VAJRAKARUR WIND POWER PROJECT IN ANDHRA PRADESH

Document Prepared By

SGS United Kingdom Limited

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Summary:

SGS United Kingdom Ltd has performed the verification of the project "Vajrakarur wind power project in Andhra Pradesh" bearing CDM UNFCCC No. 9650 and VCS ID PL1214 against VCS Standard Version 3.4. The verification includes confirming the implementation of the monitoring plan of the registered CDM PDD Version 02.8 dated 23/05/2013 and the application of the monitoring methodology as per ACM0002 Version 13.0.0. A site visit was conducted to verify the data submitted in the Monitoring Report.

The project activity comprises of 30 Wind Electric Generators (WTGs) of Suzlon Energy Limited's (SEL) S88 model, with a capacity of 2.1 MW each. Total installed capacity of the project activity is 63 MW. The generated electricity is being supplied to the Southern Grid of India. Thus, the project contributes towards reducing GHG emissions by replacing the same amount of electricity from the Southern Grid which would otherwise be generated by a fossil fuel based power plant.

The report describes a total of 05 findings which include:

- 05 Corrective Action Requests (CARs)
- 00 Clarification Requests (CLs)
- 00 Forward Action Requests (FARs)

All findings have been closed satisfactorily and have been discussed in Annex 2 of this report.

SGS confirms that the project is implemented in accordance with the registered CDM PDD, version 02.8, dated 23/05/2013. 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 validated 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 **68,771tCO_2e** emission reductions during period 31/03/2012 to 10/06/2013 (both days included).

Abbreviations

ACM	Approved Consolidated Methodology
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CL	Clarification Request
DISCOM	Distribution company
EB	Executive Board
EPC	Engineering and Procurement Contractor
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse Gases
ISO	International Organization for Standardization
JMR	Joint Meter Report
LCS	Local Controller System
L&T	Larsen & Toubro
MP	Monitoring Period
MR	Monitoring Report
MW	Mega Watt
MWh	MegaWatt hour
NEWNE	Integrated Northern, Eastern, Western, and North-Eastern regional grids
OM	Operating Margin
O&M	Operation & Maintenance
PD	Project Description
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
QA/QC	Quality Assurance/Quality Control
tCO_{2e}	Tonnes of Carbon Dioxide
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCS PD	VCS Project Description
VCU	Verified Carbon Unit
WTG	Wind Turbine Generator

TABLE OF CONTENTS

1 INTRODUCTION

1.1 Objective

SGS United Kingdom Ltd has been contracted by M/s Mytrah Vayu (Pennar) Private Limited (MVPPL) to perform an independent verification of its project "Vajrakarur wind power project in Andhra Pradesh" (CDM UNFCCC No. 9650)[/8/] against VCS Standard Version 3.4[/1/]. The assessment team have reviewed the GHG data collected to date for the period from 31/03/2012 to 10/06/2013 (both days included).

The purposes of this verification exercise are, by review of objective evidence, to independently review:

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

1.2 Scope and Criteria

This engagement covers the VCS verification of emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of "Vajrakarur wind power project in Andhra Pradesh" as per the registered CDM PDD, version 02.8 dated 23/05/2013 and gap validation of VCS PD version 04 dated 20/04/2014[/4/].

Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Our examination includes assessment, on a test basis, of evidence relevant to the amounts and disclosures in relation to the project's GHG emission reductions for the defined reporting period.

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 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements as selected by the Client.

1.4 Summary Description of the Project

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:	Vajrakarur wind power project in Andhra Pradesh
UN Registration No.	9650
MP Covered in this Report	31/03/2012 to 10/06/2013
Project Participants	M/s Mytrah Vayu (Pennar) Private Limited (MVPPL)

Location of the Project Activity:	The project activity is located in Vajrakarur village, Anantapur district of Andhra Pradesh state, India.

The project activity involves electricity generation by WTGs and supplying the generated electricity to the Southern Grid. This is a renewable energy generation, which replaces the fossil fuel dominated grid connected electricity generation. The project activity is resulting in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

The project activity comprises of 30 Wind Electric Generators (WTGs) of Suzlon Energy Limited's (SEL) S88 model, with a capacity of 2.1 MW each. This was checked by the assessment team during the project site visit. This information was also found to be consistent as per the information as mentioned in the registered PDD, version 02.8, dated 23/05/2013. The WTGs have been commissioned between 31/03/2012 and 20/12/2012. The same was verified against the registered CDM PDD[/9/] and commissioning certificates[/15/] and was found to be correct.

All 30 WTGs are fully functional and the assessment team verified this during the site visit.

2 VERIFICATION PROCESS

2.1 Method and Criteria

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

In the first stage, SGS completed a strategic review and risk assessment of the projects activities and processes in order to gain a full understanding of:

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

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

Using the Verification checklist, SGS verified the implementation of the monitoring plan and the data presented in the Monitoring Report/3/ for the period in question. This involved a site visit and a desk review of the Monitoring Report/3/. This verification report describes the findings of this assessment.

2.2 Document Review

The registered CDM PDD/9/(version 02.8, dated 23/05/2013),CDM Validation report/10/, VCS MR/3/; VCS PD/4/ and additional supporting documents related to the project performance submitted by the client were reviewed. A complete list of all documents reviewed is mentioned in Annex 1 of this report.

2.3 Interviews

The verification team has carried out interviews in order to verify the information included in the project documentation and to gain additional information regarding the compliance of the project with the VCS requirements. Before, during and after the on-site visit, the verification team has interviewed the representatives of the PP to confirm selected information and to clarify issues identified during the document review and the site visit. Representatives of Suzlon Energy Limited's (SEL) (O&M contractor) were also interviewed. The names and designations of the personnel interviewed are mentioned in section 3.4 below.

