VERIFICATION AND CERTIFICATION REPORT

Enercon (India) Limited

Enercon Wind Farm (Hindustan) Ltd in Karnataka

UN PA 1259

Monitoring Period 2: 01/12/2009 to 31/08/2011

(first and last day included)

SGS Climate Change Programme
SGS United Kingdom Ltd
SGS House
217-221 London Road
Camberley Surrey
GU15 3EY
United Kingdom

Date of Issue:	**Project Number:**
05/11/2011	CDM.VER1248 MP02
Project Title:	
Enercon Wind Farm (Hindustan) Ltd in Karnataka	
Organisation:	**Client:**
SGS United Kingdom Limited	Enercon (India) Limited
Publication of Monitoring Report:	
Monitoring Period:	01/12/2009 to 31/08/2011
First Monitoring Report Version and Date:	01, dated 05/09/2011
Final Monitoring Report Version and Date:	03, dated 31/10/2011

Summary:

SGS United Kingdom Ltd has performed the second periodic verification of the CDM project "Enercon Wind Farm (Hindustan) Ltd in Karnataka" and UNFCCC Ref Number 1259. The verification includes confirming the implementation of the monitoring plan of the registered PDD[/1/] UNFCCC Ref Number 1259 and the application of the monitoring methodology as per ACM0002 version 06 dated 19/05/2006[/2/]. A site visit was conducted to verify the data submitted in the monitoring report. SGS confirms the following has been reviewed;

(a) The registered PDD, including the monitoring plan and the corresponding validation report;

(b) Monitoring report, revised monitoring plan;

(c) The applied monitoring methodology;

(d) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board;

(e) All information and references relevant to the project activity's resulting in emission reductions

Project activity involves electricity generation by wind mills and supplying the same to the southern regional electricity grid. This is the renewable energy generation which can replace the fossil fuel dominated grid connected electricity generation. The project activity consists of the installation of 86 windmills of 0.8 MW capacity each at Chitradurga and Tumkur districts of Karnataka, India, reaching a total installed capacity of 68.8 MW. These wind mills are of Enercon make E-48. The generated electricity is evacuated to Karnataka state grid substation.

A request for revision of monitoring plan was submitted to and approved by CDM EB on 15th March 2011.

SGS confirms that the project is implemented in accordance with the validated and registered Project Design Document. The monitoring system is in place and the emission reductions are calculated without material misstatements. 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 **173,795 tCO2e** emission reductions during period **01/12/2009 up to 31/08/2011.**

Subject:	
CDM Verification	
Verification Team:	
Ravi Kant Soni– Lead Assessor/Team Leader/Local Assessor/ Sectoral Scope Expert (TA 1.2) Anshul Sharma – Assessor	☒ No Distribution (without permission from the Client or responsible organisational unit)
Technical Review:	
Date: 07/11/2011 Name: Ramkrishna Patil	☐ Limited Distribution
Authorised Signatory:	
Name: Siddharth Yadav Date:17 November 2011	☐ Unrestricted Distribution

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01	02/11/2011	31	
02	05/11/2011	34	

Abbreviations

A/D Converter	Analog to Digital Convertor
BESCOM	Bangalore Electricity Supply Company
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CL	Clarification Request
CMP	Conference of Parties as the Meeting of the Parties
CO_2	Carbon Dioxide
CoP	Conference of the Parties
CRM	Customer Relationship Management
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EB	Executive Board
EF	Emission Factor
EIL	Enercon India Limited
EPC	Engineering Procurement Construction
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
I	Interview
HESCOM	Hubli Electricity Supply Company
I/O	Input / Output
ISO	International Organization for Standardization
JMR	Joint Meter Reading
KPTCL	Karnataka Power Transport Company Limited
kWh	Kilo watt hour
MFR	Multi Function Relay
MoV	Means of Verification
MoP	Meetings of Parties
MP	Monitoring Plan
MR	Monitoring Report
MW	Mega watt
MWh	Mega Watt hour
O&M	Operation and Maintenance
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Participant
PPA	Power Purchase Agreement
PT	Potential Transformer
QA/QC	Quality Assurance/Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
WTG/WEC/ WEG	Wind Turbine Generator/Wind Energy Converter/Wind Electricity Generator

Table of Content

1. Introduction

1.1 Objective

SGS United Kingdom Ltd has been contracted by Enercon (India) Limited to perform an independent verification of its CDM project "Enercon Wind Farm (Hindustan) Ltd in Karnataka". CDM projects must undergo periodic audits and verification of emission reductions as the basis for issuance of Certified Emission Reductions (CERs).i

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The emissions report conforms with the requirements of the monitoring plan in the registered PDD and the approved methodology; and
- The data reported are complete and transparent.

1.2 Scope

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the project activity. The verification is based on the validated and registered project design document and the monitoring report. The project is assessed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance.

SGS has, based on the recommendations in the Validation and Verification Manual[/14/], employed a risk-based approach in the verification, focusing on the identification of significant reporting risks and the reliability of project monitoring.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 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:	Enercon Wind Farm (Hindustan) Ltd in Karnataka
UNFCCC Registration Number:	1259
Monitoring Period Covered in this Report	01/12/2009 to 31/08/2011 (first and last day included)
Project Participants	Enercon (India) Limited (India – host) Rabobank International (United Kingdom and Northern Ireland)
Location of the Project Activity:	Chikkabyaladakere, Kanubehalli, Elladakere and Arasinagundi villages in Chitradurga District of Karnataka state in India and Dasudi, Nelenuru, Ganadu, Annenhalli, Siddapura villages in Tumkur district of Karnataka state in India.

