, removal enhancements. This assessment included collection of evidence supporting the reported data checking whether the provisions of the Monitoring and Verification Plan in the PDD were consistently and appropriately applied

We have verified whether the information included in the monitoring report representing the project baseline is current and has been extracted from the project site and the emission reduction achieved has been determined by correctly subtracting emissions for the monitoring period 21/10/2007 to 14/06/2010 from the baseline figures for the comparable

**Reporting Period:** From 21/10/2007 to 14/06/2010

Verified emission in the above reporting period:

| | | |
|---|---|---|
| **Project Emissions:** | 0 | tCO2equivalents |
| **Baseline Emissions:** | 15,645 | tCO2equivalents |
| **Emission Reductions:** | 15,645 | tCO2equivalents |

Based on process and procedures conducted, in our opinion, WMI Power Private Limited assertion on GHG emission reductions for the "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" project during the reporting period 21/10/2007 to 14/06/2010 is materially correct and is a fair representation of the GHG data and information and the emission reductions are fairly stated. The GHG emission reductions were calculated correctly on the basis of approved monitoring methodology AMS I.D version 13 dated 14/12/2007.

SGS confirms that the project is implemented as described in the validated and registered project design documents. Based on the information we have seen and evaluated, we confirm the following:

| | |
|---|---|
| Project Title: | 5.5 MW Bundled Wind Power Project by WMI Cranes Ltd |
| UNFCCC Reference Number : | 2682 |
| Registered PDD and Approved Used for Verification: | PDD version 09 dated 04/06/2010 |
| Methodology Used for Verification: | AMS I.D version 13 dated 14/12/2007 |
| Applicable Period: | 21/10/2007 to 14/06/2010 |
| Total GHG Emission Reductions Verified: | 15,645 |

**Signed on behalf of the Verification Body by Authorized Signatory**

Signature:

**Lead Assessor**
**Vikas Bankar**

**Date: 04.07.2011**

Signature:

**Technical Reviewer**
**S. Sathis Kumar**

**Date: 05.07.2011**

## 8. Document References

/1/ Validation Report version 01 dated 20/10/2009 for the project activity (considered complete submission by UNFCCC) and final Validation Report version 2 dated 09/06/2010 (final version for Registered Project)
/2/ Registered PDD, Version 09 dated 04/06/2010
/3/ AMS I.D Methodology Version 13 dated 14/12/2007
/4/ UNFCCC CDM website http://cdm.unfccc.int/Projects/DB/SGS-UKL1244624606.95/view
/5/ VCS 2007.1 Standard http://www.v-c-s.org/program-documents/vcs-2007.1
/6/ Monitoring Report version 01 dated 14/10/2010
/6.1/ Monitoring Report version 1.1 dated 09/04/2011
/6.2/ Monitoring Report version 1.2 dated 19/04/2011
/6.3/ Monitoring Report version 02 dated 25/04/2011
/6.4/ Monitoring Report version 03 dated 06/05/2011
/6.5/ Monitoring Report version 3.1 dated 02/07/2011
/7/ Credit Reports/Certificate of Share of electricity and Invoices for the project activity
/8/ JMRs for the project activity
/9/ Test/Calibration certificates for the meters installed related/responsible to monitoring project activity are summarized as follows:

**Maharashtra Site:** *[Sr. No. 04862765 (main meter) & Sr. No. 04862469 (check meter)]*

- Calibration Certificate (Ref. No. EE/TDD/TECH/-2/97) dated 07/03/2007
- Calibration Certificate (Ref. /No. EE/TDD/TECH/15/480) dated 08/10/2007
- Calibration Certificate (Ref. No. EE/TDD/Tech/221) dated 27/05/2008
- Calibration certificate (Ref. No. EE/TDD/DHL/TECH/320) dated 08/07/2009

Maximum permissible error (0.2%) is applied for the months of Oct 2007, May – July 2009 conservatively.

**Gujarat Site:** *[Bulk Meters: Sr. No. GJB00731 and GJB00730]]*

- Bulk Meter Sr. No. GJB00731: Calibration certificate (Ref. No. IP/84) dated 07/04/2007
- Bulk Meter Sr. No. GJB00730: Calibration certificate (Ref. No. IP/85) dated 07/04/2007
- Bulk Meters Sr. No. GJB00731 & GJB00730: Calibration Certificate dated 14/05/2009

Maximum permissible error (0.2%) is applied for the months of April 2008 to April 2009, April – May 2009 conservatively.

**Tamil Nadu Site:** *[Meters at WTGs: Sr. No. TNU04733* (HTSC 2281) & Sr. No. 04881074 (HTSC 2277)]*

- Calibration certificate (Ref. AEE/MRT/WF/Tin. F. Carbon Credit/D 1661/2010) dated 29/11/2010 which indicates that calibration for meter 04881074 (HTSC 2277) was carried out on 29/03/2007 (fixed on), and thereafter calibration was one on 11/12/2008 and 25/11/2010
- Calibration certificate (Ref. AEE/MRT/WF/Tin. F. Carbon Credit/D 1660/2010) dated 29/11/2010 which mentions that calibration of the old meter (Sr. No. 04865413) was carried out on 29/03/2007 (fixed on) and thereafter on 11/12/2008
- Calibration certificate (Ref. AEE/MRT/WF/Tin. F. Carbon Credit/D 1660/2010) dated 29/11/2010 which also mentions that calibration of new meter (Sr. No. TNU04733) was carried out on 17/09/2010 and thereafter 15/11/2010

Maximum permissible error (0.5%) is applied for the months of March – December 2008, December 2009 to June 2010 conservatively.

**Old meter (Sr. No. 04865413) was gone faulty on 17/09/2010 and new meter (Sr. No. TNU04733) was installed on the same day (Evident from Calibration certificate (Ref. AEE/MRT/WF/Tin. F. Carbon Credit/D 1660/2010) dated 29/11/2010)*

/10/ Letter from Suzlon (Ref. WMIPPL/CDM/01) dated 04/01/2011 for no requirement of Calibration for controller meters

/11/ Excel spreadsheet for emission reduction calculation

/12/ VCS PD for validation of clauses 1.5, 1.12, 1.13, 1.14, 8.1 and 8.2 as per VCS Guidelines http://www.v-c-s.org/program-documents/vcs-2007.1

/13/ Undertakings from project proponent for project not to create environmental credit

/14/ Undertakings from project proponent for project activity not to claim GHG credits under more than one GHG programme

/15/ Purchase Orders for the project activity

/16/ Commissioning Certificates for the project activity

/17/ CEA Database http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

/18/ Letter from TNEB (Ref. AE/MRT/WF/Tin/F.5/D1326/2010/) dated 25/09/2010 which clearly mentions that old meter (Sr. No. 04865413) had gone faulty on 17/09/2010 and it was replaced by new meter (Sr. No. TNU04733).