The main topics covered during the interview are as follows:

- General Aspects of the project
- Project Implementation
- Equipment and operation
- Staff Training procedures
- Calibration procedures

- Monitoring & Measuring System
- Data collection, recording and archiving procedure
- QA/QC procedures
- VCS documentation
- Emission reduction calculations

2.4 Site Inspections

As part of the verification, an on-site inspection has been performed by the Lead Assessor; Local Assessor and Sectoral Expert (TA1.2). The site visit was carried out on 11/01/2014. During the site visit, representatives of the PP and SEL (O&M contractor) were interviewed; i.e. personnel responsible for monitoring of the project activity, data collection and management, and QA/QC procedure. The details of the people interviewed and the topics discussed are mentioned in the table below:

Location: The project activity is located at Nadurbhar, Maharashtra State, India.	**Date:** 11/01/2014
Coverage	**Source of Information / Persons Interviewed**
Electricity Generation Records (monthly energy statements, Invoices and credit notes) Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure	Mr. Anshu Yadav (Executive-MEIL) Mr.Suresh. D.(Assistant Manager, SEL)
Monitoring and measuring system • Collection of measurements • Observations of established practices • Data Verification of monitoring parameters	Mr. Anshu Yadav (Executive-MEIL) Mr.Suresh. D.(Assistant Manager, SEL)
QA/QC procedures, data management, internal audits to maintain data quality & reliability, maintenance Practices Consideration of monitoring period, monitoring methodology, project documentation and emission reduction calculations	Mr. Anshu Yadav (Executive-MEIL) Mr.Parmanand(Executive,MEIL)
Discussion to clarify issues identified during the	Mr. Anshu Yadav (Executive-

document review and the site visit through the findings document	MEIL)

2.5 Resolution of Findings

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

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

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

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

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

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

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.

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

No clarification requests or forward action request was raised during the current verification. However 05 corrective action requests have been raised during the verification process. The summary of findings have been provided under Appendix 2 of this report.

2.5.1 Forward Action Requests

No forward action request has been raised during this verification.

2.6 Eligibility for Validation Activities

Not applicable to this project activity.

3 VALIDATION FINDINGS

The site visit to the project activity was conducted on 11/01/2014 (i.e. after 04/04/2013);

The requirement in clause 5.2.3 of the VCS standard 3.4 which states "*The project shall be listed on the project pipeline before the opening meeting between the validation/verification body and the project proponent (such opening meeting representing the beginning of the validation process). The validation/verification body is responsible for checking that the project is listed on the project pipeline and shall not conduct the opening meeting or otherwise begin validation until such time as the project is listed*".

The PP listed their project activity in the VCS pipeline on 18/12/2013/21/ i.e. prior to conducting opening meeting on 11/01/2014; hence it is accepted.

This project activity is registered under the CDM (UNFCCC No. 9650)/8/ on 11/06/2013. Hence, as per section 3.11.9 (paragraph 1) of the VCS Standard Version 3.4/1/ a gap validation has been carried out, which has been described in detail in below section 3.1.

3.1 Participation under Other GHG Programs

As per the requirement of section 3.11.9 (paragraph 1) of the VCS Standard Version 3.4/1/, the PP has submitted a VCS PD/4/ in which the cover page and sections 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 have been completed. In the submitted VCS PD, the PP has completed only the section mentioned above providing the necessary information and deleted the guidance. The other sections are mentioned as not applicable.

In section 1.2 of the VCS PD/4/, it is mentioned that the project activity is a renewable energy project i.e. it falls under sectoral scope 1 and has confirmed that the project is not a grouped project. This was confirmed from the registered CDM PDD/9/, CDM validation report of the project activity/10/ and physical inspection by the assessment team during the site visit.

The contact details and roles/responsibilities of the PP have been mentioned in section 1.3 of the VCS PD/4/. The project is operated and managed by Suzlon Energy Limited. This has been confirmed from the registered CDM PDD (version 02.8, dated 25/03/2013) and site visit observations. In section 1.5 of the VCS PD/4/, the start date of the project has been mentioned as 31/03/2012 which is the date of commissioning of the first WTG. This was confirmed by checking the commissioning certificates/15/ of all the WTGs in the project. The assessment team confirms that the PP has correctly identified the start date of the project as per the definition of the start date as mentioned in section 3.7.1 of the VCS Standards, Version 3.4/1/.

In section 1.6 of the VCS PD[/4/], the start and end dates of the crediting period is mentioned as 31st March 2012 to 30th March 2022 respectively. The start date is the date of commissioning[/15/] of the first WTG i.e. the date on which the project began generating GHG emission reductions. The end date of the first crediting period is 10 years after the start date of the crediting period, i.e., 30th March 2022 The choice of crediting period and its validity was found to be in line with the requirements of section 3.8.1, 3.8.2 & 3.8.3 of the VCS Standard Version 3.4[/1/]. Furthermore, the PP has submitted a declaration[/20/] stating that the project shall not claim credits for the same GHG emission reduction under the VCS and the CDM. It is understood that the client will either claim under VCS or under CDM during the CDM crediting period. This satisfies the requirements of section 3.11.6 of the VCS Standard Version 3.4[/1/]. Thus the assessment team is of the opinion that the PP has correctly identified the start date of the crediting period and the end date of crediting period, further PP has also obeyed the requirements of VCS standard Version 3.4[/1/] regarding crediting period (section 3.8.1, section 3.8.2, section 3.8.3, section 3.11.6, and 3.11.7).

In section 1.7 of the VCS PD[/4/], the scale of the project has been indicated as the category 'project' and the estimated amount of GHG reductions per year has been mentioned as has been mentioned as 124,363 tCO2e . This was checked from the registered PDD of the project activity, version 02.8 dated 23/05/2013. Hence, as per section 3.9.1 of the VCS Standard Version 3.4[/1/], the PP has correctly identified the scale of the project as 'project', as the annual GHG removal by the project activity is less than 300,000 tCO2e /year.