Project activity involves electricity generation by wind mills and supplying the same to the southern regional grid. This is the renewable energy generation which can replace the fossil fuel dominated grid connected electricity generation. The project activity consists of the installation of 86 windmills of 0.8 MW capacity each at Chitradurga and Tumkur districts of Karnataka, India, reaching a total installed capacity of 68.8 MW. These wind mills are of Enercon make E-48. The generated electricity is evacuated to Karnataka state grid

substation. The first set of WTGs was commissioned on 29/09/2006 and last WTG was commissioned on 28/12/2006 as mentioned in registered PDD and commissioning certificates /1/ and /10/.
All the 86 WTGs are fully functioning and this was verified by the assessment team during the site visit. Technical details of WTGs with respect to installation place and capacity have been verified during the site visit and found to be consistent with the details provided in the registered PDD/1/.
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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 Periodic Verification Checklist which, based on the risk assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

Using the Periodic Verification Checklist, SGS verified the implementation of the monitoring plan and the data presented in the Monitoring Report[/4/] 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**
Ravi Kant Soni	Lead Assessor/Team Leader/Local Assessor/Sectoral Scope Expert (TA 1.2)
Anshul Sharma	Assessor

Technical Review Team	
Name	**Role**
Ramkrishna Patil	Technical Reviewer and Sector Scope Expert (TA 1.2)

2.3 Means of Verification

2.3.1 Review of Documentation

The validated PDD[/1/], the monitoring report[/4/] 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 Site Visits

As part of the verification, the following on-site inspections have been performed by the Lead Assessor, Assessor, Local Assessor and Sectoral Expert from 28/09/2011 to 30/09/2011.

<table>
<tr><td colspan="2">Location: District- Chitradurga and Tumkur

State – Karnataka, India</td></tr>
<tr><td colspan="2">Date: 28/09/2011 to 30/09/2011</td></tr>
<tr><td>Coverage:</td><td>Source of Information / Persons Interviewed</td></tr>
<tr><td>• Project design and implementation
• The monitoring procedure,</td><td>Mr.Saujanya Kumar (Assistant Manager Enercon)</td></tr>
<tr><td>• Monitoring report and emission reduction calculations,
• Methods and formulae for calculating baseline emissions, project emissions and leakage</td><td rowspan="2">Mr.Maruthi (Operation In charge)
Mr.Saujanya Kumar (Assistant Manager Enercon)
Mr.Prakash (Supervisor Enercon)</td></tr>
<tr><td>• Technical equipment and operation
• Data uncertainty and residual risks;
• Quality control and quality assurance procedures
• Monitoring equipment including calibration performance
• Implementation of procedures for operations and data collection</td></tr>
</table>

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. Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;

II. Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;

III. Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

The verification process may be halted until this information has been made available to comply with the requirements of the CDM Executive Board. Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

A clarification request (CL) will be raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CLs raised during verification shall be resolved prior to submitting a request for issuance.

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

Forward Action Requests (FARs) may be raised during verification for actions where the monitoring and reporting require attention and/or adjustment for the next verification period. FARs may be raised which are for the benefit of future projects and future verification actors. These have no impact upon the completion of the verification activity.

All CARs, CLs and FARs for this verification period are included in this report.

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 Project Implementation – General

The project is located at Chitradurga and Tumkur district of Karnataka state in India. The electricity generated by project is supplied to the southern regional grid. The project participant has made a Power Purchase Agreement (PPA) with BESCOM/11/. The project was registered as CDM project on 27/10/2008 (ref: http://cdm.unfccc.int/Projects/DB/DNV-CUK1185356859.49/view), the same date is the starting date of the crediting period (fixed).

This is the second verification of project covering the period from 01/12/2009 to 31/08/2011. Project was implemented and equipment installed as described in the registered PDD/1/ and revised monitoring plan approved by EB on 15/03/2011/12/. Following documents have been reviewed by assessment team during site visit:

1. Commissioning certificates/10/
2. Power Purchase Agreement(PPA)/11/
3. Testing certificates of all energy meters/9/
4. Monthly Joint Meter Reports(JMRs) or Form B/7/
5. Invoices raised by PP to BESCOM/13/
6. Transmission loss calculation summary reports for current monitoring period/17/
7. JMRs (Form B) at 220kV metering point at Enercon substation for current monitoring period/18/

The data and variables provided in the monitoring report are the same as that stated in the revised monitoring plan/12/. There are no changes in the project design against the registered project design document.

All WTGs have been commissioned in 3 different phases between 29/09/2006 and 28/12/2006 as mentioned in the monitoring report/3/ and this has been cross verified with the commissioning certificates/10/. The monitoring report version 03/4.1/ for the current monitoring period is in compliance with the revised monitoring plan approved by UNFCCC on 15/03/2011/12/.

Phase	Installed Capacity(MW)	Capacity of each WTG(MW)	No. of WTGs	Commissioning date
Phase I	44.8	0.8	56	29/09/2006
Phase II	7.2		9	26/10/2006
Phase III	16.8		21	28/12/2006
Total	68.8		86	

The reported emission reduction in the current monitoring period is **173,795** tCO_2e. The estimated emission reduction in the registered PDD/1/ is **148,858** tCO2e per annum i.e. for 12 months. The current monitoring

period consists of a total of 21 months. Hence as per the registered PDD the total emission reductions achieved during the current monitoring period had to be 260,501 tCO_2e but the actual emission reductions achieved for the current monitoring period is **173,795** tCO_2e, which is less than the estimated in the registered PDD. This difference between estimated and actual CERs was due to the variability in the wind pattern (i.e. PLF) during the monitoring period.
Corresponding to paragraph 199 to 202 of VVM version 01.2, the assessment team is able to confirm that the revised monitoring plan is in accordance with the approved consolidated methodology ACM0002 version 06 which was applied to the project activity and the monitoring has been carried out in accordance with the revised monitoring plan. All the parameters used in the calculation of net electricity supplied to southern regional grid by project have been verified against the monitoring plan and the same in the monitoring report and is found complete and correct.

Discussion CARs/CLs:

The name of the PP mentioned in section A.2 of monitoring report was not found consistent with the same mentioned at UNFCCC project web page. Thus CAR #4 was raised asking the PP for clarification of the same. In response the PP has corrected the name of the PP in section A.2 of monitoring report, and the same is found consistent with UNFCCC project web page, hence CAR #4 was closed.

CAR #5 was raised asking the PP for clarifications of the following issues:

- The technical description diagram of project activity was not mentioned in section A.4 of the monitoring report.
- The title of the monitoring methodology was not found consistent with the same mentioned at UNFCCC website.
- The information's provided regarding the overhaul times, downtimes of equipment were not found inline with the MR completion guidelines outlined under point 2 and 3.

