Voluntary Carbon Standard Version 2007 Verification Report

19 November 2007

Verification Report: No: INDIA-VCS-ver/236.49/2009

Name of Verification company:	Date of the issue:
Bureau Veritas Certification SAS	11/05/2009
Report Title:	**Approved by:**
VCS Verification report for Acciona Wind Energy Pvt.Ltd.	Mr. Dinesh Shetty
Client:	**Project Title:**
Acciona Wind Energy Pvt. Ltd.	29.7 MW Wind Power project in Karnataka, India

Summary:
Bureau Veritas Certification has made the verification of the 29.7 MW Wind Power project in Karnataka, India by Acciona Wind Energy Pvt.Ltd. located at Villages Anaburu and Arasinagundi in the Jagalur Taluk in the district of Davangere, in the Indian state of Karnataka on the basis of Voluntary Carbon Standard-2007.1, as well as criteria given to provide for consistent project operations, monitoring and reporting, as well as the host country criteria. Since the said project is already validated and registered as a CDM project with the UNFCC (Project reference number:1949), the scope of validation is limited to clauses 1.12, 1.13, 1.14, 8.1 and 8.2 of the VCS Project Description, as per the policy announcement from the VCS Association dated 19th March 2008. The verification scope is defined as an independent and objective review of the project description document monitoring report and other relevant documents, and consisted of the following three phases: i) desk review of the project description and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures. The first output of the verification process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project description document and the VCS monitoring report. In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in validation report and registered CDM project design document. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. *Reporting period: From 06-06-2008 to 21-11-2008* *Verified emission in the above reporting period:* *Project emissions 00 t CO2 equivalents* *Baseline emissions 20,526 t CO2 equivalents* *Emission reductions 20,526 t CO2 equivalents*

Work carried out by:	Number of pages:
Mr. H B Muralidhar and Mr. R. Reghu Kumar	27

Table of Contents

1 Introduction

Acciona Wind Energy Pvt.Ltd has commissioned Bureau Veritas Certification to verify its VCS project "29.7 MW Wind Power project in Karnataka, India" (project activity) located at Villages Anabaru and Arasinagundi in the Jagalur Taluk in the district of Davangere, in the Indian state of Karnataka on the basis of Voluntary Carbon Standard-2007.1.

This report summarizes the findings of the verification of the project, performed on the basis of Voluntary Carbon Standard-2007.1, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The verification serves as project description verification and is a requirement of all VCS projects. The verification is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant VCS 2007.1 and host country criteria are validated in order to confirm that the project description, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Verification is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of voluntary carbon units (VCUs).

1.2 Scope and Criteria

The verification scope is defined as an independent and objective review of the project design document/project description document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against VCS 2007.1 requirements and associated interpretations.

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 monitoring towards reductions in the GHG emissions.

1.3 VCS project Description

Acciona Wind Energy Pvt. Ltd. (AWEPL) is an Indian Company and a 100% subsidiary of the Spanish Acciona group of companies, i.e. Acciona Energia Internacional, S.A. and Acciona, S.A. AWEPL has implemented the project

with 18 Wind Turbines of 1.65 MW capacity each delivered by Vestas Wind Technology India Pvt. Ltd, totaling a capacity of 29.70 MW at Villages Anaburu and Arasinagundi (latitude and longitude of around 14°28' – 14°34' N and 76°20' – 76°23' E) in the Jagalur Taluk in the district of Davangere, in the Indian state of Karnataka. The project activity involves the development and operation of wind based electricity generation facilities to be connected to the grid. The objective of the project activity is to provide renewable power to the Karnataka State electricity grid and reduce greenhouse gas emissions caused by reliance on fossil fuels. The project will lead to reduced greenhouse gas emissions as it will displace electricity from fossil fuel based electricity generating systems. The project proponent and the project owner for this project activity is the one and the same and it is "Acciona Wind Energy Pvt. Ltd".

1.4 Level of assurance

Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions.