/19/ ISO Certificates of Suzlon Group dated 27/08/2009 and ISO Certificate of RRB Energy Limited dated 20/01/2009

/20/ Training records along with list of attendees by SUZLON and RRB
Internal Audit reports dated 10/04/2007, 08/05/2008, 17/06/2009 and 11/05/2010

/21/ Court order for name change dated 22/12/2009 and Certificate of Incorporation dated 17/08/2009 which mentions that “WMI Cranes Limited” has demerged and “WMI Power Private Limited” is a resulting company

/22/ The Gadget of India (Registered NO. DL (N) – 04/0007/2003 – 15) dated 26/07/2010

/23/ Email clarification from the VCS Association dated 08/10/10

## 9. Findings Overview

Findings from validation of **5.5 MW Bundled Wind Power Project by WMI Cranes Ltd**

***Findings Overview Summary***

| | CARs | CLs | FARs |
|---|---|---|---|
| **Total Number raised** | 05 | 04 | 01 |

| Date: | 22/12/2010 | | Raised by: | Vikas Bankar | |
|---|---|---|---|---|---|
| Type: | CAR | Number: | 01 | Reference: | Start date of Monitoring Period |

**Lead Assessor Comment:**

As per VCS policy announcement dated 19th March 2008 (http://www.v-c-s.org/190308guide.html ), "The VCUs can be registered back to the project start date provisions in VCS 2007 Clause 5.2.1. This is, 28th March 2006 or two years prior to the completion of the project validation whatever is later". Project participant is requested to clarify the appropriateness of 14/10/2007 as start date of monitoring period considered for the project activity.

**Project Participant Response:** **Date:** *11/04/2011*

*The start date of the monitoring period for the project activity has been change as 21/10/2007, as per VCS policy announcement dated 19th March 2008.*

**Documentation Provided by Project Participant:**

*Revised MR version 1.1 dated 09/04/2011*

**Information Verified by Lead Assessor:**

Revised MR version 1.1 dated 09/04/2011 and revised emission reduction sheet is checked for appropriateness of start date of the monitoring period considered for the project activity.

**Reasoning for not Acceptance or Acceptance and Close Out:** **Date:** 13/04/2011

Project participant has considered start date of monitoring period as 21/10/2007 which is the two years prior date from the completion of the project validation. This is checked and confirmed from UNFCCC website (http://cdm.unfccc.int/filestorage/U/C/Y/UCYZ6OBVGLEFJWRMD4XH9AKPQ0S1T2/CDM%20Small%20Scale%20Validation%20Report%20CDM.VAL2065%20Clean.?t=bEp8MTMwMjY4MjY5Ny41MQ==|w8o89VxPsE6EyfNSSDDGAOMDWnE=) and it is found to be appropriate. Thus it is concluded that the start date of monitoring period is inline with VCS policy announcement dated 19th March 2008 (http://www.v-c-s.org/190308guide.html). This is found to be appropriate and it is accepted.
Thus CAR #1 is closed out.

**Acceptance and Close out by Lead Assessor:** **Date:** 13/04/2011

| Date: | 22/12/2010 | | Raised by: | Vikas Bankar | |
|---|---|---|---|---|---|
| Type: | CAR | Number: | 02 | Reference: | Emission Reduction calculation sheet |

**Lead Assessor Comment:**

**Maharashtra Site**

1. PP is requested to submit Credit Reports for the month of October 2007, November 2007 and December 2007.
2. If start date of the project activity is 14/10/2007, how PP has considered net power export for complete month of October 2007 in emission reduction calculation. Similarly PP has considered net power export for the month of June 2010 in emission reduction calculations for the project activity. Please clarify.
3. Power Export by WTG K233 is not consistent with the credit report submitted for the month of March 2008. Also Power Export by WTG K231 is not consistent with the credit report submitted for the month of February 2010.
4. PP needs to demonstrate apportioning procedure in emission reduction sheet as demonstrated in

section B.7.2 of the registered PDD.

**Gujarat Site**

5. PP is requested to submit Certificate of shares for the months of October 2007 to June 2008 and April 2009.
6. PP has considered net power export for complete month of October 2007 and June 2010. Please clarify the same inline with start and end date of monitoring period considered for the project activity.
7. PP had stated in the registered PDD that the apportioning procedure for Maharashtra and Gujarat states are same which is found inconsistent with actual practice being followed on site. Apportioning procedure mentioned in section B.7.2 of the registered PDD is OK for WTGs in Maharashtra. But in case of WTGs at Gujarat site, meters are also found to be installed in transformer yard near WTG. The readings of these meters are being considered in apportioning procedure being carried out for WTGs in Gujarat site instead controllers as in the case of Maharashtra. Please clarify.
8. PP needs to demonstrate apportioning procedure in emission reduction sheet inline with actual procedure followed on site while preparing share of certificates for the project activity.

**Tamilnadu Site**

9. PP has considered net power export for complete month of October 2007 and June 2010. Please clarify the same inline with start and end date of monitoring period considered for the project activity.
10. Net generation by WTG connected to HTSC 2281 is not consistent with the statement of energy generated submitted for the month of June 2010.

| **Project Participant Response:** | **Date:** *11/04/2011* |
|---|---|

*Maharashtra State:*

1. *Credit Reports for the month of October 2007, November 2007 and December 2007 has been now submitted for verification.*
2. *The net generation for the month October 2007 and the June2010 has corrected as per monitoring start and end date i.e. 21/10/2007 to 14/06/2010. The separate spread sheet for the emission reduction calculation as per start and end date with details has incorporated in the main Emission Reduction calculation excel file*
3. *Power Export by WTG K233 and WTG K231 has made consistent with the credit report submitted for the month of March 2008 and February 2010 respectively.*
4. *The demonstration for apportioning procedure for emission reduction has incorporated in separate spread sheet as demonstrated in section B.7.2 of the registered PDD.*