In response the PP has submitted the revised monitoring report incorporating changes as per the issues raised, it has been verified through the revised monitoring report that:

- The technical description diagram is incorporated in section A.4 of revised monitoring report
- The title of monitoring methodology is corrected in section A.5 of revised monitoring report
- The information's regarding the overhaul/down time of project activity has been incorporated in Appendix 2 of revised monitoring report

The response provided by the PP was found satisfactory; hence CAR #5 was closed.

3.2 Remaining Issues, CAR's, FAR's from Previous Validation or Verification

This is the second verification and there are no remaining issues from first verification.

3.3 Compliance of the monitoring plan with the monitoring methodology.

The project has been registered with the "Consolidated baseline methodology for grid connected electricity generation from renewable resources" ACM0002 version 06, dated 19/05/2006[/2/].The assessment team verified the revised monitoring plan[/12/] against ACM0002 version 06, and confirms that the revised monitoring plan approved by CDM EB on 15/03/2011 is in accordance with the approved methodology applied by the project activity. Through the onsite visit and review of the Power Purchase Agreement (PPA) signed with the grid authority (HESCOM)[/11/], it is verified that the project boundary is consistent with the registered PDD[/1/]. The management system is in place and QA/QC procedure have been followed as stipulated in the registered PDD and revised monitoring plan. This is inline with paragraph 199-203 of VVM version 01.2[/14/].

3.4 Completeness of Monitoring

Monitoring of reductions in GHG emissions to result from the registered project have been implemented in accordance with the revised monitoring plan[/12/] approved on the 15/03/2011. The monitoring mechanism is effective and reliable.

During the site visit, personnel involved at various levels of operation of the project activity have been interviewed. It has been confirmed that the plant personnel are conscious of the importance of monitoring

activities. On-site verification of plant records also substantiate consistency in recording and reporting of monitored data.

The following parameters have been verified

(1) Net electricity supplied to the grid by the Project (EGy) (MWh):

This parameter is calculated and based on the measured values of export and import on the energy meter and transmission losses. This is the difference of electricity export to the grid by the project activity and electricity imported by project, less transmission losses. Monthly values of EGy is verified from the two JMRs (form B)/7/ prepared for two separate metering points i.e. for 56.8 MW and 12 MW at 33 kV metering point issued by the state utility BESCOM. The monitoring procedure for EG_y followed at site is found inline with the same outlined in the revised monitoring plan/12/.

Further this parameter has been cross verified with invoices raised by the PP/13/ and found correct, hence accepted. It is found that calibration of meters used to measure EGexport and EGimport has been delayed hence the monthly values of export,import and transmission losses have been adjusted for delayed calibration period inline with guidelines outlined under annex 60 of EB 52 (for detail please refer section 9 CAR #2).
The value of this parameter after adjusting EGexport, EGimport, and transmission losses for the current monitoring period is 186478.770 MWh. This parameter is used for the emission reduction calculations.

(2) Summation of electricity Export recorded at meters (two main and two check) connecting 86 machines of the project activity and can be sourced from two JMR/7/ issued by BESCOM for 56.8 MW and 12 MW at 33 kV metering point. (EGexport)

This parameter is measured by online energy meters at the substation .At present there are 2 metering point at 33 Kv enercon substation i.e. one for 56.8MW (Consisting 71 WTGs) and other for 12MW (Consisting 15 WTGs). Hence there are total 2 sets of meter (2 main meter and 2 check meter) is used to record **EGexport.**

Electricity exported to the grid from all WTGs is monitored at each metering point through main meter with 0.2% accuracy class. The main meter is also called “joint meter” which has been kept under custody of Karnataka Power Transport Company Limited (KPTCL). Apart from main meter, a check meter is also provided for each feeder separately which is identical with main meter in make and technical standards and is of 0.2% accuracy class and calibration. The purpose of this check meter is just to check redundancy.

This value is used for calculating the net electricity supplied to grid by project activity. This joint meter reading is taken and certified by HESCOM in presence of project participant’s representative. The HESCOM is responsible entity to carry out the calibration, periodical testing, sealing, and maintenance of meters in the presence of EIL representative. The frequency of meter testing is annual.The calibration certificates for the energy meters at substation have been checked for validity.The calibration reports indicate that the meters are working within acceptable accuracy limits.

It is found that calibration of meters used to measure EGexport has been delayed hence monthly values of this parameters have been adjusted for the delayed calibration period inline with guidelines outlined under annex 60 of EB 52 (for detail please refer to section 9, CAR #2).

Reported values of this parameter have been verified with monthly JMR reports(Form B)/7/ during site visit and cross checked with monthly invoices raised by the PP/13/ and the value of this parameter is 188706.750 MWh for the current monitoring period.

It is noted that the value of EGexport is used for calculation of EG_y and it is verified that adjusted monthly values of EG_{export} after applying -0.2% of correction factor have been used to calculate EG_y.

(3) Summation of electricity Import recorded at the meters (two main and two check) connecting 86 machines of the project activity and can be sourced from two JMR/7/ issued by BESCOM for 56.8 MW and 12 MW at 33 kV metering point. (EGimport)

This parameter is measured by online energy meters at the substation .At present there are 2 metering point at 33 KV enercon substation i.e. one for 56.8MW (Consisting 71 WTGs) and other for 12MW (Consisting 15 WTGs). Hence there are a total of 2 sets of meter (2 main meter and 2 check meter) used to record **EGimport.**

Electricity imported from the grid from all WTGs is monitored at each metering point through the main meter with a 0.2% accuracy class. The main meter is also called a "joint meter" which has been kept under custody of Karnataka Power Transport Company Limited (KPTCL). Apart from main meter, a check meter is also provided for each feeder separately which is identical with the main meter in make and technical standards and is of 0.2% accuracy class and calibration. The purpose of this check meter is just to check redundancy.

This value is used for calculating the net electricity supplied to grid by project activity. This joint meter reading is taken and certified by HESCOM in the presence of the project participant's representative. The HESCOM is the responsible entity to carry out the calibration, periodical testing, sealing, and maintenance of meters in the presence of EIL representative. The frequency of meter testing is annual.