2 Methodology

The overall validation and verification, from Contract Review to Validation/Verification report & opinion, was conducted using Bureau Veritas Certification internal procedures. Since the said project is already validated and registered as a CDM project with the UNFCCC (Project reference number: 1949), the scope of the validation report is limited to clauses 1.12, 1.13, 1.14, 8.1 and 8.2 of the VCS Project Description as per the policy announcement from the VCS Association dated 19th March 2008. The verification is done based on the Monitoring Report Version 03 dated 03/04/2009, submitted by the project proponent.

2.1 Review of Document

Verification team verified the accuracy of the project description through a combination of steps consisting of review of contract related to the project activity, commissioning certificates for the WTGs, site visit and interview of the project proponent and their representatives.

2.2 Follow-up Interviews

On 23/03/2009 and 24/03/2009 Bureau Veritas Certification performed site visit and interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Acciona Wind Energy Pvt. Ltd were interviewed (see References). The main topics of the interviews are summarized in Table below.

Interviewed organization	Interview topics
Acciona Wind Energy Pvt.Ltd	*Project description* *Contribution of Project towards Sustainable Development* *Operational aspects* *Monitoring plans and Procedures.* *QA/ QC Procedures* *Internal review / verification mechanism* *Monitoring plans*
Vestas Wind Technology India Pvt Ltd	*Operation and maintenance aspects*

2.3 Resolution of any material discrepancy

The validation team could not see any material discrepancy during the validation, as the project is already registered under CDM excepting the minor change in the name of the project proponent, which is described under.

The objective of this phase of the verification is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

Findings established during the initial verification could either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CAR) is issued, where:

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

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

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

Forward Action Requests (FAR) are issued, for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

The verification team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable VCS 2007.1 requirements have been met.

The verification team as said above reviewed the project design document submitted by the project proponent to the UNFCCC, project description document as required under VCS, monitoring report and the emission reduction calculations. For the verification of the information provided in these documents, necessary interviews and supporting documentation were accessed and verified by the tam. These included the Joint meter readings in Form B, invoices raised by the project proponent, payments received from BESCOM, commissioning certificates of the WTGs, calibration certificates of meters, CDM Manual, internal audit reports etc.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in the verification protocol in Appendix A.

3 Verification Findings

3.1 Remaining issues, including any material discrepancy, from previous validation

The project activity is already registered as a CDM project on 20th November 2008 with UNFCCC project Reference number: 1949 under the project title" 29.7 MW Wind Power project in Karnataka, India". There are no issues remaining and material discrepancy in the project activity excepting that there is an alteration to the name of the project proponent with regard to the registered CDM project design document.

3.2 Project Implementation

Project activity involves installation of wind turbines and export electricity to grid. The main purpose of the

project activity is to reduce the GHG gas emissions by generating clean electricity from wind energy. Acciona Wind Energy Pvt. Ltd has installed 18 Wind Turbine Generators (WTGs) of capacity 1650 kW each of Vestas V 82 make at Arasinagundi and Anaburu villages in the Jagalur Taluk in the district of Davangere, in the state of Karnataka, India. The generated electricity is exported to the southern grid. During site visit it is noticed by the team that all the 18 WTGs were commissioned and in operation as described in the registered CDM-PDD. The team also confirmed this through verification of the commissioning certificates issued by the state utility and the power purchase agreements that the project proponent entered into with BESCOM.

3.3 Completeness of Monitoring

The project activity has applied the CDM approved methodology ACM0002, Version 06 and the monitoring plan is in accordance with this approved methodology. As required under the methodology the monitoring included the net electricity supplied to the distribution company through the KPTCL network. The reporting procedures reflect the content of the monitoring plan. The monitoring mechanism is effective and reliable as the readings are monitored jointly along with KPTCL officials. Verifiers hereby confirm that monitoring plan of the project activity is in accordance with the relevant approved methodology and as per the PDD registered under the CDM by UNFCCC in reference number 1949. The procedure for calculation of emission reductions has been explained in the PDD. Monitoring report also provide the same.

The discrepancies noticed in the initial monitoring report submitted by the project proponent are stated as CARs and CLs in the Table 2 of the verification protocol in Appendix A and the same are corrected/ responded by the project proponent in the latest version of the monitoring report.