*Gujarat Site*

5. *Certificate of shares for the months of October 2007 to June 2008 and April 2009 has submitted for the verification*
6. *As the Electricity generation period was not stated on the Certificate of shares for the entire crediting period. So it is not possible to get the exact generation with respect to start and end date of monitoring period considered for the project activity.*
7. *The apportioning procedure for Maharashtra has followed as per registered PDD and for Gujarat states the description for apportioning procedure has been incorporated in the Monitoring report as actual practice being followed on site.*
8. *As The controller end data for all the WTG connected to the wind farm is not available with PP, hence it is not possible to demonstrate the apportioning procedure followed on site while preparing share of certificates for the project activity*

*Tamilnadu Site*

9. *The net generation for the month October 2007 and the June2010 has corrected as per monitoring start and end date i.e. 21/10/2007 to 14/06/2010. The separate spread sheet for the emission reduction calculation as per start and end date with details has incorporated in the main Emission*

*Reduction calculation excel file*

10. *Net generation by WTG connected to HTSC 2281 has made consistent with the statement of energy generated submitted for the month of June 2010*

**Documentation Provided by Project Participant:**

*# Credit reports for the month of October 2007, November 2007 and December 2007 of the Maharashtra Site*
*# Updated Emission Reduction calculation sheet as per start and end date of monitoring period with apportioning procedure demonstration*

**Information Verified by Lead Assessor:**

Credit reports for the month of Oct 2007, November 2007 and December 2007 are checked for appropriateness of the net electricity generation considered in emission reduction sheet for the project activity.
Revised emission reduction sheet is checked for appropriateness of emission reduction calculations for the project activity.

| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** *DD/MM/YYYY* |
|---|---|

**Maharashtra Site:**
PP has submitted Credit Reports for the month of October 2007, November 2007 and December 2007. These are found to be Okay.
Project participant has calculated and included net power generation by WTGs by deducting daily readings being measured at controller from the net power generations in the month of Oct 2007 and June 2010 inline with start and end date of monitoring period in emission reduction sheet for the project activity. This is found to be the conservative approach and it is accepted.
Power Export and import by WTG K233 and WTG K231 has found to be made consistent with the credit report submitted for the month of March 2008 and February 2010 respectively. This is found to be appropriate and it is accepted.

**Gujarat Site**
Project participant had submitted Certificate of shares for all the months involved in the monitoring period considered for the project activity. Same are checked and they are found to be appropriate.
PP has considered net power export for complete month of October 2007 and June 2010. Please clarify the appropriateness and conservativeness of the same inline with start and end date of monitoring period considered for the project activity.
Project participant had submitted certificates of share for all the months involved in the current monitoring period and same are checked against the values of net electricity supplied to the grid indicated in emission reduction sheet for the project activity. These values of net electricity supplied to the grid are being used in emission reductions for the project activity. Also these readings are crosschecked with the invoices raised by the project participant to Gujarat Urja Vikas Nigam Limited. This is found to be appropriate and it is accepted.
However, the controller end data for all the WTG connected to the wind farm (Gujarat site) is not available with PP even after follow-up with the EPC contractor for the project activity, hence PP doesn't demonstrated apportioning procedure demonstrated in section B.7.2 of the registered PDD. This is the deviation from the registered monitoring methodology for the Gujarat site and it doesn't impact the emission reduction calculations for the project activity in any way; thus the proposed deviation is accepted.

**Tamilnadu Site**
PP has not considered net power export for complete month of October 2007 as Statement showing energy generated through WTGs for the month of Oct 2007 indicates electricity generation from 14/09/2007 to 19/10/2007 for HTSC 2277 and 11/09/2007 to 10/10/2007 for HTSC 2281.
Also Statement showing energy generated through WTGs for the month of November 2007 indicates electricity generation from 19/10/2007 to 12/11/2007 for HTSC 2277 and from 10/10/2007 to 12/11/2007 for HTSC 2281. Thus electricity generated (measured at controller) by WTG connected to HTSC 2277 on 19$^{th}$ Oct and 20$^{th}$ Oct 2007 and the same by WTG connected to HTSC 2281 in duration from 10$^{th}$ Oct – 20$^{th}$ Oct 2007 are deducted from net power generation by respective WTGs (for the month of Nov 2007) in order to have consistency inline with start date of monitoring period of the project activity. This is found to be conservative and it is accepted.
Similarly Statement showing energy generated through WTGs for the month of June 2010 indicates electricity generation from 13/05/2010 to 13/06/2010 for HTSC 2277 and from 14/05/2010 to 13/06/2010 for HTSC 2281. Thus electricity generated (measured at TNEB meter) by WTGs connected to HTSC 2277 and HTSC

| |
|---|
| 2281 on 14th June 2010 are added to the net power generation by respective WTGs (for the month of June 2010) in order to have consistency inline with end date of monitoring period of the project activity. This is found to be conservative and it is accepted.<br>Power export and import by WTG connected to HTSC 2281 is not consistent with the statement of energy generated submitted for the month of June 2010.<br>Thus CAR #2 is open. |
| **Project Participant Response:** **Date:** 19/04/2011 |
| ***Gujarat Site:***<br>*For the month of October 2007 and June2010, As the daily generation details are not available with the PP and it was not possible to get the exact generation as per start and end date of monitoring report hence the generation for that particular months considered as 'Zero' as conservative approach.*<br>***Tamilnadu site:***<br>*Power export and import by WTG connected to HTSC 2281 has been now made consistent with the statement of energy generated submitted for the month of June 2010* |
| **Documentation Provided by Project Participant:** |
| *Revised MR and revised ER sheet* |
| **Information Verified by Lead Assessor:** |
| Revised ER sheet is checked for appropriateness of electricity generation considered for the month of Oct 2007 and June 2010 for Gujarat Site. |
| **Reasoning for not Acceptance or Acceptance and Close Out:** **Date:** 25/04/2011 |
| Project participant had considered electricity generation for the months of Oct 2007 and June 2010 as "Zero" due to absence of daily electricity generation data for the project activity at Gujarat site. This is found to be the most conservative appropriate and it is accepted.<br>Project participant has corrected the values of power export and import by WTG connected to HTSC 2281 and same are found to be appropriate; thus it is accepted. Also Statement showing energy generation for the month of June 2010 is up to 13th June; thus electricity generation data measured at TNEB meter for the day 14th June 2010 is added. This is found to be conservative and it is accepted.<br>Thus CAR #2 is closed out. |
| **Acceptance and Close out by Lead Assessor:** **Date:** 25/04/2011 |

| Date: | 22/12/2010 | | Raised by: | Vikas Bankar | |
|---|---|---|---|---|---|
| Type: | CAR | Number: | 03 | Reference: | Monitoring Equipments and Calibration |