The calibration certificates for the energy meters at substation have been checked for validity. The calibration reports indicate that the meters are working within the acceptable accuracy limits. It is found that calibration of meters used to measure EGimport has been delayed, hence monthly values of this parameters have been adjusted inline with the guidelines outlined under annex 60 of EB 52 (for detail please refer to section 9 CAR #2).

The reported values of this parameter have been verified with monthly JMR reports (Form B)[/7/] during the site visit and cross checked with the monthly invoices raised by the PP[/13/]and the value of this parameter is 76.800 MWh for the current monitoring period. It is observed from JMR that few months import is zero because during that month there is no electricity import for the project activity. The same has been cross checked with invoices and found to be appropriate.

It is noted that the value of EGimport is used for calculation of EG_y and it is verified that adjusted monthly values of EG_{import} after applying +0.2% of correction factor have been used to calculate EG_y.

(4) Transmission loss for export between the metering location at 33 kV point and the metering location at 220 kV at the Enercon substation. (TE)

Transmission losses refer to the energy loss incurred between the 2 metering points for the project WTGs connected at 33 kV substations and the receiving substation at Dasudi village where voltage is stepped up to 220 KV and exported to the grid. The calculation of transmission losses is carried out by state utility considering the export readings of the bulk meter at the 220 KV receiving substation[/18/] as well as the export readings of each metering point connected to the respective 33 KV receiving substation.

The transmission losses confirmed jointly by the representatives of Enercon and the state utility, this is verified from monthly transmission loss calculations summary reports[/17/]. The transmission loss applied to the project activity by the state utility is verified from the JMR (Form B)[/7/] recorded at 33KV metering point and cross checked with the invoices[/13/] raised to the state utility. The value of this parameter is 2119.615 MWh for the current monitoring period.

It is noted that the value of the transmission losses is used for the calculation of EG_y and it is verified that as a conservative approach the adjusted monthly values of transmission loss after applying +0.2% of correction factor have been used to calculate EG_y.

Discussion CARs/CLs:

The value of the net electricity supplied to the grid through meter for meter KBCWP-2 (56.8 MW) and KBCWP-3 (12 MW) was not found consistent with the Form B and Invoices for some months, thus CAR #1 was raised. In response the PP has corrected the values of net electricity supplied to grid (EG_y) in the monitoring report and in the CER calculation excel sheet. It has been confirmed verifying the Form B and invoices that values of EG_y considered for emission reductions calculation were conservative, hence accepted. Thus CAR #1 was closed.

It was in section C of the monitoring report that correction factor of +0.2% for transmission loss is applied for the delayed calibration period but the same was not followed in the CER calculation sheet. Thus CAR #6 was raised requesting the PP for clarification of the same. In response the PP has clarified that it was missed by mistake and the correction factor of +0.2% for transmission loss is now applied in the CER calculation and the CER excel spread sheet is updated accordingly. It has been verified through the revised CER calculation excel spread sheet that correction factor of +0.2% for transmission loss is applied precisely as conservative approach. Hence CAR #6 was closed out.

3.5 Accuracy of Equipment

As prescribed in approved revised monitoring plan[/12/], main meter and check meter connected to each feeder has an accuracy class 0.2%.This is also verified through testing certificates[/9/] and physically during the site visit, and found consistent.

Metering Point Identification	Meter Type	Meter Serial No.	Accuracy class	Location
KBCWP-01 (88.0 MW)	Main Meter	6605121	0.2	Enercon 220KV substation at Dasudi village
	Check Meter	6605122	0.2	
KBCWP-02 (56.8 MW)	Main Meter	5389967	0.2	Enercon 33 KV Substation At Chikkabyaladakere Village
	Check Meter	5389970	0.2	
KBCWP-03 (12 MW)	Main Meter	5463844	0.2	Enercon 33 KV Substation at Bukkapatna Village
	Check Meter	5463845	0.2	

3.6 Accuracy of Emission Reduction Calculations

The calculation of the emission reductions is found to be correct. It is verified that calibration of meters used to measure electricity export and import have been delayed during the current monitoring period. The verification team has checked all the calibration certificates valid and applicable for current monitoring period and it can be confirmed that meters are working within the permissible accuracy limits. To take care the impact of delayed calibration for energy meter KBCWP-02 (56.8 MW) located at 33 Kv substation (from 01/12/2009 to 14/12/2009) on emission reduction calculation, electricity export and import measured through this energy meters has been adjusted for the entire months from 01/12/ 2009 to 31/12/ 2009. Similarly the calibration delay occurred for energy meter KBCWP-03 (12 MW) from 01/12/2009 to 16/04/2010, electricity export and import measured through this energy meters has been adjusted for the period starting from 01/12/2009 to 30/04/2010. This approach is found quite conservative and inline with the guidelines published in EB 52 annex 60 under paragraph 4(a) which states that "Applying the maximum permissible error of the instrument to the measured values, if the results of the delayed calibration do not show any errors in the measuring equipment, or if the error is smaller than the maximum permissible error;" hence accepted.

It was found that meter KBCWP-2 (56.8 MW) (Sr.No-5389967) calibrated on 14/12/2009. Also the calibration of meter KBCWP-3 (Sr.No-5463844) was done on 06/02/2008 and 16/04/2010.It was not clear how it is ensured that the meters were working satisfactorily during the delayed calibration period and why the guidelines for delayed calibration (EB 52 annex 60) have not been followed while calculating the emission reductions for the current monitoring period starting from 01/12/2009 to 31/08/2011? Thus CAR #2 was raised.