3.4 Accuracy of Emission Reduction Calculations

The calculation of emission reductions is found to be accurate and fairly stated. The spreadsheet formulae are correctly applied, conversions are correct and there is no manual transposition errors noticed between datasets. Baseline for southern gird has been taken for arriving at emission reductions due to Project. The emission factor for the southern grid is already fixed ex ante (0.93 tCO2/MWh) and the same is correctly applied in the calculation of emission reductions. There is no evidence of major loss of generation data within the said monitoring period.

The monitoring period considered for this VCS verification is from 6th June 2008 to 21st November 2008 (both days inclusive). For this project, under VCS, the first project-crediting period will be from 6th June 2008 to 31st May 2018 with the possibility to renew this period twice. Project developer intended to go for VERs from 6th June 2008 till 21st November 2008 initially, since the first calibration post CDM registration was done along with taking the meter reading on this date. The project proponent will apply for VERs for the generation prior to this meter reading and for CERs subsequently. The project proponent will re-apply to the VCS before the end of the first crediting period in order to generate VCUs from 20th November 2018 onwards. It is assured by the project proponent in its letter to APX registry that they have no intention of claiming emission reductions being claimed under VCS program again under CDM or any other program in future.

3.5 Quality of Evidence to Determine Emission Reductions

The critical parameter used for the determination of the Emission Reductions is the net generation given in the joint meter readings for the power exported to the grid. The data pertaining to the above parameters are maintained in the identified records. All the data are in compliance with the figures stated in the revised monitoring report.

The generation readings taken for the emission reduction calculation is as per the joint monthly readings certified jointly by the KPTCL/BESCOM and the project proponent. This is also cross-verified through the invoice raised and payment received by the project proponent from the BESCOM. The metering is done by calibrated tri-vector meters of 0.2 class accuracy. The verification team checked the pre-commissioning test on metering, calibration certificates of the meters engaged to monitor and record the generation and found them calibrated update. There were no instances of any meter change or failure noticed with in this monitoring period and hence there is no uncertainty involved. The team also verified the emission factor applied for the calculations and is correct as per the CEA database, version 3 published by the Central Electricity authority, Government of India.

3.6 Management and Operational System

The Management System for the project and the organisation structures with the responsibilities has been properly identified and are in place as per the pre-defined manual. The operation and maintenance of the wind farm is vested with the WTG supplier M/s. Vestas Wind

Technology India Pvt Ltd. The daily electricity generation is monitored by competent personnel and reported to the head office for further review. The readings are recorded manually as well as electronically as stated in the monitoring plan. Periodic review being a regular practice ensures the quality assurance of the data. The data uncertainty level of the data is very low as the same is jointly monitored along with KPTCL officials. The team also verified the internal audit records to note that the internal audit is conducted locally and in Spain.

4 Verification conclusion

Bureau Veritas Certification has performed a verification of the '29.7 MW Wind Power project in Karnataka, India' project of Acciona Wind Energy Pvt. Ltd. The verification was performed on the basis of VCS criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of Acciona Wind Energy Pvt. Ltd is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the CDM PDD version 02, January 2008. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the contents of the Project Monitoring Report (Version 03) for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented and described in validated and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and the meters deployed for the measurement of generations is calibrated appropriately. The monitoring system is in place and the project is ready to generate and generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: From 06-06-2008 to 21-11-2008
Verified emission in the above reporting period:

Project emissions	*00*	*t CO2 equivalents*
Baseline emissions	*20,526*	*t CO2 equivalents*
Emission reductions	*20,526*	*t CO2 equivalents*