**Lead Assessor Comment:**

**Maharashtra Site:** *[Sr. No. 04862765 (mail meter) & Sr. No. 04862469 (check meter)]*

1. PP has provided calibration certificates (Ref. No. EE/TDD/TECH/-2/97) dated 07/03/2007, (Ref. /No. EE/TDD/TECH/15/480) dated 08/10/2007 and (Ref. No. EE/TDD/Tech/221) dated 27/05/2008 which is valid up to 26/05/2009. Calibration results are found to be satisfactory. Monitoring report version 01 for the project activity also mentions that latest calibration was carried out on 08/07/2009. Please submit the same.
2. Delay in calibration has occurred in calibrations carried out on 27/05/2008 and 08/07/2009. Please clarify why paragraph 4 of Guidelines for assessing for compliance with the calibration frequency requirements i.e. Annex 60 of EB 52 is not followed while calculating emission reductions for the project activity.
3. During site visit to the project activity, it is understood that calibration is not possible for controllers of WTGs. Please provide the evidence for the same.

**Gujarat Site:** *[Meters at WTGs: Sr. No. 06758371 (WMI-1), Sr. No. 06770099 (WMI-2) & Sr. No. GJB01199 (WMI-3), Bulk Meters: Sr. No. GJB00731 and GJB00730]*

4. PP has provided below calibration certificates for project activity at Gujarat site;
   - Sr. No. 06758371: Calibration certificate (Ref. No. IP/291) dated 04/01/2010

- Sr. No. 06770099: Calibration certificate (Ref. No. IP/290) dated 01/01/2010
- Sr. No. GJB01199: Calibration certificate (Ref. No. IP/83) dated 14/04/2010
- Bulk Meter Sr. No. GJB00731: Calibration certificate (Ref. No. IP/84) dated 07/04/2007
- Bulk Meter Sr. No. GJB00730: Calibration certificate (Ref. No. IP/85) dated 07/04/2007

Please submit all calibration certificates for WTGs located at WTGs and bulk meters so that complete monitoring period will be covered. Also please include all calibration details in the monitoring report for the project activity.

**Tamilnadu Site:** *[Meters at WTGs: Sr. No. TNU04733 (HTSC 2281) & Sr. No. 04881074 (HTSC 2277)*

5. Please submit all calibration certificates for above mentioned meters so that complete monitoring period considered for the project activity will be covered. Please include the complete calibration details in monitoring report also.
6. During site visit, it is observed that meter has changed for WTG connected to HTSC 2281 on 17/09/2010. Old meter serial number was 04881074 and it is replaced by TNU04733. Please clarify how this change in meter is documented by the project participant. Please submit evidence for the same.

PP needs to ensure application of Guidelines for assessing for compliance with the calibration frequency requirements i.e. Annex 60 of EB 52 wherever delay in calibration has occurred.

| **Project Participant Response:** | **Date:** *11/04/2011* |
|---|---|

***Maharashtra Site:*** *[Sr. No. 04862765 (mail meter) & Sr. No. 04862469 (check meter)]*

1. *The calibration certificates (Ref. No. EE/TDD/TECH/-2/97) dated 07/03/2007, (Ref. /No. EE/TDD/TECH/15/480) dated 08/10/2007 and (Ref. No. EE/TDD/Tech/221) dated 27/05/2008 which is valid up to 26/05/2009.and latest calibration certificate dated 08/07/2009 has submitted for verification.*
2. *Delay in calibration has occurred in calibrations carried out on 27/05/2008 and 08/07/2009. And as per paragraph 4 of Guidelines for assessing for compliance with the calibration frequency requirements i.e. Annex 60 of EB 52 is not followed while calculating emission reductions for the project activity has applied to the emission reduction for the same period. The detailed calculation of emission reduction as per Annex 6- of E 52 has incorporated in separate spread sheet in ER calculation excel file.*
3. *During site visit to the project activity, it is understood that calibration is not possible for controllers of WTGs, and the evidence i.e. letter from the technology supplier, for the same has provided for verification*

***Gujarat Site:*** *[Meters at WTGs: Sr. No. 06758371 (WMI-1), Sr. No. 06770099 (WMI-2) & Sr. No. GJB01199 (WMI-3), Bulk Meters: Sr. No. GJB00731 and GJB00730]*

4. *Calibration certificate for following meters has already submitted for verification*

- *Sr. No. 06758371: Calibration certificate (Ref. No. IP/291) dated 04/01/2010*
- *Sr. No. 06770099: Calibration certificate (Ref. No. IP/290) dated 01/01/2010*
- *Sr. No. GJB01199: Calibration certificate (Ref. No. IP/83) dated 14/04/2010*
- *Bulk Meter Sr. No. GJB00731: Calibration certificate (Ref. No. IP/84) dated 07/04/2007*
- *Bulk Meter Sr. No. GJB00730: Calibration certificate (Ref. No. IP/85) dated 07/04/2007*

***Tamilnadu Site:*** *[Meters at WTGs: Sr. No. TNU04733 (HTSC 2281) & Sr. No. 04881074 (HTSC 2277)*

5. *All calibration certificates for Meters at WTGs Sr. No. TNU04733 (HTSC 2281) & Sr. No. 04881074 (HTSC 2277) has provided for verification.*
6. *During site visit, it is observed that meter has changed for WTG connected to HTSC 2281 on 17/09/2010. Old meter serial number was 04881074 and it is replaced by TNU04733. The Meter*

*replacement certificate given by the TNEB has provided as documentary evidence for verification.*

7. *The Guidelines for assessing for compliance with the calibration frequency requirements i.e. Annex 60 of EB 52 wherever delay in calibration has occurred is applied for the emission reduction calculation.*

**Documentation Provided by Project Participant:**

*# Calibration certificates of Main and check meters for Maharashtra*
*# Letter for Controller calibration from Suzlon and RRB*
*# Calibration certificates for Meters at WTGs: Sr. No. 06758371 (WMI-1), Sr. No. 06770099 (WMI-2) & Sr. No. GJB01199 (WMI-3), Bulk Meters: Sr. No. GJB00731 and GJB00730 for the Gujarat site*
*# Meter change certificate from TNEB for WTG HTSC 2281*