In response the PP has clarified that as per the meter calibration records for Meter KBCWP-2 dated 14/12/2009, both the main and check meters were performing within their accuracy class, The last calibration for the meter was done on the 02/01/2008 and there is a delay in the annual calibration. In

accordance with the annex 60, EB 52, a correction factor of +0.2% for imports and transmission loss and -0.2% for exports for the month of December 2009 has been applied while calculating the net electricity supplied (EG_y) hence in the emission reduction calculations.
Similarly the latest test certificates for the main and check meters for KBCWP-03 between year 2008 to 2010 was not done annually, and calibration certificate dated 16 April 2010 confirms that meters were performing within their accuracy class. In accordance with annex 60, EB 52, a correction factor of +0.2% for imports and transmission loss and -0.2% for exports for the period of Dec 2009 to April 2010. The verification team has checked all the calibration certificates for the current monitoring period and confirmed that meters were working satisfactorily and the approach followed for emission reductions calculations as presented in the revised CER calculations sheet is conservative and in line with the guidelines outlined under annex 60 of EB 52, hence accepted. Thus CAR #2 was closed out.

It was found that the emission reduction for the current monitoring period reported in the revised monitoring report and the CER calculations excel sheet is 173,795 tCO2 but the same was reported in the monitoring report version 01 and the CER calculations excel sheet as 173,489 tCO2**.** Thus CL #3 was raised asking for the clarification for the increase in emission reductions. In response the PP has clarified that value of transmission losses and electricity import reported was wrongly overestimated in the CER calculations excel sheet and the same is corrected in the revised CER sheet. The verification team has checked the Form B and invoice for the month of June 2011 and confirmed that the values of transmission loss (for 56.8 MW metering point**)** and import measured through meter KBCWP-03 (12 MW) was over estimated due to typographical error. The PP has corrected the values in the revised CER sheet and the same is lesser than the reported in the earlier version of the CER calculation sheet and hence leading to an increase in the emission reductions. Since the values reported in the revised CER excel sheet was found consistent with Form B and invoices, hence accepted. Thus CL #3 closed out.

Calibration details of energy meters verified for current monitoring period is as following:

Meter Identification	Calibration frequency	Dates of calibration (for main meter and check meter both)	Calibration valid up to	Delay in Calibration
KBCWP-01 (88.0 MW) located at 220 KV substation	Annual	29/09/2009	28/09/2010	No delay in Calibration
		30/12/2009	29/12/2010	
		22/11/2010	21/11/2011	
KBCWP-02 (56.8 MW) located at 33 KV substation (Chikkabyaladakere Village)	Annual	02/01/2008	01/01/2009	About 14 days delay in Calibration
		14/12/2009	13/12/2010	
		18/10/2010	17/10/2011	
KBCWP-03 (12 MW) Located at 33KV substation (Bukkapatna Village)	Annual	06/02/2008	05/02/2009	4 months 16 days delay in calibration
		16/04/2010	15/04/2011	
		13/04/2011	12/04/2012	

3.7 Quality of Evidence to Determine Emission Reductions

Critical parameters used for the determination of the Emission Reductions are discussed in section 3.4 above. All the data recorded is in compliance with the monitoring report.

There are 6 electricity meters (3 main meter and 3 check meters) which have been installed for the project activity. The monitoring data is from the each main meter which measures the electricity exported to grid by the WTGs connected and the electricity imported from the grid. The accuracy class of the main meter and check meter is 0.2%, the same has been confirmed through the physical inspection of meters during the site visit. The electricity exported to the grid is recorded by taking the two JMRs[/7/] at 56.8 MW and 12 MW at 33kV metering point in the presence of the representatives of the state utility and Enercon. The JMRs at 33kV metering point contains the value of energy exported, energy imported, transmission loss, and net electricity supplied to the grid during the recording period. This JMR is certified by the Executive Engineer of the state utility and Enercon and these figures becomes the basis for emission reduction calculations.

The general conditions set out for metering, recording, meter readings, meter inspections, test and checking and communication are as per the PPA (Power Purchase and Sale Agreement) signed between Enercon and BESCOM[/11/]. The testing reports of the energy meters have been verified by the assessment team during the site visit, and are consistent with the revised monitoring plan and monitoring report[/12/&/4/.]

It is concluded that in this monitoring period, the evidence for determination of ER is sufficient and reasonable. The Assessment team is able to confirm that the result of ER calculation[/6/] is reliable.

3.8 Management System and Quality Assurance

The companies involved in the project have ISO 9001:2000, and ISO14001:2004 quality assurance system implemented, therefore the assessment team can confirm that the management system the CDM project is in place; with the responsibilities properly identified and in place.

In order to verify data quality, the Companies involves in the project works in accordance with a quality assurance procedure (Procedure for Monitoring Plan Implementation), which establishes the operational and management structure implemented.

3.9 Data from External Sources

The baseline emission factor was determined ex-ante and fixed for the entire crediting period as mentioned in section B.6.2 of registered PDD[/1/]. Emission factor was calculated using data available in CO2 Baseline Database for the Indian Power Sector version 1.1 published by Central Electricity Authority (CEA)[/8/].

The value of baseline emission factor used in emission reduction calculations for current monitoring period is 0.93204 tCO_2/MWh as reported in monitoring report[/4.1/]. It is found to be consistent with the value of EF mentioned in the registered PDD version 05 dated 01/10/2008[/1/].

4. Calculation of Emission Reductions

Parameter	Reported Value in MR Version 01	Verified Value MR version 3
Net electricity supplied to grid (EGy) (MWh)	186151.699	186478.770
Grid Emission Factor (t CO2e /MWh)	0.93204	0.93204

The emission reduction is calculated as follows:

Baseline emission = Net electricity supplied to grid (MWh) x Grid emission Factor (t CO2e/MWh)

= 186478.770 x 0.93204

= 173,795 tCO2e

As per methodology, leakage emissions and project emissions are zero.

Thus emission reductions are calculated as follow:

Emission reductions = Baseline emissions – Project emissions – Leakage emissions

= 173,795 – 0 – 0

= 173,795 tCO2e

5. Recommendations for Changes in the Monitoring Plan

Recommendation for changes in the monitoring plan was made during first verification and revised monitoring plan[/12/] has been approved by CDM EB on 15/03/2011. No recommendations for changes in the approved revised monitoring plan in this monitoring period.

6. Overview of Results

Assessment Against the Provisions of Decision 17/CP.7:

Is the project documentation in accordance with the requirements of the registered PDD and relevant provision of decision 17/CP.7, EB decisions and guidance and the COP/MOP?

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. All members of the assessment 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[4] is attached with this verification report.