Appendix A - ACCIONA WIND ENERGY PVT LTD - VCS Verification Protocol

TABLE 1 VERIFICATION REQUIREMENTS

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
1 Project implementation in accordance with the registered project design document						
It is assessed if the CDM project activity has been implemented and operated as per the registered PDD						
a	Are all physical features of the proposed CDM project activity, proposed in the registered PDD, in place?	1,2,3	-	As per the registered PDD, the 29.70 MW project activity comprises of 18 units of Vestas V82 make Wind Turbine Generators (WTGs), with each WTG having a capacity of 1,650kW. During site visit on 23/03/2009 it was noticed that all the WTGs were installed as described in the registered PDD.	OK	OK
b	Have the project participants operated the proposed CDM project activity as per the registered PDD?	1,2,3	-	All the 18 WTGs were commissioned and in operation. The 10 WTGs at Anaburu were commissioned on 29/09/2008 and the 8 WTGs at Arasinagudi were commissioned on 06/06/2008. This is also verified through the commissioning certificates issued by KPTCL on 30/09/2008 and 12/06/2008 respectively. During site visit all the WTGs were in operation.	OK	OK
c	Is the proposed CDM project implemented against the description in the PDD?	1,2,3	-	The "29.7 MW Wind Power project in Karnataka, India" CDM project is implemented as described in the PDD. However it is noticed that as per the registered PDD the project participant name is given as "Accion Wind Energy Pvt. Ltd " where as in the monitoring report, it is mentioned as "Acciona Wind Energy Pvt. Ltd "	CAR 1	CAR 1
d	Was an on-site visit conducted?	1,2,3	-	The on site visit was conducted on 23/03/2009 & 24/03/2009.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
e If not, justify the rationale of the decision.	1,2,3	-	Not applicable	OK	OK
2 Compliance of the monitoring plan with the monitoring methodology					
It Is assessed if the monitoring plan of the proposed CDM project activity is in accordance with the applied methodology					
a Is the validated monitoring plan in accordance with the approved methodology applied by the proposed CDM project activity?	1,2,3	-	The monitoring plan is in accordance with the approved methodology applied (ACM0002, Version 6)	OK	OK
b If no, was a request for revision of the monitoring plan was done? (The DOE may request for revision of the monitoring plan covering the monitoring period under verification, for approval by the Board)	1,2,3	-	Not applicable	OK	OK
c Are there any monitoring aspects of the project activity that are not specified in the methodology, particularly in the case of small-scale methodologies (e.g. additional monitoring parameters, monitoring frequency and calibration frequency)?	1,2,3	-	This is a windmill project and the monitoring included the net electricity supplied by the project activity. The monitoring frequency and the calibration frequency are defined and carried out as per the CDM manual in place for the project activity and complying to the local regulatory requirements.	OK	OK
3 Compliance of monitoring with the monitoring plan					
It is assessed if monitoring of reductions in GHG emissions to result from the proposed CDM project activity is implemented in accordance with the monitoring plan contained in the registered PDD or the accepted revised monitoring plan.					
a Have the monitoring plan and the applied	1,2,3	-	The following deviations from the monitoring plan of		