The details of the project location have been mentioned in section 1.9 of the VCS PD[/4/]. The PP has indicated the project location by mentioning the geographical co-ordinates of each WTG, which allows for unique and clear identification of the project activity. The range of coordinates was verified using Google maps to confirm the project location. The project location has already been validated during the CDM validation of the project activity and has been confirmed from the validation report[/10/]. The coordinates have also been checked against the registered CDM PDD[/9/] and during the site visit and are found to be consistent.

Section 1.10 of the VCS PD[/4/] states that the project is a Greenfield wind power project at a site where there was no renewable energy power plant operating prior to the implementation of the project activity. Also, as the project is a renewable energy project, electricity generated through this project does not emit any GHGs. It has already been validated and reported in the CDM validation report[/10/], during the CDM validation, that this project is a new installation. Also, since it is a wind power project there are no GHG emissions associated with this project and hence it is confirmed that the project has not been implemented to generate GHG emissions for the purpose of their subsequent reduction.

The PP has submitted the commissioning certificates[/15/] for all WTGs involved in the project and the PPA[/16/] signed specifically for this project, as evidence of right of use, as mentioned in section 1.12.1 of the VCS PD[/4/]. These documents have been checked to confirm the ownership of the project. This has also been validated and reported in the CDM validation report[/10/] of this project activity. Hence it is confirmed that the PP has the right to all GHG emission reductions generated by the project during the project crediting period.

The PP has stated in section 1.12.2 of the VCS PD[/4/] that project activity does not reduce GHG emissions from activities that are included in emissions trading program or any other mechanism that includes GHG allowance trading. The PP has provided a declaration[/20/] confirming the same.

The PP has mentioned in section 1.12.3 of the VSC PD[/4/] that the project activity has not sought or received another form of GHG-related environmental credit. The PP has provided a declaration[/20/] confirming the same. The possibility of participation of the project activity in REC programme in India was also checked and PP confirmed through the submitted undertaking[/20/] that the project was not being registered under the REC programme for the period of the current monitoring period as referred from the web-link (https://www.recregistryindia.nic.in/index.php/general/publics/registered_regens). This is found to be in line with the requirements stipulated under section 3.11.3 of VCS standard version 3.4[/1/], thus acceptable.

The PP has stated that section 1.12.4 of the VCS PD[/4/] that project activity has been registered under the CDM (UN No. 9650) on 11/06/2013. This was confirmed by checking the UNFCCC project webpage[/8/] for this project activity. Even though the project has been registered under the CDM, it shall not claim credits for the same GHG emission reduction under the VCS and the CDM. This was confirmed through a declaration[/20/] submitted by the PP and hence accepted by the assessment team.

In section 1.13 of the VCS PD[/4/] the PP has provided additional information relevant to the project. The project is not a grouped project and hence the identification of eligibility criteria for the inclusion of new instances of each project activity is not applicable. In compliance with the applied methodology, leakage has not been considered for the project activity. This has already been validated and reported in the CDM validation report[/10/]. Hence the description of the leakage management plan and implementation of leakage and risk mitigation measures is not applicable. The PP has also confirmed that no commercially sensitive information has been excluded from the public version of the project description; hence this section is not applicable.

3.2 Methodology Deviations

Not applicable as no methodological deviations are found.

The assessment team confirms that the monitoring plan is in accordance with the approved consolidated methodology ACM0002[/6/] Version 13.0.0 which was applied to the project activity and that the monitoring has been carried out in accordance with the monitoring plan. ACM0002 version 13.0.0 was the latest methodology available at the time of registration. The same is confirmed from the UNFCCC website all the parameters used in calculation of net quantity of electricity exported to the grid by project have been verified against the revised monitoring plan and found to be complete and correct.

3.3 Project Description Deviations

Not applicable as no new project activity instances are included in the project activity. During the site visit to the project activity, it is confirmed that the implementation of the project activity is in accordance with the project description mentioned in the CDM registered PDD[/9/].

3.4 Grouped Project

The assessment team confirmed that the project is not a grouped project and hence this is not applicable to this project activity.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project has been implemented; all WTGs were commissioned and are in operation as described in the registered CDM PDD[/9/] (Version 02.8, dated 23/05/2013). The same has been verified during the site visit. The first WTG has been commissioned on 31/03/2012 and the last WTG on 20/12/2012. The commissioning of all the WTGs have been verified against their commissioning certificates[/15/]. The commissioning has already been validated and reported in the CDM validation report[/10/] of this project activity.

The monitoring of the project activity is found to conform with the monitoring methodology described in ACM0002, version 13.0.0[/6/]; monitoring plan indicated in the registered CDM PDD[/9/] and the VCS MR[/3/] for the current monitoring period of 31/03/2012 to 10/06/2013.

The monitoring mechanism is effective and reliable. During the site visit, personnel involved at various levels of the operation of the project activity have been interviewed to confirm that the plant personnel are conscious of the importance of the monitoring activities. The on-site verification of the plant records also substantiates consistency in recording and reporting of monitored data.

The required monitoring systems have been installed and are operational. The meters comply with appropriate quality standards applicable for the used technology. The accuracy class of the meters

installed for the project activity was checked against the registered CDM PDD[/9/] and cross-checked against the signed PPA[/16/] for the project activity. The meter details have been described in section 4.2 of this report. The supporting records of monthly JMR[/13/] and monthly invoices[/14/] for the entire monitoring period were checked and found to be sufficient to enable verification of emission reductions.

The parameter $EG_{PJ, y}$ (Net Electricity Supplied to the grid by the project activity) :

The net electricity supplied to the grid by the project activity is a calculated value. The project activity comprises of 30 WTGs, with all the WECs involved in the project activity connected on to different feeders. One main and one back-up meter are connected to each feeder involved in the project activity. The net electricity supplied to the grid is the difference of the Electricity exported by the project activity to grid and the electricity imported from the grid the by project activity after apportioning of the transmission losses between 33Kv metering point (Cluster meter) & 220 Kv metering point (Bulk metering point). Same has been discussed with the person responsible for the monitoring and found in line with the procedure mentioned in appendix 5 of the registered PDD[/9/] and in section 3.3 of the monitoring report[/3/]

The apportioning of the electricity generated by the project activity is entirely under the jurisdiction of the state utility and the PP has no role in computing and furnishing the apportioned electricity for themselves. This parameter is directly used in the emission reduction calculations. This parameter has been cross verified against the invoices[/14/] raised by the PP and found correct. The value of this parameter for the current monitoring period is **76,665.46** MWh.