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

The grid emission factor has been taken from the registered PDD and this is the ex-ante parameter and remains constant throughout the crediting period.

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

Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM 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[1] and monitoring plan. The emission reduction was **148,858 tCO_2/year** as per the estimation made in the registered PDD. Hence the total emission reduction for the current monitoring period had to be about **260,501 tCO_2** but the actual emission reduction has been verified as **173,795 tCO2** for the same period which was less than the estimate in the registered PDD.*

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 design 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 design document has been observed.

Post monitoring report[3] on UNFCCC website[5]

Yes, the monitoring report is available at ref.1259 on UNFCCC website[5]
http://cdm.unfccc.int/Projects/DB/DNV-CUK1185356859.49/view

7. Verification and Certification Statement

SGS United Kingdom Ltd has been contracted by Enercon (India) Limited to perform the verification of the emission reductions reported for the CDM project "Enercon Wind Farm (Hindustan) Ltd in Karnataka"_and UNFCCC ref. No 1259 in the period 01/12/2009 to 31/08/2011.

The verification is based on the validated and registered project design document and the monitoring report for this project. Verification is performed in accordance with section I of Decision 3/CMP.1, and relevant decisions of the CDM EB and CoP/MoP. The scope of this engagement covers the verification and certification of greenhouse gas emission reductions generated by the above project "Enercon Wind Farm (Hindustan) Ltd in Karnataka" during the above mentioned period, as reported in monitoring report version 03[/4.1/] dated 31/10/2011.

The management of the Enercon (India) 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 03, dated 31/10/2011[/4.1/]. The development and maintenance of records and reporting procedures are in accordance with the monitoring report.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01/12/2009 to 31/08/2011 based on the reported emission reductions in the Monitoring Report version 03 dated 31/10/2011[/4.1/] for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, SGS 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 this reported amount of GHG emission reductions for the period is fairly stated.

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:	Enercon Wind Farm (Hindustan) Ltd in Karnataka
UNFCCC Reference Number:	1259
Registered PDD Used for Verification:	Version 05dated 01/10/2008
Methodology Used for Verification:	ACM0002 version 06 dated 19/05/2006
Applicable Period:	01/12/2009 to 31/08/2011
Total GHG Emission Reductions Verified:	**173,795 tCO2e**

Signed on behalf of the Verification Body by Authorized Signatory

Signature: 

Name: Siddharth Yadav

Date: 17 November 2011

8. Document References

/1/ Registered PDD, version 05 dated 01/10/2008

/2/ ”Consolidated baseline methodology for grid-connected electricity generation from renewable sources” ACM0002 version 06
http://cdm.unfccc.int/UserManagement/FileStorage/CDMWF_AM_BW759ID58ST5YEEV6WUCN5744MN763

/3/ Monitoring report version 01 dated 05/09/2011

/4/ Monitoring report version 02 dated 01/10/2011

/4.1/ Monitoring report version 03 dated 31/10/2011

/5/ UNFCC Project Page website: http://cdm.unfccc.int/Projects/DB/DNV-CUK1185356859.49/view

/6/ CER calculation excel sheet version 01

/6.1/ Revised CER calculation excel sheet version 02

/6.3/ Revised CER calculation excel sheet version 03

/7/ Monthly Joint Meter Reading (JMRs) (Form B) for current monitoring period

/8/ CEA CO2 Baseline Database for the Indian Power Sector Version 1.1

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

/9/ Testing Certificates for the sub station meters: (total meter-6)

Meter ID	**KBCWP-01**	
S/N	**Certificate Ref.No**	**Date of Testing**
Main meter: 6605121 Check meter: 6605122	WF-T-02	29-Sep-09
Main meter: 6605121 Check meter: 6605122	WF29	25-Jun-10
Main meter: 6605121 Check meter: 6605122	WF56	10-Jun-11

Meter ID	**KBCWP-02**	
S/N	**Certificate Ref.No**	**Date of Testing**
Main meter: 5389967 Check meter: 5389970	DVG/RT/F-WFT17/07-08/815-19	2-Jan-08

Main meter: 5389967 Check meter: 5389970	AEE//NCE/HT/MT/CT A	14-Dec-09
Main meter: 5389967 Check meter: 5389970	AEE//NCE/HT/MT/CT A	18-Oct-10
Main meter: 5389967 Check meter: 5389970	AEE//NCE/HT/MT/CT A	13-Apr-11

Meter ID	**KBCWP-03**	
S/N	**Certificate Ref.No**	**Date of Testing**
Main meter: 5463844 Check meter: 5463845	DVG/RT/F-WFT02/07-08/945-48	6-Feb-08
Main meter: 5463844 Check meter: 5463845	AEE//NCE/HT/MT/CT A	16-Apr-10
Main meter: 5463844 Check meter: 5463845	AEE//NCE/HT/MT/CT A	13-Apr-11

/10/ Commissioning Certificates of all WTGs commissioned from 29 September 2006 to 28 December 2006

/11/ Power Purchase Agreement dated 01/03/2006

/12/ Revised monitoring plan approved by CDM EB on 15/03/2011

/13/ Monthly Invoices raised by PP to BESCOM (State utility) for current monitoring period

/14/ Validation and Verification Manual version 01.2 dated 30/07/2010

/15/ Verification report and monitoring report for first monitoring period

http://cdm.unfccc.int/Projects/DB/DNV-CUK1185356859.49/iProcess/RWTUV1265623587.94/view

/16/ Validation report of project activity – Report No. 2007-1021, Revision No. 03 dated 24/10/2008

/17/ Transmission loss calculation summary reports for current monitoring period

/18/ JMRs (Form B) at 220kV metering point at Enercon substation for current monitoring period

Main reason for revision in monitoring report:

Monitoring Report Version	**Main changes reason for Revision**
Version 01,dated 05/09/2011	Webhosted Monitoring Report
Version 02,dated 01/10/2011	Total Emission reduction value is changed Calibration details of meters have been added

Monitoring Report Version	Main changes reason for Revision
	Values of electricity exported, imported and transmission losses for some months.
Version 03,dated 31/10/2011	A.2: Name of PP is corrected as per UNFCCC project webpage A.4: Technical description is updated A.5: Title of monitoring methodology is corrected B.1: Information's regarding down time is updated