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
methodology been properly implemented and followed by the project participants?			the registered PDD are noticed during the site visit. 1. It is said in the registered monitoring plan that "The project developer will install all metering and check metering facilities within the plant premises as well as in the grid substation where exported power is connected to the grid." However it is noticed during site visit that the project developer has installed the SCADA systems at the wind farm sites and the main and check meters are provided only at the substation. 2. It is also said in the registered monitoring plan that "All instruments carry tag plates, which indicate the date of calibration and the date of next calibration". However the same is not in place during site visit.	CAR 2	CAR 2
b Have all parameters stated in the monitoring plan, the applied methodology and relevant CDM Executive Board decisions been sufficiently monitored and updated as applicable, including:					
i Project emission parameters?	1,2,3	-	Since it is a windmill project, there is no project emission and hence not applicable.	OK	OK
ii Baseline emission parameters?	1,2,3	-	The electricity generated and supplied to the grid is contineously monitored by the trivector meters (main meters and check meters) installed at the Hiremallanahole substation. The monthly readings from these meters are recorded by the BESCOM officials jointly with company representatives.		
iii Leakage parameters?	1,2,3	-	It is a windmill project and no transfer of equipment from or to the project activity, there is no leakage	OK	OK
iv Management and operational system: the	1,2,3	-	It is verified that the responsibilities and authorities for	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan?			monitoring and reporting are clearly defined in the CDM manual in place for the project activity and the same is found followed by the project participant		
c Is the accuracy of equipment used for monitoring in accordance with the relevant guidance provided by the CDM Executive Board and are equipment controlled and calibrated in accordance with the monitoring plan?	1,2,3	-	The initial calibration of the meters were carried out on 23/01/2005 and 20/09/2008, as per the report dated 25/01/2008 22/09/2008. However it is said in the VCS monitoring report that the main meter and check meter were calibrated before installation on 25th January 2008 by KPTCL for Arasinagundi and on 22nd September 2008 by KPTCL for Anaburu. The meters used for monitoring the generation are trivector meters of 0.2 class and are calibrated every year. However it is seen that the pp has calibrated all the meters on 21/11/2008 and again the quarterly calibration is carried out on 25/02/2009. The calibration reports dated 22/11/2008 and 03/03/2009 from KPTCL are verified and it is certified that the meters are recording readings within the permissible limit of + /- 0.2 . It is said in the monitoring report that during monthly meter readings, the variation between the main and check meter has been less than +/- 2% and that the maximum variation permissible for meters of 0.2% accuracy class is 2%. It is not clear/transparent on what is the basis for this 2% and the evidence for the same could not be verified.	CL 1 CL 2	CL 1 CL 2
i Are monitoring results consistently recorded	1,2,3	-	The generation is contineously recorded by the	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
as per approved frequency?			trivector meters. However the monthly readings jointly recorded by the BESCOM officials and company representatives are taken for the emission reduction calculations as described in the registered PDD. These are recorded in soft and hard copies and archived.		
ii Have quality assurance and quality control procedures been applied in accordance with the monitoring plan monitoring plan?	1,2,3	-	As per the registered PDD, the QA/QC procedures to be applied include the calibration of the energy meters as per the applicable law. Though the common practice is to do calibration every year, it is noticed that the pp has carried out the calibration on a quarterly basis within this monitoring period as described in 3 c above..	OK	OK
4 Assessment of data and calculation of greenhouse gas emission reductions					
It is assessed if GHG emission reductions achieved by / resulting from the proposed CDM project activity are calculated applying the selected methodology					
a Is a complete set of data for the specified monitoring period is available? (If no, i.e., only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, the DOE shall opt to either make the most conservative assumption theoretically possible in finalizing the verification report, or raise a request for deviation if appropriate).	1,2,3	-	The complete set of data for the specified monitoring period is available as per the monitoring report. This also tally with the monthly generation reports in Form B signed jointly by the BESCOM, KPTCL and company representative.	OK	OK
b Has information provided in the monitoring report	1,2,3	-	The information provided in the monitoring report are	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
been cross-checked with other sources such as plant log books, inventories, purchase records, laboratory analysis?			cross verified as follows: 1. Commissioning of WTGS: Purchase orders, Commissioning certificates by KPTCL. 2. Calibration: PPA, Calibration reports issued by KPTCL 3. Generation: Joint meter readings in Form B, invoice raised by project participant to BESCOM and the payment received. 4. Operation & maintenance: O&M contract with Vestas and monthly O&M reports 5. Project management: CDM manual and internal audit reports. (internal audit reports in Spanish to be translated and given)		
c Have calculations of baseline emissions, proposed CDM project activity emissions and leakage, as appropriate, been carried out in accordance with the formulae and methods described in the monitoring plan and the applied methodology document?	1,2,3	-	The calculations of baseline emissions are carried out as per the formulae as described in the registered PDD. As per the information on UNFCCC website, the project is registered on 20/11/2008 and the crediting period starts from 20/11/2008. It is noticed that in the first page of the VCS monitoring report and inside the monitoring report at various places it is said that the monitoring period is from June 1st 2008 to 21st November 2009 (Inclusive of both days). However from commissioning certificates it is noted that the first set of 8 WTGs at Arasinagudi were commissioned on 06/06/2008 only. Hence the monitoring period mentioned offshoots the actual commissioning date itself and overlaps the CDM crediting period. (monitoring period starts on 1st June???). In the baseline emission calculations it is	CAR 3	CAR 3

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			not transparent on the start date considered for the month of June and September 2008. Further on discussion during site visit it was informed by the project participant that the generation up to 21st November 2008 is considered for the calculations, though the crediting period for CDM starts from 20th November 2008. However the project participant is claiming the CERs from 21st November wherein a calibration is done for the energy meters and the generation prior to the calibration is recorded. This is not explained in detail transparently in the monitoring report with along with justification for no double counting.		
d Have any assumptions used in emission calculations been justified?	1,2,3	-	There are no assumptions involved and the emission factor of 0.93 fixed ex ante as in the registered PDD is used	OK	OK
e Have appropriate emission factors, IPCC default values and other reference values been correctly applied?	1,2,3	-	Emission factor of 0.93 fixed ex ante as in the registered PDD is used	OK	OK