EG,export,y (Electricity exported by project activity to grid after apportioning of transmission losses between 33Kv metering point (cluster meter) and 220Kv metering point(Bulk metering point).):

This parameter is calculated by multiplying the total electricity export by project activity recorded at 33Kv (cluster metering point) and (1- Lep (%).

Where Lep(%) is the total % of transmission losses for export (Lep) occurred between 33Kv (cluster metering point) and 220 Kv(Bulk metering point).

The calculation procedure has been discussed with the person responsible for monitoring and found in line with the same procedure included in appendix 5 of the CDM registered PDD[/9/]. Value of $EG_{export,y}$ is cross checked with the certified statement[/13.b/] issued by the state utility showing cost of export and import.

The value for this parameter during current monitoring period is 77,045.49 **MWh.**

EG_{imp} (Electricity imported recorded at 33Kv (JMR at 33Kv metering point) cluster metering points connecting a total of 30 machines of the project activity.):

Value of **$EG_{,imp,y}$** is considered from the joint meter reading recorded[/13.a/] at cluster metering points. The measurement is done once a month. The electricity import from each WTG in the wind farm is recorded by an energy meter installed near each machine. The assessment team confirms that **EG,imp,y** has been monitored as per the monitoring plan described in section B.7 of the registered CDM PDD[/9/].

Value of Egimp is cross checked from certified statement[/13.b/] given by state utility showing cost of export and import. This was checked by the assessment team and the value reported in the MR and ER calculation sheet found to be consistent. The value for this parameter during current monitoring period is 380.03 **MWh.**

The assessment team is able to confirm that there is no discrepancy observed between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology outlined in the registered PDD[/9/.]

EGpe (Electricity Export recorded at 33 Kv (JMR at 33Kv metering point) cluster points connecting total 30 machines of the project activity):

This is the electricity exported to the grid as per the joint meter reading recorded at the cluster metering points. Value of Egpe is cross checked from certified statement[/13.b/] given by the state utility showing cost of export and import. This was checked by the assessment team and the value reported in the MR and ER calculation sheet was found to be consistent. The value for this parameter during the current monitoring period is 78,045.19 **MWh.**

The assessment team is able to confirm that the parameter **EGpe** has been monitored as per the monitoring plan described in section B.7 of the registered PDD[/9/].

EGe (Electricity export recorded at 220 Kv meters (main and check) at Suzlon pooling station connecting machines of the project activity and the machines commissioned by other project developers):

This is the electricity exported to the grid as per the joint Meter readings recorded at the 220Kv Suzlon pooling sub –station. The value of Ege is cross checked from the transmission loss calculation sheet[/19/] signed by the representatives of Suzlon and Discom.

The value for this parameter during current monitoring period is 1, 49,461.70 **MWh.**

QA/QC procedures are implemented by Discom/ State utility, pursuant to the provisions of the power purchase agreement[/16/]; this was checked and was confirmed by the assessment team. The energy meters (main & check) are calibrated by the state utility annually. The assessment team is able to confirm that the parameter $\mathbf{EG_e}$ has been monitored as per the monitoring plan described in section B.7 of the registered PDD[/9/].

Lep (Total percentage of transmission loss for export between the metering point at 33 Kv (sum of all the *WTG*s connected to Bulk metering point including non-project activity as well as project activity WTG's) metering points and the metering point at 220Kv at Suzlon pooling substation): The transmission losses are calculated based on the formula mentioned under appendix 5 of the registered PDD [/9/] and in section 3.3 of monitoring report[/3/]. These transmission losses equally distributed to all the WTGs connected on metering point at 132 Kv at the Suzlon pooling substation. It has been checked by the assessment team with the JMR[/13/] issued by the state electricity board.

Monthly values of the parameter **Lep** reported in ER calculation sheet is checked from the transmission losses calculation sheet issued by state utility and found to be consistent.

The assessment team confirms that **Lep** has been monitored as per the monitoring plan described in section B.7 of the registered CDM PDD[/9/].

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The calculation of the emission reductions is found to be correct. The details of the reported and the verified values for all parameters are listed in section 4.1 of this report.

The parameter $\mathbf{EG_{PJ,y}}$ is used for the emission reduction calculations. The parameters $\mathbf{EG_{export,y}}$ and $\mathbf{EG_{imp}}$ are used to calculate $\mathbf{EG_{PJ,y}}$. The PP has provided the complete set of data for all the monitored parameters in the ER spreadsheet[/5/]. This data has been verified as described in section 4.1 above. The formulae & method used to calculate the baseline emissions, project emissions and leakage are appropriate and in line with the approved methodology ACM0002 version 13.0.0[/6/].

The PP has calculated the grid emission factor as per the combined margin approach described in the 'Tool to calculate the emission factor for an electricity system', version 2.2.1[/7/]. The grid emission factor has been calculated as the weighted average of OM & BM; and has been fixed ex-ante for the entire crediting period.

The OM and BM have been obtained from a publicly available source i.e. "CO_2 Baseline Database for Indian Power sector", version 7.0[/12/] published by Central Electricity Authority, Ministry of Power, and Government of India. The OM has been determined as the average of the previous 3 years values obtained from the CEA database[/12/]. The value of BM has been identified directly from the CEA database. The combined margin emission factor was arrived at by applying weights of 75% for OM and 25% for BM, as specified in the tool. The OM and BM have been calculated to be 0.9515 t CO_2/MWh and 0.7339 t CO_2/MWh respectively. Applying the weights, the grid emission factor has been calculated to be 0.8971 t CO_2/MWh. The calculation of the grid emission factor has been validated and reported in the CDM validation report[/10/] of this project activity.