**Information Verified by Lead Assessor:**

Calibration certificate (Ref. No. EE/TDD/DHL/TECH/320) dated 08/07/2009 and revised emission reduction sheet are checked for appropriateness of maximum permissible error applied.
Letter from technology supplier Suzlon Infrastructure Services Limited (Ref. WMIPPL/CDM/01) dated 04/01/2011 is checked for appropriateness of need for calibration for the controller.
Energy meter periodical calibration certificates (Ref. AEE/MRT/WF/Tin. F. Carbon Credit/D 1661/2010) dated 29/11/2010 and (Ref. AEE/MRT/WF/Tin. F. Carbon Credit/D 1660/2010) dated 29/11/2010 are checked for appropriateness of calibrations carried out for meters installed at HTSC 2277 and 2281.
Letter from TNEB (Ref. AE/MRT/WF/Tin/F.5/D1326/2010/) dated 25/09/2010 is checked for the duration when meter change was happened for WTG connected to HTSC 2281.

| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** 15/04/2011 |
|---|---|

**Maharashtra Site:** *[Sr. No. 04862765 (mail meter) & Sr. No. 04862469 (check meter)]*
PP has provided calibration certificate (Ref. No. EE/TDD/DHL/TECH/320) dated 08/07/2009. This is checked for appropriateness of the calibration results and it is found to be satisfactory.
Also Project participant had applied maximum permissible error for the months of May 2009, June 2009 and July 2009 conservatively. This is found to be appropriate and it is accepted.
Project participant had provided a letter from technology supplier Suzlon Infrastructure Services Limited (Ref. WMIPPL/CDM/01) dated 04/01/2011. Letter clearly supports the fact that controller doesn't need any calibration with the help below mentioned text in it.

**SCS Controller** is a micro-processor based intelligent controller which has been specially designed for control of wind turbines. It uses a Woodward Multi function Relay that has three current inputs from CT and three direct voltage inputs (690 Volts). The analog values of current / voltage is converted into digital signal internally using A/D Converters at very high sampling rate. A software program reads these values and displays instantaneous parameters such as voltage, current, power factor, kVAh, kVArh and kWh. These instantaneous values are then time integrated and displayed / stored. **Woodward relay is having no display and needs special protocol to view energy readings as this relay is communicating digital signal through special communication protocol hence, it is not possible to calibrate. Moreover, turbine cannot run without this relay hence it cannot be removed for calibration during operation.**

**Gujarat Site:** *[Meters at WTGs: Sr. No. 06758371 (WMI-1), Sr. No. 06770099 (WMI-2) & Sr. No. GJB01199 (WMI-3), Bulk Meters: Sr. No. GJB00731 and GJB00730]*
Project participant failed to provide calibration certificates for the WTGs in Gujarat Site. Thus project participant had applied maximum permissible error to arrive at conservative figures. This is found to be conservative and it is accepted.
However, please clarify why maximum permissible error is not applied for the month May 2010 inline with EB 52 Annex 60 as calibration certificate for the bulk meter is not available for that period.
Due to unavailability of daily readings from the EPC contractor for the project activity, it was not possible for the project participant to calculate net electricity generation by WTGs in the months of Oct 2007 and June 2010. Thus project participant has considered net electricity generation in those months as 'zero' which is the

most conservative approach and it is accepted.
**Tamilnadu Site:** *[Meters at WTGs: Sr. No. TNU04733 (HTSC 2281) & Sr. No. 04881074 (HTSC 2277)*
Project participant had submitted Energy meter periodical calibration certificate (Ref. AEE/MRT/WF/Tin. F. Carbon Credit/D 1661/2010) dated 29/11/2010 which clearly indicates that calibration for meter 04881074 (HTSC 2277) was done on 29/03/2007 (fixed on), 11/12/2008 and 25/11/2010 and results from the same are found to be satisfactory.
Also project participant had submitted a letter from TNEB (Ref. AE/MRT/WF/Tin/F.5/D1326/2010/) dated 25/09/2010 which clearly mentions that old meter (Sr. No. 04865413) had gone faulty on 17/09/2010 and it was replaced by new meter (Sr. No. TNU04733). Meter change happened after the monitoring period considered for the project activity; thus it doesn't affect the project activity in any way.
Project participant had submitted Energy meter periodical calibration certificate (Ref. AEE/MRT/WF/Tin. F. Carbon Credit/D 1660/2010) dated 29/11/2010 which mentions that calibration of the old meter (Sr. No. 04865413) was carried out on 29/03/2007 (fixed on) and 11/12/2008 and results from the same are found to be satisfactory.
Project participant had applied maximum permissible error for the period of December 2009 to June 2010 for both the WTGs at Tamilnadu site due to delayed calibration. This is found to be appropriate and it is conservative. However, please clarify why maximum permissible error is not applied for the months of March 2008 to December 2008 inline with EB 52 Annex 60.
Thus CAR #3 is Open.

| **Project Participant Response:** | **Date:** 19/04/2011 |
|---|---|

***Gujarat Site:***
*Maximum permissible error has been now applied for the month May 2010 as per EB 52 Annex 60 as calibration certificate for the bulk meter is not available for that period.*
***Tamilnadu Site:***
*Maximum permissible error has been now applied for the months of March 2008 to December 2008 as per with EB 52 Annex 60.*

**Documentation Provided by Project Participant:**

*Revised ER sheet*
*Calibration certificate dated 07/04/2007 and (Ref. No. AJR/Lab/Panel Meter/04483) dated 14th May 2009 is checked for appropriateness of calibration carried out for bulk meters (Sr. No. GJB00731 and GJB00730) at Gujarat Site*

**Information Verified by Lead Assessor:**

Revised ER sheet is checked for appropriateness of application of Maximum permissible error inline with EB 52 Annex 60.

| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** 25/04/2011 |
|---|---|

Project participant had applied maximum permissible error for the months of April 2008 to April 2009, April 2010 and May 2010 for bulk meters (Sr. No. GJB00731 and GJB00730) at Gujarat Site. This is found to be most appropriate and conservative approach inline with calibration certificates submitted for Bulk meters relevant to the project activity at Gujarat site.
Project participant had applied maximum permissible error inline with EB 52 Annex 60 for the month of March 2008 to December 2008. This is found to be appropriate and conservative; thus it is accepted.
Thus CAR #3 is Closed out.

| **Acceptance and Close out by Lead Assessor:** | **Date:** 25/04/2011 |
|---|---|

| Date: | 22/12/2010 | | Raised by: | Vikas Bankar | | |
|---|---|---|---|---|---|---|
| Type: | CL | Number: | 04 | | Reference: | Grid Emission Factor |