TABLE 2: RESOLUTION OF CORRECTIVE ACTION / FORWARD ACTION / CLARIFICATION REQUESTS.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CAR 1 It is noticed that as per the registered PDD the project participant name is given as "Accion Wind Energy Pvt. Ltd " where as in the monitoring report, it is mentioned as "Acciona Wind Energy Pvt. Ltd "	1 c Table 1	Name is changed post final PDD. We have subsequently sent the intimation vide email as well as hard copy documents to UNFCCC for which relevant proof of receipt by UNFCCC has been provided to the DoE BvQI.	It is verified that the project proponent has intimated about the name change to UNFCCC and the same is confirmed through reply mail. The team also verified the MOA, MOC and the incorporation certificates to note that there is no change in the management. Hence the CAR is closed.
CAR 2 The following deviations from the monitoring plan of the registered PDD are noticed during the site visit. It is said in the registered monitoring plan that "The project developer will install all metering and check metering facilities within the plant premises as well as in the grid substation where exported power is connected to the grid." However it is noticed during site visit that the project developer has installed the SCADA systems at the wind farm sites and the main and check meters are provided only at the substation	3 a Table 1	1. Separate metering facilities have been installed in the wind wind farm in Arasinagundi (phase i) and these have not been installed in the wind farm in Anabaru (phase ii) as per BESCOM. The metering for both wind farms for payment purpose is at the bulk metering point at the common sub-station in Hiremallanahole only which is owned by us and exclusively dedicated to these two wind farms. Billing and payment by bescom is happening as per	Though the meters are installed at the Arasinagundi site,lit is not yet installed at Anaburu it is not installed. However the metering for both the sites is done at the bulk metering point at Hiremallanahole, based on which only the JMR (Form B) is issued by KPTCL and invoice is raised by the project proponent. As such even if meter is installed, it may not be considered for the purpose of accounting of the generations by the state utility. Hence the team accepted the explanation of the project proponent and closed this CAR.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
at the substation. It is also said in the registered monitoring plan that "All instruments carry tag plates, which indicate the date of calibration and the date of next calibration". However the same is not in place during site visit.		bescom is happening as per this metering only though BESCOM takes the meter reading at the meter installed at arasinagundi (form b enclosed and photograph to follow in the week of 6-apr-09) it is redundant for metering and billing. bescom finds it unnecessary to do the metering at the wind farm because there are no multiple owners of wtgs within the wind farms connected to the sub-station meter where the billing takes place which is the case in most wind farms in india. We exclusively own the sub-station and the meters are for our project only. tags have been installed and proof in the form of photos has been provided subsequently to bvqi.	After indicating about the missing tags during site visit, the project proponent has provided the tags for the meters and the photographs of the same are submitted to the team as evidence. Hence this CAR is closed.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
CAR 3 It is noticed that in the first page of the VCS monitoring report and inside the monitoring report at various places it is said that the monitoring period is from June 1st 2008 to 21st November 2009 (Inclusive of both days). However from commissioning certificates it is noted that the first set of 8 WTGs at Arasinagudi were commissioned on 06/06/2008 only. Hence the monitoring period mentioned offshoots the actual commissioning date itself and overlaps the CDM crediting period. (monitoring period starts on 1st June???). In the baseline emission calculations it is not transparent on the start date considered for the month of June and September 2008. Further on discussion during site visit it was informed by the project participant that the generation up to 21st November 2008 is considered for the calculations, though the crediting period for CDM starts from 20th November 2008. However the project participant is claiming the CERs from 21st November wherein a calibration is done for the energy meters and the generation prior to the calibration is	4 c Table 1	Report is revised with suggested date corrections.	Corrections carried out in the revised monitoring report and explanation included for the period of monitoring and ensuring no double counting. Hence the CAR is closed.