9. Findings Overview

Findings Overview Summary

	CARs	CLs	FARs
Total Number raised	05	01	0

Date:	30/09/2011		Raised by:	Assessment Team	
Type:	CAR	Number:	01	Reference:	Section 03
Lead Assessor Comment:					
The value of net electricity supplied to the grid through meter for meter KBCWP-2 (56.8 MW) is not found consistent with the Form B and Invoices for following months: December 2009, April 2010, October 2010, January 2011, February 2011, April 2011 and June 2011. The value of net electricity supplied to the grid through meter for meter KBCWP-3 (12 MW) is not found consistent with the Form B and Invoices for following months: October 2010 and June 2011 Please clarify the inconsistency observed.					
Project Participant Response:				**Date:** 01/10/2011	
Inconsistency in net electricity supplied to the grid through meter KBCWP-2 (56.8 MW) for the month of December 2009, April 2010, October 2010, January 2011, February 2011, April 2011 and June 2011 has been corrected based on the Form B & Invoices. Inconsistency in net electricity supplied to the grid through meter KBCWP-3 (12 MW) for the month of October 2010 and June 2011 has been corrected based on the Form B & Invoices.					
Documentation Provided by Project Participant:					
CER calculations sheet Version 2.0 Monitoring Report Version 2.0					
Information Verified by Lead Assessor:					
Revised values of EG_y provided in CER calculations sheet Version 2.0 is checked with Form B					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 03/10/2011	
The identified inconsistencies in net electricity supplied to the grid through meter KBCWP-2 56.8 MW for the month of December 2009, April 2010, October 2010, January 2011, February 2011, April 2011 and June 2011 & meter KBCWP-3 (12 MW) for the month of October 2010 and June 2011 have been corrected in the latest submitted emission reduction calculation sheet. The assessment team have checked and matched the corrected figure from the data source viz. Form B. The reported data is consistent with the data source used and emission reduction calculations have been revised accordingly, hence closed. CAR#01 Closed.					
Acceptance and Close out by Lead Assessor:				**Date:** 03/10/2011	

Date:	30/09/2011		Raised by:	Assessment Team	
Type:	CAR	Number:	02	Reference:	Section 3.5
Lead Assessor Comment:					
It is verified that meter KBCWP-2 (56.8 MW) (Sr.No-5389967) was calibrated on 14/12/2009; it is not clear how it has been ensured that meter was working satisfactorily between 01/12/2009 to 13/12/2009? Also the calibration of meter KBCWP-3 (Sr.No-5463844) has been done on 06/02/2008 and 16/04/2010.Please clarify why the guidelines for delayed calibration (EB 52 annex 60) has not been followed while calculating the emission reductions for the delayed calibration period?					
Project Participant Response:				**Date:** 01/10/2011	

As per the meter calibration records for Meter KBCWP-2 dated 14/12/2009, both main & check meters are performing within their accuracy class, The last calibration for the meter was done on 02/01/2008 and there is a delay in annual calibration. In accordance with Annex 60, EB 52 we have applied a correction factor of +0.2% for imports & transmission loss and -0.2% for exports for the month of Dec 2009. Similarly the latest test certificates for main and check meters for KBCWP-03 between year 2008 to 2010 wasn't done annually, and calibration certificate dated 16 April 2010 clearly show that meters are performing within their accuracy class, in accordance with Annex 60, EB 52 we have applied a correction factor of +0.2% for imports & transmission loss and -0.2% for exports for the period of Dec 2009 to April 2010.
Documentation Provided by Project Participant:
CER calculations sheet Version 2.0 Monitoring Report Version 2.0 Calibration certificates.
Information Verified by Lead Assessor:
Revised monitoring report and CER sheet is checked

Reasoning for not Acceptance or Acceptance and Close Out:	**Date:** 03/10/2011

During verification it was identified that the calibration has been delayed for meter No KBCWP-2 (56.8 MW) (Sr.No-5389967), KBCWP-3 (Sr.No-5463844). The calibration has been implemented during the monitoring period in consideration and the results of delayed calibration are available. The results of the delayed calibration do not show any errors in the measuring equipment. PP has applied a correction factor viz. maximum permissible error of the instrument to the measured values, +0.2% for imports & transmission loss and -0.2% for exports; the same is in line with Para 4(a) of EB52Annex60.The error has been applied in a conservative manner such that the adjusted measured values shall result in lower baseline emissions and higher project emissions / leakage. The assessment team has checked the applied formula and calculation for correctness and the same is found to be in line with para 4 of EB52Annex60 The error has been applied to all measured values taken during the period between the scheduled date of calibration and the actual date of calibration covered in the considered monitoring period *(values in Dec 2009 for meter no KBCWP-2 (56.8 MW) (Sr.No-5389967) and values in Dec 2009 to Apr 2010 for meter no KBCWP-3 (Sr.No-5463844))*, The assessment team has checked the duration considered, applied formula and calculation for correctness, and the same is found to be in line with Para 5 of EB52Annex60. The emission reduction calculations have been revised accordingly, hence closed CAR#02 Closed.

Acceptance and Close out by Lead Assessor:	**Date:** 03/10/2011

Date:	10/10/2011		Raised by:	Assessment Team	
Type:	CL	Number:	03	Reference:	Section 03

Lead Assessor Comment:
It is found that emission reduction for current monitoring period reported in monitoring report version 02 is **173,795 tCO2** but the same was mentioned in monitoring report version 01 as **173,489 tCO2.** Please clarify the reason leading to increase in emission reductions.