**Lead Assessor Comment:**

PP has applied latest grid emission factor as 0.83 $tCO_2$/MWh for west region i.e. for Maharashtra/Gujarat sites and 0.76 $tCO_2$/MWh for South region i.e. Tamilnadu site from CEA database version 05 which is applicable from November 2009. Pleas clarify the appropriateness and conservativeness of the grid emission factor applied.

| **Project Participant Response:** | **Date:** *11/04/2011* |
|---|---|

*The applicable grid emission factor as per CEA database as per the applicable period throughout the crediting period has been incorporated as separate table in Section E.1 of revised Monitoring report please refer the*

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|---|---|
| *same for details.* | |
| **Documentation Provided by Project Participant:** | |
| *Revised MR* | |
| **Information Verified by Lead Assessor:** | |
| Revised MR and emission reduction sheet is checked for appropriateness of grid emission factor considered for the project activity. | |
| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** 15/04/2011 |
| Project participant is requested to clarify the appropriateness of grid emission factor considered for the vintage of the monitoring period.<br>Thus CL #4 is Open. | |
| **Project Participant Response:** | **Date:** 25/04/2011 |
| *The grid emission factor for the monitoring period was considered as Minimum value of the grid emission factor as per the applicable version of CEA database for the respective period covered under the monitoring period. The detail of the same has been incorporated in the section E.1 of monitoring report.* | |
| **Documentation Provided by Project Participant:** | |
| *Revised monitoring report dated 25/04/2011* | |
| **Information Verified by Lead Assessor:** | |
| Revised monitoring report dated 25/04/2011 is checked for appropriateness grid emission factor applied to the project activity. | |
| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** 03/04/2011 |
| Project participant has now mentioned weighted average grid emission factor for the current monitoring period and PP had referred CEA database version 06 for the same. Project participant had considered lower weighted average grid emission factor which is the most conservative approach and it is accepted.<br>Thus CL #4 is closed out. | |
| **Acceptance and Close out by Lead Assessor:** | **Date:** 03/05/2011 |

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|---|---|---|---|---|---|
| Date: | 22/12/2010 | | Raised by: | Vikas Bankar | |
| Type: | CL | Number: | 05 | Reference: | Comparison between Estimated and actual ERs |
| **Lead Assessor Comment:** | | | | | |
| Project proponent need to discuss comparison between estimated annual emission reductions as per registered PDD and actual annual emission reductions for the present monitoring period with appropriate arguments in Monitoring Report. | | | | | |
| **Project Participant Response:** | | | **Date:** *11/04/2011* | | |
| *Comparison between estimated annual emission reductions as per registered PDD and actual annual emission reductions for the present monitoring period with the appropriate argument has incorporated in revised monitoring report* | | | | | |
| **Documentation Provided by Project Participant:** | | | | | |
| *Revised MR* | | | | | |
| **Information Verified by Lead Assessor:** | | | | | |
| Revised MR is checked for appropriateness of comparison of estimated ER and actual ERs for the project activity | | | | | |
| **Reasoning for not Acceptance or Acceptance and Close Out:** | | | **Date:** 15/04/2011 | | |
| Project participant had mentioned 23,750 $tCO_2$ as estimated figure of emission reductions for the monitoring period of the project activity. Project participant is requested to check appropriateness of the same considering 968 days of current monitoring period for the project activity.<br>Thus CL #5 is Open. | | | | | |
| **Project Participant Response:** | | | **Date:** 25/04/2011 | | |
| *The estimated figure of emission reductions for the monitoring period (21/10/2007 to 14/06/2010) i.e. for 968 days has been now corrected and updated in section E.5 of monitoring report.* | | | | | |

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| **Documentation Provided by Project Participant:** | |
| *Revised monitoring report dated 25/04/2011* | |
| **Information Verified by Lead Assessor:** | |
| Revised monitoring report dated 25/04/2011 is checked for appropriateness of estimated emission reductions inline with current monitoring period. | |
| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** 03/05/2011 |
| Section E.5 of the revised monitoring report dated 25/04/2011 is now mentions estimated emission reduction as 23,619 tCO2 which is estimated considering 968 days of current monitoring period. This is found to be appropriate and it is accepted.<br>Thus CL #5 is closed out. | |
| **Acceptance and Close out by Lead Assessor:** | **Date:** 03/05/2011 |

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|---|---|---|---|---|---|
| Date: | 22/12/2010 | | Raised by: | Vikas Bankar | |
| Type: | CL | Number: | 06 | Reference: | Clause 1.5 of VCS PD |
| **Lead Assessor Comment:** | | | | | |
| Please clarify how clause 1.5 of VCS PD has been fulfilled by project participant inline with paragraph 7 of VCS program update dated 21st January 2010 and paragraph 4.1.4 (a) of VCS program Normative document version 1.2 dated 21st January 2010. | | | | | |
| **Project Participant Response:** | | | **Date:** *11/04/2011* | | |
| *As per paragraph 7 of VCS program update dated 21st January 2010 and paragraph 4.1.4 (a) of VCS program Normative document version 1.2 dated 21st January 2010, the VCS PD under section 1.5 "Project location including geographic and physical information allowing the unique identification and delineation of the specific extent of the project" has now been updated.* | | | | | |
| **Documentation Provided by Project Participant:** | | | | | |
| *Revised MR* | | | | | |
| **Information Verified by Lead Assessor:** | | | | | |
| Revised MR dated 09/04/2011 is checked for appropriateness of the inclusion of the co-ordinates for the project activity in monitoring report. | | | | | |
| **Reasoning for not Acceptance or Acceptance and Close Out:** | | | **Date:** 15/04/2011 | | |
| Project participant has included GPS coordinates of the wind mills involved in the project activity in section A.3 of the monitoring report. Same are checked and confirmed against google earth; it is found appropriate. Thus para 7 of VCS program update dated 21st Jan 2010 and para 4.1.4 (a) of VCS program Normative document version 1.2 dated 21st Jan 2010 are found to be fulfilled.<br>Thus CL #6 is closed out. | | | | | |
| **Acceptance and Close out by Lead Assessor:** | | | **Date:** 15/04/2011 | | |