As per CER excel spreadsheet[/5/] submitted by the PP, the net emission reductions for the current monitoring period was verified as 68,771, tCO_{2e} for the current monitoring period.
The assessment team is able to confirm that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

It is noteworthy that the emission reduction calculations is based on the monthly values of parameter $\mathbf{EG_{PJ,y}}$ sourced from the monthly JMRs issued by DISCOM (Also purchaser of electricity generated by project activity) .The billing cycle for the project activity starts from 23rd of each month and ends on 23rd of next month. Hence the value of $\mathbf{EG_{PJ,y}}$ is available to PP for the month June 2013,which covers the period from 23/05/2013 to 23/06/2013. However the current monitoring period ends on 10/06/2013 and hence the value of $\mathbf{EG_{PJ,y}}$ for the period (from 23/05/2013 to 10/06/2013) is obtained using apportioning approach as following:

Apportioned value of Electricity Export recorded at 33kV, EGpe (for 23/05/2013 to 10/06/2013) =(X/Y)*M

Apportioned value of Electricity Imported, EGimp (for 23/05/2013 to 10/06/2013) =(X/Y)*N

$\mathbf{EG_{PJ,y}}$ (for 23/05/2013 to 10/06/2013)=(Apportioned value of EGpe - Apportioned value of EGimp)(1-Z)

Where,

X= Controller generation for the period from 23/05/2013 to 10/06/2013

Y= Controller generation for 23/05/2013 to 23/06/2013

Z= Transmission losses (%) for entire month June 2013(Sourced from monthly transmission losses calculation sheet issued by DISCOM)

M= Value of EGexp for the month June 2013 (Sourced from monthly JMR issued by DISCOM)

N= Value of EGimp for the month June 2013 (Sourced from Monthly JMR issued by DISCOM)

The assessment team has checked the apportioning approach used by PP and it is confirmed that the approach is conservative and reliable in the context of wind projects in Indian scenario.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

All parameters used for the determination of the Emission Reductions are discussed in section 4.1 of this report. All the data recorded is in compliance with the VCS Monitoring Report[/3/] and registered CDM PDD[/9/].The assessment team has checked the monthly generation reports (JMRs)[/13.a/], monthly certified statement for electricity generated by project activity[/13.b/] and monthly transmission losses calculation sheet[/19/] for the current monitoring period to verify the values of monitoring parameter reported in ER calculation sheet and found to be consistent. Since the monthly JMRs, monthly certified statements and monthly transmission losses calculation sheets have been issued by state utility hence found to be reliable and authentic.

As per the registered CDM PDD[/9/](version 02.8), the operations, maintenance and monitoring of the project activity is being carried out by the WTG supplier (Suzlon Energy Limited) whose operation and maintenance activities are ISO 9001:2008 certified, this is verified during site visit. Hence it is confirmed that the management system of the VCS project is in place; with the responsibilities properly identified. The same was also verified during the on-site verification.
During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate. The installation and working conditions of the meters were checked during the on-site inspection and were found to be satisfactory. Details of meters are provided in below table.

Location No	Main Meter No.	Check Meter No.	Calibration Date	Calibration Due Date	Comments
VAR204, VAR15, VAR16, VAR205, VAR10, VAR108, VAR109, VAR110	12091057	12091058	29/10/2012	29/10/2013	Ok
VAR203, VAR300	12091085	12091086	29/10/2012	29/10/2013	Ok
VAR217, VAR216,VAR26	12091064	12091065	30/10/2012	30/10/2013	Ok
VAR30, VAR28, VAR27	12091066	12091072	30/10/2012	30/10/2013	Ok
VAR22, VAR29, VAR19	12091069	12091070	30/10/2012	30/10/2013	Ok
VAR 37	12091080	12091081	30/10/2012	30/10/2013	Ok
VAR50, VAR51	12091075	12091076	20/12/2012	20/12/2013	Ok
VAR 38, VAR39, VAR 40, VAR209, VAR 18, VAR 208, VAR 023, VAR 024	12091060	12091061	31/03/2012 & 23/04/2014	23/04/2015	Ok

Meters installed at 220 Kv (Suzlon Pooling substation)

Meter serial No-	Meter type	Calibration date	Calibration due date
0012091073	Main meter	23/04/2014	23/04/2015
0012091074	Check meter		

All the meters used to measure the parameters are of accuracy class 0.2s as verified through calibration certificates[/17/] and also physical inspection during the site visit. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006[/18/] which is considered as national standard, mentions that for voltage of 650 V up to 33 Kv, 0.5s accuracy class or above is recommended. Hence, the accuracy classes of 0.2s for the energy meters installed at the project activity site are found to be appropriate.

The details of monitoring equipments involved in the project activity and their calibration details[/17/] are mentioned in the table under section 5 of the VCS MR[/3/]. The monitoring equipment consists of a main and check meter at the state utility substation. The meters have been physically inspected during the site visit and the meter details provided in MR[/3/] are found to be consistent with that observed during the site visit. The accuracy class of the meters are consistent with that mentioned in the registered CDM PDD.

The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006[/18/] which is considered as national standard mentions that “All interface meters shall be tested at least once in five years.” Hence, the stipulated calibration frequency is appropriate. As indicated through the dates of calibration mentioned in the table under section 5 of the VCS MR, all meters are calibrated once in 3 year. The date of calibration has been verified against the calibration certificates[/17/]; the registered CDM PDD[/9/]; the corresponding CDM validation report[/10/] and site visit observations confirm that the metering equipment are sealed and calibrated by the state utility.
In view of the above discussion, the assessment team is able to confirm that evidence used to determine the GHG reductions and removals are sufficient and appropriate with respect to quality and quantity.

4.4 Non-Permanence Risk Analysis

Not applicable in this project activity.