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
recorded. This is not explained in detail transparently in the monitoring report with along with justification for no double counting.			
CL 1 The initial calibration of the meters were carried out on 23/01/2005 and 20/09/2008, as per the report dated 25/01/2008 22/09/2008. However it is said in the VCS monitoring report that the main meter and check meter were calibrated before installation on 25th January 2008 by KPTCL for Arasinagundi and on 22nd September 2008 by KPTCL for Anaburu.	3 c Table 1	The initial calibration was done "after" meter installation at Hiremallanahole substation. The statement in the Monitoring Report is modified accordingly and revised version is enclosed.	The corrections are carried out in the revised monitoring report and hence the CL is closed.
CL 2 It is said in the monitoring report that during monthly meter readings, the variation between the main and check meter has been less than +/- 2% and that the maximum variation permissible for meters of 0.2% accuracy class is 2%. It is not clear/transparent on what is the basis for this 2% and the evidence for the same could not be verified.	3 c Table 1	The PPA casts the responsibility on BESCOM for checking the deviation between Main and Check meters such that they are within "permissible limits" without expressly stating what these are. BESCOM has been taking the monthly meter reading and paying us as per the Main meter which implies that any difference between Main and Check meter is within permissible limits. We have only been verbally informed by	The project proponent has submitted the letter of clarification submitted by them to KPTCL regarding the permissible limit. However there was no reply from KPTCL. However the project proponent is doing quarterly calibration to ensure proper functioning of the meters and there has not been any meter change / meter failure during this monitoring period. Since the JMR readings are the basis for the emission reduction calculations

Draft report clarifications and corrective action requests by verification team	Reference to checklist question in Periodic Verification Checklist	Summary of project owner response	Verification team conclusion
		BESCOM that these limits are +/- 2%. We have formally written to BESCOM to confirm the same – response is awaited. We have no control over BESCOM to elicit a response. Our assumption is that since BESCOM is routinely verifying the meter readings and paying us, any differential is within limits and acceptable especially since they are also doing quarterly calibration based on our request.	for the emission reduction calculations and the project proponent has provided the main meter and check meter separately for each of the sites Anaburu and Arasinagundi at the bulk metering point at the substation, from which only the readings are taken for the JMR, providing additional meters will in no way be helpful for the generation of JMRs. Hence the verification team accepted the explanation of the project proponent and closed the CL.

Ref: 1. PDD, version 02 , January 2008.
2. Draft first monitoring report , version 01 dated 16/03/2009.
3. Monitoring report version 01 dated 24/03/2009

Appendix B

Abbreviations

ACM	*Approved Consolidated Methodology*
AWEPL	*Acciona Wind Energy Pvt. Ltd*
BESCOM	*Bangalore Electricity Supply Company*
CAR	*Corrective Action Request*
CER	*Certified Emission Reductions*
CDM	*Clean Development Mechanism*
CL	*Clarification Request*
CO2	*Carbon Dioxide*
DOE	*Designated Operational Entity*
FAR	*Forward Action Request*
GHG	*Green House Gas(es)*
HTSC	*High Tension Service Connection*
I	*Interview*
IETA	*International Emissions Trading Association*
JMR	*Joint Meter reading*
KPTCL	*Karnataka Power Transmission Company Limited*
MoV	*Means of Verification*
MP	*Monitoring Plan*
PCF	*Prototype Carbon Fund*
PD	*Project Document*
PDD	*Project Design Document / Project Description Document*
UNFCCC	*United Nations Framework Convention for Climate Change*
VVM	*Validation and Verification Manual*
VCS	*Voluntary Carbon Standard*
VCU	*Voluntary Carbon Units*
VWTIPL	*Vestas Wind Technology India Pvt Ltd*
WTG	*Wind Turbine Generator*

Appendix C

References

Documents submitted by Acciona Wind Energy Pvt. Ltd

/1/ *VCS PD, dated 24/03/09 submitted by Acciona Wind Energy Pvt. Ltd and revised on 11/05/09.*

/2/ *CDM PDD version no: 02 dated January 2008*

/3/ *CDM Validation report no: 2007-1094, Revision 01 dated 05/06/2008*

/4/ *Monitoring report version 01 dated 16/03/09, 24/03/09 and latest version 03 dated 03/04/2009*