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|---|---|---|---|---|---|
| Date: | 22/12/2010 | | Raised by: | Vikas Bankar | |
| Type: | CL | Number: | 07 | Reference: | QA/QC Procedure |
| **Lead Assessor Comment:** | | | | | |
| Project participant is requested to submit ISO certificates of EPC contractors responsible for Operation and Maintenance of the project activity. Also please submit training records and internal audit reports for the project activity. | | | | | |
| **Project Participant Response:** | | | **Date:** *11/04/2011* | | |
| *The ISO certificates of EPC contractors responsible for Operation and Maintenance of the project activity, the Training certificate (record) has now provided for verification and the Internal Audit report has been provided for Verification.* | | | | | |
| **Documentation Provided by Project Participant:** | | | | | |
| *# ISO certificates for SUZLON & RRB India*<br>*# Training record and certificate for Tamilnadu Gujarat and Maharashtra*<br>*# Internal Audit report for the entire Monitoring period* | | | | | |
| **Information Verified by Lead Assessor:** | | | | | |

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| ISO Certificates of Suzlon Group dated 27/08/2009 and ISO Certificate of RRB Energy Limited dated 20/01/2009 are checked for appropriateness and its validity<br>Training records along with list of attendees by SUZLON and RRB are checked for appropriateness of trainings conducted for their employees.<br>Internal Audit report dated 10/04/2007, 08/05/2008, 17/06/2009 and 11/05/2010 are checked for appropriateness of internal audit procedure being followed. |
| **Reasoning for not Acceptance or Acceptance and Close Out:** **Date:** 15/04/2011 |
| Project participant had submitted ISO Certificates of Suzlon Group dated 27/08/2009 which is valid up to 14/04/2012. Also PP submitted ISO Certificate of RRB Energy Limited dated 20/01/2009 valid up to 20/03/2012. These are found to be appropriate and they are accepted.<br>Project participant had provided training records of SUZLON and RRB along with list of attendees in the monitoring period considered for the project activity.<br>Project participant had submitted Internal Audit reports dated 10/04/2007, 08/05/2008, 17/06/2009 and 11/05/2010. Same are checked and it is found that review team has assessed JMRs and invoices, documentation of monitored data, equipments calibration and maintenance etc time to time. This is found to be appropriate and they are accepted.<br>Thus CL #7 is closed out. |
| **Acceptance and Close out by Lead Assessor:** **Date:** 15/04/2011 |

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|---|---|---|---|---|---|
| Date: | 22/12/2010 | | Raised by: | Vikas Bankar | |
| Type: | CAR | Number: | 08 | Reference: | Monitoring Report |

**Lead Assessor Comment:**

1. Monitoring report doesn't include complete monitoring methodology with monitoring parameters as mentioned in section B.7.1 of the registered PDD. Please include the same in the monitoring report for the project activity.
2. Please include details of meter change observed for WTG connected HTSC 2281 in Tamilnadu site. Also please mention complete calibration details for monitoring period considered for the project activity.

**Project Participant Response:** **Date:** *11/04/2011*

1. The monitoring parameters as mentioned in section B.7.1 of the registered PDD has been incorporated in the revised monitoring report for the project activity.
2. The details of meter change observed for WTG connected HTSC 2281 in Tamilnadu site has been incorporated in the separate Annexure-I of the revised monitoring report.

**Documentation Provided by Project Participant:**

*Revised MR*

**Information Verified by Lead Assessor:**

Revised MR dated 09/04/2011 is checked for appropriateness of incorporation of above queries

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| **Reasoning for not Acceptance or Acceptance and Close Out:** **Date:** 15/04/2011 |
| Section D.2 of the revised MR version 1.1 dated 09/04/2011 is now mentions about all monitoring parameters inline with section B.7.1 of the PDD. This is found to be appropriate and it is accepted.<br>However, project participant is requested to mention value of all monitoring parameters involved in the project activity in section D.2 of the MR. Also check the appropriateness of source and monitoring method (measured/calculated) mentioned for all monitoring parameters for the project activity.<br>Revised MR now mentions complete calibration details in annexure 1 of the monitoring report. MR also mentions about meter change details for WTG connected to HTSC 2281. This is found to be appropriate and it is accepted.<br>Thus CAR #8 is Open. |
| **Project Participant Response:** **Date:** 25/04/2011 |
| *Values of all the monitoring parameters involved in the project activity, in section D.2 of the MR has been now updated. Also the monitoring method (measured/calculated) mentioned for all monitoring parameters for the project activity has been now corrected and updated.* |

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| **Documentation Provided by Project Participant:** | |
| *Revised ER sheet* | |
| **Information Verified by Lead Assessor:** | |
| Revised Emission Reduction sheet is checked for appropriateness of emission reduction calculations for the project activity. | |
| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** 03/05/2011 |
| Please refer spreadsheet "MH Apportioning". Please clarify how it is appropriate to consider complete month data for Oct-2007 and June-2010 in apportioning procedure. Thus the values reported in section D.2 of the monitoring report is not appropriate as it is calculated considering complete month data for Oct-2007 and June-2010. Please clarify.<br>Thus CAR #8 is open. | |
| **Project Participant Response:** | **Date:** 04/05/2011 |
| *The values mentioned in "MH apportioning" spreadsheet for the month Oct-2007 and June-2010 was for complete month. As the daily generation data for all the WTG (except WTG of the PP) connected to the particular feeder for month Oct-2007 and June-2010 is not readily available with PP, hence it is difficult to mention the parameters as per Monitoring period (21/10/2007 to 14/06/2007). So PP has not considered the month Oct-2007 and June-2010 for the apportioning calculation sheet as a conservative approach.*<br>*The value mentioned in section D.2 of the MR has been now revised for period 1st November 2007 to 31st May 2010 (excluding the month Oct-2007 and June-2010). The statement for same has been now also incorporated in section D.2 of MR for particular parameter.* | |
| **Documentation Provided by Project Participant:** | |
| *Revised ER sheet* | |
| **Information Verified by Lead Assessor:** | |
| Revised ER sheet is checked for appropriateness of apportioning procedure demonstration for the project activity. | |
| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** 06/05/2011 |
| Project participant had submitted revised emission reduction sheet. Data for monitoring parameters $EG_{JMR, export}$ and $EG_{JMR, import}$ are available on monthly basis and it can't be considered as monitoring period for the project activity starts from 21st Oct 2007. Thus project participant had demonstrated apportioning procedure for the period of November 2007 to May 2010. This is found to be appropriate and it is accepted.<br>The values reported for monitoring parameters $EG_{n, y}$, $EG_{m, y}$, $EG_{JMR, export}$ and $EG_{JMR, import}$ in Maharashtra site in section D.2 of the monitoring report are for the period of November 2007 to May 2010. Monitoring report clearly mentions this fact and above reason behind it. This is found to be appropriate and it is accepted.<br>Thus CAR #8 is closed out. | |
| **Acceptance and Close out by Lead Assessor:** | **Date:** 06/05/2011 |