5 VERIFICATION CONCLUSION

The scope of the verification

SGS have been engaged by Mytrah Vayu (Pennar) Private Limited (MVPPL) to verify that the greenhouse gas (GHG) emission reductions reported for "Vajrakarur wind power project in Andhra Pradesh" (UN No. 9650) for the period 31/03/2012 to 10/06/2013 in the VCS Monitoring Report Version 05 dated 27/04/2014 are eligible for issuance as Verified Carbon Units.

This engagement covers the verification of emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of "Vajrakarur wind power project in Andhra Pradesh" (UN No. 9650), as well as an additional confirmation of the compliance of the VCS PD/4/ with the requirements of VCS Standard version 3.4/1/.

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

Conclusions of the verification

(a) SGS is an entity accredited by the United Nations Framework Convention on Climate Change (UNFCCC) to undertake validation, and verification/ certification services in the sector in which the Project is undertaken. The accreditation is accepted by VCSA as indicated in Clause 5 of VCS Program Guide Version 3.5/2/.

(b) The VCS Monitoring Report, together with other information examined (appendix 1 for full list), was prepared as per the VCS Monitoring Report Template, Version 3.3.

(c) The information in the VCS Monitoring Report together with other information examined (appendix 1 for full list), including all the information necessary to determine that the emission reductions achieved have been determined correctly.

(d) Based on the examination of the VCS Monitoring Report and other relevant information (appendix 1 for full list), the project meets all the requirements of the VCS Standard Version 3.4/1/.

(e) Based on our examination of the VCS Monitoring Report/3/ and other relevant information, the emission reductions during the monitoring period from 31/03/2012 to 10/06/2013 (both days included) are verified as 68,771 tCO_2e.

Liability statement with regards to the accuracy of the verification statement

The management of Mytrah Vayu (Pennar) Private Limited (MVPPL) is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions. SGS is responsible for verification and confirming emissions achieved for the project, as described in the VCS Monitoring Report.

Our certification approach draws on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Our examination includes an assessment of evidence, through desk review, and where necessary, interviews, stakeholder discussions and site visits, relevant to certifying the rightfulness of the amounts and disclosures in relation to the Project's GHG emission reductions.

We planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that the amount of GHG emission reductions for the given period, prepared on the basis of the Monitoring Report, are fairly stated.

This assessment included:

- Collection of evidence supporting the reported data;
- Checking whether the provisions of the Monitoring Plan in the registered CDM PDD, were consistently and appropriately applied;
- Site visit and interview of relevant staff.

We have verified whether the information included in the VCS Monitoring Report representing the emission reductions achieved has been determined correctly for the given period from the baseline figure.

Certification statements

Based on process and procedures conducted, in our opinion, the VCS Monitoring Report Version 05 dated 27/04/2014 on emission reductions for "Vajrakarur wind power project in Andhra Pradesh" (CDM 9650 and VCS PL1214) during the reporting period 31/03/2012 to 10/06/2013 (both days included), is materially correct and is a fair representation of the GHG data and information and the emission reductions during this period. All relevant facts have been found correct by our examination. The GHG emission reductions calculation is also confirmed as correct.

Therefore, SGS is able to certify that the project is in full compliance with the VCS Standard Version 3.4, and the quantity of the reported emission reductions during below reporting period are completely, comparably, accurately and correctly reported.

Verification period: From 31/03/2012 to 10/06/2013

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals(tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2012	29,759	0	0	29,759
2013	39,012	0	0	39,012

Vintage Period	VCUs
31st March 2012 to 31st Dec 2012	29,759
1st Jan 2013 to 10th June 2013	39,012
Total VCU (tCO_2e)	68,771

Statement of Confidentiality

SGS will hold all information confidential until the client instructs otherwise or until it has been released in accordance with the VCS Standard Version 3.4[1] requirements.

Signed on behalf of the Verification Body by Authorized Signatory

SGS United Kingdom Limited

Dated: 10/06/2014

Signature:

Lead Assessor

Ravi Kant Soni

Dated: 11/06/2014

Signature:

Technical Reviewer

Shivaji Chakraborty

APPENDIX 1: DOCUMENT REFERENCES

1. VCS Standard Version 3.4
2. VCS Program Guide Version 3.5
3. VCS Monitoring Report, a. Version 01,dated 25/12/2013 b. Version 02,dated 03/02/2014 c. Version 03,dated 20/02/2014 d. Version 04,dated 20/04/2014 e. Version 05,dated 27/04/2014
4. VCS Project Description, a) version 01, dated 03/12/2013 b) version 02 ,dated 03/02/2014 c) Version 03,dated 20/02/2014 d) Version 04,dated 20/04/2014
5. Emission Reduction Spreadsheet, a) version 01, dated 25/12/2013 b) version 02,dated 29/01/2014 c) Version 03,dated 26/02/2014 d) Version 04,dated 20/04/2014 e) Version 05,dated 27/04/2014
6. Approved consolidated methodology ACM0002, Version 13.0.0
7. Tool to calculate the emission factor for an electricity system, version 02.2.1
8. CDM Project Webpage (http://cdm.unfccc.int/Projects/DB/SGS-UKL1369989385.4/view)
9. Registered CDM PDD Version 2.8 dated 23/05/2013
10. CDM Validation report, dated 30/05/2013
11. Breakdown details of WTGs for the current monitoring period
12. CEA database Version 7
13. a) Monthly Joint Meter Reading (JMR) recorded at 33kV metering point and 22okV metering point for the current monitoring period b) Certified statement given by state utility showing cost of export and import for current monitoring period
14. Monthly Invoices for the project activity issued by the PP for the current monitoring period
15. Commissioning certificates for project activity
16. Power Purchase Agreement, For the capacity 16.8 MW,dated 27/04/2012 For the capacity 46.2 MW ,dated 25/10/2012
17. Calibration Certificates for current monitoring period
18. CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006