Project Participant Response:	**Date:** 15/10/2011

We would like to submit to DOE that the change in emission reduction in monitoring report version 02 is due to the typo error in transmission loss & import values for the month June 2011 which were identified during the site visit and same was rectified in revised emission reduction sheet.
Documentation Provided by Project Participant:
CER calculation sheet version 2.0
Information Verified by Lead Assessor:
Revised CER calculation sheet is checked

Reasoning for not Acceptance or Acceptance and Close Out:	**Date:** 15/10/2011

It is verified from Form B and invoice for the month June 2011 that values of transmission loss (for 56.8 MW metering point**)** and import measured through meter KBCWP-03 (12 MW) was over estimated. PP has corrected the values in revised CER sheet, whose are lesser than the same reported earlier and hence leading to increase in emission reductions. Since the values reported in revised CER excel sheet is found consistent with Form B and invoices, hence accepted. CL #3 closed out.
Acceptance and Close out by Lead Assessor: **Date:** 15/10/2011

Date:	25/10/2011		Raised by:	Assessment Team	
Type:	CAR	Number:	04	Reference:	Section 2, 1.1
Lead Assessor Comment:					
Name of PP mentioned in section A.2 of monitoring report is not found consistent with the same at project webpage, please clarify the inconsistency observed.					
Project Participant Response:				**Date:** 31/10/2011	
PP name has been made consistent according to the project webpage.					
Documentation Provided by Project Participant:					
Monitoring Report version 3.0					
Information Verified by Lead Assessor:					
Name of PP is checked					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 02/11/2011	
Name of PP mentioned in section A.2 of revised MR is found consistent with the same mentioned at UNFCCC project web page. CAR #4 closed					
Acceptance and Close out by Lead Assessor:				**Date:** 02/11/2011	

Date:	25/10/2011		Raised by:	Assessment Team	
Type:	CAR	Number:	05	Reference:	Section 3.2
Lead Assessor Comment:					
Section A.4: Please clarify why Technical description diagram of project activity is not mentioned in section A.4 of monitoring report. Section A.5: Title of monitoring methodology is not consistent with the same mentioned at UNFCCC website. Section B.1: The information's provided regarding the overhaul times, downtimes of equipment ect is not inline with MR completion guidelines outlined under point 2 and 3.					
Project Participant Response:				**Date:** 31/10/2011	
Section A.4: Technical description diagram of project activity has been added as appendix 1 and reference of same has been given in section A.4 of MR. Section A.5: Title of monitoring methodology has been made consistent in section A.5. Section B.1: Information regarding the downtime, performance of WEG etc has been added as per the point 2 and 3 of section B.1 of MR guidance in revised MR.					
Documentation Provided by Project Participant:					
Monitoring Report version 3.0					
Information Verified by Lead Assessor:					
Relevant section of revised MR is checked to verify the PP response					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 02/11/2011	
PP has mentioned the Technical description diagram in section A.4 of revised MR Title of monitoring methodology is made consistent in section A.5 of revised MR with the same mentioned at UNFCCC website. Information's regarding the down time of project activity in **Appendix 2** of revised MR. Response to issues raised is found satisfactory hence accepted. CAR #5 closed.					
Acceptance and Close out by Lead Assessor:				**Date:** 02/11/2011	

Date:	25/10/2011		Raised by:	Assessment Team	
Type:	CAR	Number:	06	Reference:	Section 3.6
Lead Assessor Comment:					
Section C: It is stated that correction factor of +0.2% for imports & transmission loss and -0.2% for exports for the delayed calibration period but the same is not followed in CER calculation sheet. Section D.2: It is not clear from CER calculation sheet how the value of EGexport 188706.750 MWh is arrived.					
Project Participant Response:			**Date:** 31/10/2011		
Section C: Correction has factor of +0.2% for imports & transmission loss and -0.2% for export for the delayed calibration period has been applied in revised excel spreadsheet. Section D.2: Please refer the Emission reduction calculation sheet for the value of value of EGexport 188706.750 MWh in the CER calculation sheet version 3.0					
Documentation Provided by Project Participant:					
CER calculations sheet Version 3.0					
Information Verified by Lead Assessor:					
CER Excel sheet and revised MR is checked					
Reasoning for not Acceptance or Acceptance and Close Out:			**Date:** 02/11/2011		
PP has applied correction factor +0.2% for imports & transmission loss and -0.2% for export for the delayed calibration period has been applied in revised excel spreadsheet correctly in revised CER excel sheet. The value of EGexport 188706.750 MWh is traceable in the CER calculation sheet version 3.0. CAR #6 is closed.					
Acceptance and Close out by Lead Assessor:			**Date:** 02/11/2011		

10. Statement of Competence

Statement of Competence

Name: Ravikant Soni

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**
Technical Area(s): *TA 1.2 Energy generation from renewable energy sources*	
2. Energy Distribution	
Technical Area(s):	
3. Energy Demand	
Technical Area(s):	
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: 01/08/2011

Statement of Competence

Name: Anshul Sharma

Status

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

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)
Technical Area(s*):*

2. Energy Distribution
Technical Area(s*):*

3. Energy Demand
Technical Area(s*):*

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: 19/05/2011

Statement of Competence

Name: Ramkrishna Patil

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**
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: 30/06/2011

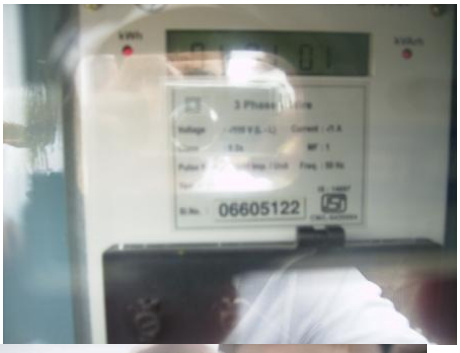
11. Photographic Evidence

Unique reference number: **KBCWP-01**

Parameter: Electricity exported and imported from all WTGs(including project WTG)

Name of equipment: Bulk Meter at 220KV

Date: 29/09/2011



Unique reference number: **KBCWP-02**

Parameter: **EGexport and EGimport**

Name of equipment: Energy Meters at 33KV Substation (Chikkabyaladakere Village)

Date: 29/09/2011

Unique reference number: KBCWP-03

Parameter: **EGexport and EGimport**

Name of equipment: Energy Meters at 33KV Substation (Bukkapatna Village)

Date: 29/09/2011

Unique reference number: ATMP02
Assessment team on site
Left is Lead Asessor/Team Leader/Local Assessor/Sectoral Scope Expert (Ravi Kant Soni) and Right is Assessor (Anshul Sharma)

Date: 29/09/2011

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