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|---|---|---|---|---|---|
| Date: | 12/05/2011 | | Raised by: | Vikas Bankar | |
| Type: | CAR | Number: | 09 | Reference: | Monitoring Report |
| **Lead Assessor Comment:** | | | | | |
| Revised monitoring report version 03 dated 06/05/2011 mentions name of project participant as WMI Power Private Limited which is not consistent with the same mentioned in the registered PDD. Registered PDD mentions name of project participant as WMI Cranes Limited in section A.3 of the PDD. Please clarify the inconsistency observed. | | | | | |
| **Project Participant Response:** | | | **Date:** 12/05/2011 | | |
| The Project proponent has changed the company name from 'WMI cranes Limited' to 'WMI Power Private Limited'. Hence the revised name has reflected in revised Monitoring report version 03 dated 06/05/2011. The same has made consistence throughout the monitoring report and The supportive documents has made available for the verification. | | | | | |
| **Documentation Provided by Project Participant:** | | | | | |
| *Documentary evidence for the name change of project proponent*<br>*# Court order for name change*<br>*# Certificate of incorporation* | | | | | |

| **Information Verified by Lead Assessor:** | |
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| Court order for name change dated 22/12/2009 and Certificate of Incorporation dated 17/08/2009 are checked for appropriateness of change of name of project participant in the project activity | |
| **Reasoning for not Acceptance or Acceptance and Close Out:** | **Date:** 16/05/2011 |
| From above submitted documents i.e. Court order for name change dated 22/12/2009 and Certificate of Incorporation dated 17/08/2009, it is understood that "WMI Cranes Limited" has demerged and "WMI Power Private Limited" is a resulting company. This is found to be appropriate and it is accepted.<br>Thus CAR #9 is closed out. | |
| **Acceptance and Close out by Lead Assessor:** | **Date:** 16/05/2011 |

| Date: | 04/07/2011 | | Raised by: | Vikas Bankar | |
|---|---|---|---|---|---|
| Type: | FAR | Number: | 10 | Reference: | |
| **Lead Assessor Comment:** | | | | | |
| Registered PDD, Version 09 dated 04/06/2010 mentions that energy meters of accuracy class of 0.2s will be implemented for the project activity. However, during site visit to the project activity, it is observed that accuracy class of the meters in Maharashtra and Gujarat is 0.2s and same in Tamil Nadu is 0.5s. This is found to be inline with the requirements of The Gadget of India (Registered NO. DL (N) – 04/0007/2003 – 15) dated 26/07/2010 (page 10) which clearly mentions that for voltage of 650 V up to 33 kV, energy meters with accuracy class of 0.5s or better is recommended. Hence it is concluded that energy meters with accuracy class of 0.5s is acceptable in the state of Tamil Nadu as energy meters are found to be installed at WTG where generation voltage is 690 V. However, registered PDD[2] is inconsistent with the same and RMP is proposed for the same during 1st CDM verification; thus **FAR #10** is raised. | | | | | |
| **Project Participant Response:** | | | **Date:** | | |
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| **Documentation Provided by Project Participant:** | | | | | |
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| **Information Verified by Lead Assessor:** | | | | | |
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| **Reasoning for not Acceptance or Acceptance and Close Out:** | | | **Date:** | | |
| | | | | | |
| **Acceptance and Close out by Lead Assessor:** | | | **Date:** | | |

## 10. Statement of Competence

Name: Vikas Bankar

**Status**

| | | | | | |
|---|---|---|---|---|---|
| - | Lead Assessor | x | - | Expert | x |
| - | Assessor | x | - | Financial Expert | |
| - | Local Assessor | India | - | Technical Reviewer | |

**Scopes of Expertise**

**1. Energy Industries (renewable / non-renewable)** **x**

Technical Area(s): TA 1.2 Energy generation from renewable energy sources

**2. Energy Distribution** **x**

Technical Area(s): TA 2.1 Electricity distribution
TA 2.2 Heat distribution

**3. Energy Demand** **x**

Technical Area(s): TA 3.1 Energy Demand

**4. Manufacturing**

Technical Area(s):

**5. Chemical Industry**

Technical Area(s):

**6. Construction**

Technical Area(s):

**7. Transport**

Technical Area(s):

**8. Mining/Mineral Production**

Technical Area(s):

**9. Metal Production**

Technical Area(s):

**10. Fugitive Emissions from Fuels (solid, oil and gas)**

Technical Area(s):

**11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride**

Technical Area(s):

**12. Solvent Use**

Technical Area(s):

**13. Waste Handling and Disposal**

Technical Area(s):

**14. Afforestation and Reforestation**

Technical Area(s):

**15. Agriculture**

Technical Area(s):

Approved Member of Staff by: Siddharth Yadav Date: 14/02/2011

# Statement of Competence

Name: Sathis Kumar

**Status**

| | | | | | |
|---|---|---|---|---|---|
| - | Lead Assessor | x | - | Expert | x |
| - | Assessor | x | - | Financial Expert | |
| - | Local Assessor | India | - | Technical Reviewer | x |

**Scopes of Expertise**

**1. Energy Industries (renewable / non-renewable)** **x**

*Sub scope(s):* TA 1.2 Energy generation from renewable energy sources

**2. Energy Distribution** **x**

*Sub scope(s):* TA 2.1 Electricity distribution
TA 2.2 Heat distribution

**3. Energy Demand** **x**

*Sub scope(s):* TA 3.1 Energy Demand

**4. Manufacturing**

*Sub scope(s):*

**Chemical Industry**

*Sub scope(s):*

**16. Construction**

*Sub scope(s):*

**17. Transport**

*Sub scope(s):*

**18. Mining/Mineral Production**

*Sub scope(s):*

**19. Metal Production**

*Sub scope(s):*

**20. Fugitive Emissions from Fuels (solid, oil and gas)**

*Sub scope(s):*

**21. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride**

*Sub scope(s):*

**22. Solvent Use**

*Sub scope(s):*

**23. Waste Handling and Disposal**

*Sub scope(s):*

**24. Afforestation and Reforestation**

*Sub scope(s):*

**25. Agriculture**

*Sub scope(s):*

Approved Member of Staff by: Siddharth Yadav Date: 11/01/2011