19. Monthly transmission losses calculation sheet for current monitoring period
20. Declaration issued by the PP for validating clauses 1.6, 1.12.2 and 1.12.4,dated 03/02/2014
21. VCS Pipeline(VCS ID-1214) (https://vcsprojectdatabase2.apx.com/myModule/Interactive.asp?Tab=Pipeline&a=1)

APPENDIX 2: OVERVIEW OF FINDINGS

	CARs	CLs	OBSs
Total Number raised	05	00	00

Date:	14/01/2014		Raised by:	Assessment team	
Type:	CAR	Number:	01	Reference:	AU4
Lead Assessor Comment:					
The project as per the information available in the UNFCCC website is registered using methodology ACM 0002, version 13. However, the version has not been correctly shown in the MR and VCS PD.					
Project Participant Response:				**Date:** 03/02/2014	
Methodology applicable has been corrected in MR & PD.					
Documentation Provided by Project Participant:					
Revised MR version 02,dated 03/02/2014 Revised VCS PD,version 02 ,dated 03/02/2014					
Information Verified by Lead Assessor:					
Following documents are checked: Revised MR version 02,dated 03/02/2014 Revised VCS PD,version 02 ,dated 03/02/2014					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 18/02/2014	
PP has corrected the version of methodology in revised MR and VCS PD, found to be consistent with UNFCCC project web page. Closed. CAR #1 closed					
Acceptance and Close out by Lead Assessor:				**Date:** 18/02/2014	

Date:	14/01/2014		Raised by:	Assessment team	
Type:	CAR	Number:	02	Reference:	AU4

Lead Assessor Comment:

1. The source of data of the monitored parameters are not matching with the registered PDD, PP is requested to clarify the mismatch.
2. PP is requested to clarify why the monitoring equipment details in section 3.2 of the MR, including meter type, serial number and calibration details is not reported.
3. The PP has not reported the parameters EGpe, EGe & Lep as mentioned in the registered PDD. PP is requested to justify. Further the notation of the monitored parameter is not matching with the registered PDD.
4. The QA/QC procedure of the parameter monitored parameters is not matching with the registered PDD. The PP is requested to clarify.
5. The organizational structure as mentioned in the section 3.3 of the MR is not matching with the registered PDD. The PP is requested to justify the mismatch.

Project Participant Response: **Date:** 03/02/2014

1. Source of Data of the monitored parameters is updated in revised MR.
2. Metering Details are involved in revised MR.
3. The parameters EGpe, EGe & Lep as mentioned in the registered PDD is included in revised MR.
4. The QA/QC procedure of the parameter monitored parameters in included in revised MR as per registered PDD.
5. The organizational structure is updated in revised MR.

Documentation Provided by Project Participant:

Revised MR version 02,dated 03/02/2014

Revised VCS PD,version 02 ,dated 03/02/2014

Information Verified by Lead Assessor:

Revised MR and VCS PD is checked

Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 15/02/2014

Source of data for monitoring parameters is corrected in line with registered PDD.Closed

Calibration details provided in section 3.3 reveals that meters were calibrated on 28/11/2012 but the monitoring period starts from 30/03/2012.Please clarify why the error due to calibration delay is not applied in line with the guidelines provided under para 238 of VVS version 05.Open

PP has reported the parameters EGpe, EGe & Lep in revised MR and description of parameters found to be consistent with the registered PDD.Closed

The QA/QC procedure of the parameter monitored parameters is not matching with the registered PDD. The PP is requested to clarify.Open

The organizational structure provided in revised MR is found to be consistent with the registered PDD.Closed

CAR #2 is open

Project Participant Response: **Date:** 08/03/2014

Project was commissioned in phase wise manner. Initially, 8 WTGs with a common metering point were commissioned on 31/03/2012. Therefore, calibration of these meters is done on 30/03/2012. 20 WTGs with common metering point were phase wise commissioned in Nov'12. Therefore, calibration of these meters is done on 28/11/2012 and remaining WTGs is commissioned in Dec'12. Hence, Calibration for the same is done on 31/12/2012.

The QA/QC procedure of the parameter monitored parameters is corrected as per registered PDD.
Documentation Provided by Project Participant:
Revised MR version 03,dated 20/02/2014 Revised VCS PD, version 03 ,dated 20/02/2014
Information Verified by Lead Assessor:
Following documents are checked: Revised MR version 03,dated 20/02/2014 Revised VCS PD, version 03 ,dated 20/02/2014

Reasoning for not Acceptance or Acceptance and Close Out:	**Date: 17/03/2014**
Project is commissioned in phases and dedicated meter is installed for each WTG.It is confirmed through calibration certificates and commissioning certificates that energy meters corresponds to each WTGs was calibrated at the time of commissioning of machine. Hence there is no delay in calibration occured during current monitoring period. QA/QC procedure for monitoring parameters are revised and found to be in line with the same mentioned in registered PDD. CAR #2 is closed	
Acceptance and Close out by Lead Assessor:	**Date: 17/03/2014**

Date:	14/01/2014		Raised by:	Assessment team	
Type:	CAR	Number:	03	Reference:	AU4

Lead Assessor Comment:

Please clarify why the apportioning procedure is not reported for the verification period as billing cycle dates doesn't match with the monitoring dates.

Under section Appendix 1, the PP has mentioned a heading "shutdown details", however no information has been provided. PP is requested to clarify.

Project Participant Response:	**Date:** 03/02/2014

Shutdown details are included in revised MR.

Documentation Provided by Project Participant:

Revised MR version 02,dated 03/02/2014

Revised VCS PD,version 02 ,dated 03/02/2014

Information Verified by Lead Assessor:

Revised MR and VCS PD is checked

Reasoning for not Acceptance or Acceptance and Close Out:	**Date:** 18/02/2014

No response for point 1 is provided. Open

PP has provided shut down details in Appendix 1 of revised MR and the same is verified through details provided by EPC contractor, found to be consistent. Closed.

CAR #3 is open.