/5/ *Memorandum of Articles of Acciona Wind Energy Pvt. Ltd dated 6/09/2006*

/6/ *Certificate of Incorporation by Registrar of Companies, identity number: U40102KA2006PTC047750*

/7/ *Power purchase agreements with BESCOM dated 02/05/08 for Anabaru and 17/03/08 for Arasinagudi*

/8/ *Calibration certificates of the meters dated 22/11/2008 and 1st quarter calibration certificate dated 03/03/2009.*

/9/ *Pre commissioning test on 66 KV metering, report dated 25/01/2008*

/10/ *Monthly Generation reports of the WTGs of Acciona Wind Energy Pvt. Ltd for the months June – November 2008*

/11/ *CDM Manual rev 01 dated 30/05/2008*

/12/ *Training records dated 04/02/09*

/13/ *WTG commissioning certificates dated 12/06/2008 and 30/09/2008*

/14/ *Operation and maintenance records of Arasinagundi and Anaburu sites*

/15/ *Invoices raised from Acciona Wind Energy Pvt. Ltd dated 07/07/08 ;07/08/08; 05/09/08; 06/10/08; 07/11/08; 06/12/08*

/16/ *Payments received against the invoices from BESCOM dated 26/08/08; 04/09/08; 20/09/08; 19/12/08*

/17/ *O&M contract with Vestas dated 27/04/2007 for Arasinagundi site*

/18/ *O&M contract with Vestas dated 20/09/2007 for Anaburu site*

/19/ *Internal audit certificate dated 01/04/2009*

/20/ *E mail communication regarding name change to UNFCCC from the project proponent and the reply mail from UNFCCC dated 09/04/09*

/21/ *Declaration by Acciona Wind Energy Pvt Ltd to APX Registry, dated 11/05/2009.*

Other documents referred for validation

/22/ *Voluntary Carbon Standard Programme guidelines dated 18/11/2008*

/23/ *VCS Guidance Document, Version 1.1 dated 12/03/2009*

Persons interviewed:

List persons interviewed during the validation or persons that contributed with other information that are not included in the documents listed above.

/1/ *Mr. Prashanth Vittal. P, Director-Projects & Operations, Acciona Energy*

/2/ *Ms. Nuria Iturriagagoitia, Acciona Energy*

/3/ *Mr. Rajnish Sapra, CFO, Acciona Energy*

/4/ *Ms. Magdalena Garcia, Director-Regulation, Acciona Energy*

/5/ *Mr. Nilanjan Sinha, Dy. Financial Controller, Acciona Energy*

/6/ *Mr. Shiva Kumar, Site Manager, Vestas Wind Technology India Pvt Ltd*

Appendix D

Curricula vitae of the DOE's verification team members

H B Muralidhar: *(Team Leader) Lead auditor in Bureau Veritas Certification for Environment Management System, Quality Management System and Occupational Health and Safety Management System.Graduate in Electrical Engineering with 25 years of experience power generation and distribution related fields as well as in management system auditing. He is the Lead auditor for Environmental Management System, Quality Management system and Occupational Health and Safety Management System. He has undergone intensive training on Clean Development Mechanism. He is the technical expert & conducted Validation / Verification for more than 50 CDM Projects*

R. Reghu Kumar: *(Team Member) Lead auditor in Bureau Veritas Certification for Environment Management System, Quality Management System and Occupational Health and Safety Management System. Post graduate in Environmental Engineering, Management and certified Project Management Professional from PMI, Pennsylvania, USA, with 20 years of work experience, which include teaching, Environmental Management & Monitoring as part of the environmental regulatory authority and Management system auditing with exposure to variety industrial processes. He has undergone intensive training on Clean Development Mechanism and involved in validation / verification of CDM projects.*

Dinesh Shetty *(Internal Reviewer) A Chemical Engineer with over all 17 years of experience. He has worked with National Productivity Council of India as Project Consultant and trainer for projects in the field of Environment Management for thirteen years. He is working as Lead auditor and trainer in Bureau Veritas Certification for Environment Management System, Quality Management System and Occupational Health and Safety Management System. He has undergone intensive training on Clean Development Mechanism and involved in validation / verification of CDM projects. He is also a Lead Tutor for CDM.*