Project Participant Response:	**Date:** 08/03/2014

For Apportioning of electricity for the period from 23/05/2013 to 10/06/2013, we have adopted a conservative approach. By choosing controller data, no of VERs would have been increased, as transmission loss and amount of energy imported by individual machine would not have been considered for calculation of VERs for December'12 month. Therefore, Apportioning is done on the bases of no. of days. Apportioning for the June'13 month generation is shown in ER emission calculation sheet. I.e. billing cycle date for June month is from 23/05/13 to 23/06/2013 and current monitoring period ends on 10/06/2013. Generation for 18 days (i.e from 23/05/2013 to 10/06/2013) is considered.

Documentation Provided by Project Participant:

Revised MR version 03,dated 20/02/2014

Revised ER sheet version 03,dated 26/02/2014

Revised VCS PD, version 03 ,dated 20/02/2014

Information Verified by Lead Assessor:

Following documents are checked against the response provided by PP.

Reasoning for not Acceptance or Acceptance and Close Out:	**Date: 17/03/2014**

The apportioning approach followed by PP is found to appropriate and conservative hence accepted.
CAR #3 is closed.

Acceptance and Close out by Lead Assessor:	**Date: 17/03/2014**

Date:	14/01/2014		Raised by:	Assessment team	
Type:	CAR	Number:	04	Reference:	AU4
Lead Assessor Comment:					
The PP was requested to provide a declaration to confirming the requirement of section 1.12.2 and 1.12.3 of the VC PD					
Project Participant Response:			**Date:** 03/02/2014		
Declaration to confirming the requirement of section 1.12.2 and 1.12.3 of the VC PD has been submitted					
Documentation Provided by Project Participant:					
Declaration dated 03/02/2014					
Information Verified by Lead Assessor:					
Declaration provided by PP is checked					
Reasoning for not Acceptance or Acceptance and Close Out:			**Date:** 18/02/2014		
Declaration provided by PP confirmS the requirement of section 1.12.2 and 1.12.3 of the VC PD.Closed					
Acceptance and Close out by Lead Assessor:			**Date:** 18/02/2014		

Date:	01/04/2014		Raised by:	Assessment team	
Type:	CAR	Number:	05	Reference:	AU4

Lead Assessor Comment:

VCS MR:

i. Section 1.8 MR: It is not clear if all the tools listed are referred by project activity.

ii. Section 3.1: Purpose of data mentioned for parameter is not consistent with registered PDD.

iii. Section 3.3: Apportioning procedure is not described. Also the details of meter installed at 220 kv Suzlon pooling sub-station is not provided.

VCS PD and ER sheet:

Section 1.12.2 and 1.12.3 of PD is not completed as per the requirement of VCS standard version 3.4.Please clarify.

Please clarify how the apportioning approach for used to calculate the net electricity supplied to grid during 23/05/2013 to 10/06/2013 is conservative.

Project Participant Response: **Date:** 21/04/2013

VCS MR:

1. Section 1.8 MR: Corrected in revised MR.
2. Section 3.1: Purpose of data mentioned for parameter is corrected in revised MR.
3. Section 3.3: Apportioning procedure and details of meter installed at 220 kv Suzlon pooling sub-station is included in revised MR.

VCS PD and ER sheet:

Section 1.12.2 and 1.12.3 is completed in revised PD as per the requirement of VCS standard version 3.4.

Apportioning Procedure used to calculate the net electricity supplied to grid during 23/05/2013 to 10/06/2013 has been corrected in ER sheet and generation details from controller meter is considered for the calculation of net VCUs.

Documentation Provided by Project Participant:

Revised MR version 04,dated 20/04/2014

Revised ER sheet version 04,dated 20/04/2014

Revised VCS PD, version 04 ,dated 20/04/2014

Information Verified by Lead Assessor:

Following documents are verified :

Revised MR version 04,dated 20/04/2014

Revised ER sheet version 04,dated 20/04/2014

Revised VCS PD, version 04 ,dated 20/04/2014

Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 24/04/2014

VCS MR:

Section 1.8 of MR is updated in line with the comment. Closed

Purpose of data is transparently mentioned in section 3.1 of MR. Closed

Apportioning procedure is described in section 3.3 of MR is found to be in line with registered monitoring plan.

Closed. VCS PD and ER sheet: Section 1.12.2 and 1.12.3 is completed in line with the guidelines provided in VCS standard version 3.4.Closed Net electricity supplied to grid during 23/05/2013 to 10/06/2013 is not calculated using controller data. Also it is not clear how the ER from 31/03/2012 to 31/12/2012 is calculated. CAR #5 is open	
Project Participant Response:	**Date:** 27/04/2014
Net electricity supplied to grid during 23/05/2013 to 10/06/2013 is calculated using controller data. Also apportioning of ER from 31/03/2012 to 31/12/2012 is explained in revised ER sheet.	
Documentation Provided by Project Participant:	
Revised MR version 05,dated 27/04/2014 Revised ER sheet version 05,dated 27/04/2014	
Information Verified by Lead Assessor:	
Following documents are checked: Revised MR version 05,dated 27/04/2014 Revised ER sheet version 05,dated 27/04/2014	
Reasoning for not Acceptance or Acceptance and Close Out:	**Date: 30/04/2014**
The approach applied to calculate the net electricity supplied to grid for the period from 23/05/2013 to 10/06/2013 and from 31/03/2012 to 31/12/2012 is found to be satisfactory. CAR #5 is closed.	
Acceptance and Close out by Lead Assessor:	**Date: 30/04/2014**

APPENDIX 3: TEAM MEMBERS STATEMENTS OF COMPETENCY

Statement of Competence

Name: Ravi Kant 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: 12/10/2012

Statement of Competence

Name: Ahmed Rekibuddin

Status

-	Lead Assessor		-	Expert	
-	Assessor	x	-	Financial Expert	
-	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: 02/11/2012

Statement of Competence

Name: Shivaji Chakraborty

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 1.1 Thermal energy generation from fossil fuels and biomass including thermal electricity from solar* *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: 19/09/2012