VERIFICATION REPORT FOR SATARA WIND POWER PROJECT IN MAHARASHTRA, INDIA

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Summary:

LGAI Technological Center, S.A. (hereafter referred to as Applus+ LGAI) has performed the Voluntary Emission Reduction verification of the VCS project ““Satara Wind Power Project in Maharashtra, India.”(Project ID 1519) for the monitoring period from 06/03/2014 to 31/12/2015. The verification includes confirming the implementation of the monitoring plan of the registered VCS PD (Project ID 1519) and the application of the monitoring methodology as per ACM0002 version 16: “Grid-connected electricity generation from renewable sources”. A site visit was conducted to verify the data submitted in the monitoring report.

The project activity consists of 20 WTGs (1.5 MW capacity each), making the total installed capacity to be 30 MW at Village Mann, Taluka Man in the district of Satara in the state of Maharashtra, India. The WTGs are of Vensys V87 type, supplied by ReGen Power Tech Pvt. Ltd.

The purpose of this project activity is to generate electricity using renewable sources (wind) and export it to Maharashtra State Electricity Distribution Company Limited (MSEDCL) which is connected NEWNE grid, thereby displacing the grid generated electricity.

In the course of verification, 09 Corrective Action request (CARs), 02 Clarification requests (CLs) were raised and successfully closed.

Applus+ LGAI confirms that the project is implemented in accordance with the validated and registered VCS PD. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in **89,514** tCO_2e during period 06/03/2014 to 31/12/2015.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center, S.A. (VVB) has been contracted by NSL Wind Power Company (Satara) Pvt. Ltd (Project proponent) to conduct an independent verification of its reported greenhouse gas emission reductions from the "Satara Wind Power Project in Maharashtra, India.", with regard to the relevant requirements of VCS programme guidelines and standard (VCS standard version 3.7, VCS Validation and Verification Manual version 3.2 & VCS program guide version 3.7). The verifiers have reviewed the GHG data collected to date for the period from 06/03/2014 to 31/12/2015 (both days included).

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

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

1.2 Scope and Criteria

The scope of the verification was the independent and objective review and ex-post determination of the monitored reductions in GHG emissions from "Satara Wind Power Project in Maharashtra, India". The verification of this project was based on the validated and registered project design document (PD)/1/, validation report and monitoring report/3/ and supporting documents submitted by the project proponent to the verification team. The documents were reviewed against the following guidance and protocols:

- VCS Standard: VCS Version 3, 21/06/2017, v3.7 (VCS Standard)
- Approved Clean Development Mechanism (CDM) methodology ACM0002, version 16, "Grid-connected electricity generation from renewable sources".
- Validated VCS Project Description (VCS PD) version 03; dated 08/02/2016
- VCS Program Guide, Version 3, 21/06/2017, v3.7
- VCS Validation Verification Manual, Version 3, 19/10/2016, v3.2
- ISO 14064-3: Specification with guidance for the validation and verification of greenhouse gas assertions, 2006

The verification is not meant to provide any consulting towards the client. However, stated request 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. Materiality for the project is 5%.

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:	Satara Wind Power Project in Maharashtra, India
Project ID	1519
MP Covered in this Report	06/03/2014 to 31/12/2015 (both days included)
Project Participants	NSL Wind Power Company (Satara) Pvt. Ltd.
Location of the Project Activity:	The wind power project is located in Satara district, Maharashtra, India.

The project activity involves electricity generation by WTGs and supplying the generated electricity to the NEWNE 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.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification approach consists two phases.

- In the first phase, Applus+ LGAI 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 phase, Applus+ LGAI 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, Applus+ LGAI 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. This verification report describes the findings of this assessment.

2.2 Document Review

The registered VCS PD/1/ (version 03 dated 08/02/2016), corresponding validation report/4/, VCS MR/3/ 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 Appendix 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 and during the on-site visit, the validation team has interviewed the representatives of the PP to confirm selected information and to clarify issues identified during the document review. Representatives of the PP and ReGen Power Tech Pvt. Ltd (O&M contractor) were also interviewed. The names and designations of the personnel interviewed are mentioned in section 2.4 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 and site visit was carried out on 20/01/2016 to 21/01/2016. During the site visit representatives of the PP and ReGen Power Tech Pvt. Ltd (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: Wind Project Site at Village Mann, Taluka Man in the district of Satara, Maharashtra, India	**Date:** 20/01/2016 to 21/01/2016
Coverage	**Source of Information / Persons Interviewed**
Project implementation, start date as per the VCS requirements. Electricity Generation Records (monthly energy statements, Invoices) Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure	Mr. Sanjay Kadam (Technician- ReGen Power Tech Pvt. Ltd)
Monitoring and measuring system • Collection of measurements • Observations of established practices • Data Verification of monitoring parameters	Mr. Sachin Sakate (Site Manager- NSL Wind Power Company (Satara) Pvt. Ltd.)
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. Sagar S. (Technician- ReGen Power Tech Pvt. Ltd)

2.5 Resolution of Findings

As a consequence of the verification process, the verification team can raise different types of findings e.g.

Clarification Request (CL): shall be raised where inadequate or inaccurate information is available and clarification or new information is required.CL shall specify about the additional information is required.

Corrective Action Request (CAR): shall be raised where a non-conformance arises with reference to the following:

- 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;

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

The verification process may be paused until this information has been made available to the verification team leader's 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.

2.5.1 Forward Action Requests

No forward action request has been raised during this first verification and also from project validation.

2.6 Eligibility for Validation Activities

LGAI Technological Center, S.A is accredited to perform validation/verification activities in Sectoral Scope 1, which is the applicable scope for the approved methodology ACM0002.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

During the verification process, the verification team has reviewed the declaration submitted by the project proponent confirming that GHG emission reduction credits from the Project have not been registered under another GHG program.
It can be concluded that the project is eligible to participate under the VCS Program.

3.2 Methodology Deviations

Not applicable as no methodological deviations are found.

3.3 Project Description Deviations

Not applicable as no project description deviations are found.

3.4 Grouped Project

The project activity is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Project activity is implemented and equipment's are installed as described in the validated VCS PD/1/. This is the first verification for the project activity. The project activity has been commissioned and is operating satisfactorily. The same has been checked and verified during the site visit to the project activity. The commissioning of all the WTGs have been verified against their commissioning certificates/7/. All the monitoring parameters reported in monitoring report/3/ are found to be in-line with registered PD /1/ as verified during on-site visit.

The monitoring of the project activity is found to be in accordance with the monitoring methodology described in ACM0002, Version 16/9/. 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 substantiate 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 verified against the validated VCS PD/1/; VCS MR/3/ and cross-checked against the PPA/8/ signed for the project activity.

The supporting records of monthly credit notes /11/ and monthly invoices/12/ for the entire monitoring period were checked and found to be sufficient to enable verification of emission reductions.

The following parameters have been verified for current monitoring period:

1. **Quantity of Net Electricity exported to the grid by the project WTGs to the grid during the year y ($EG_{facility,y}$) (MWh):**

This parameter is difference of electricity exported to the grid and electricity imported from the grid by the project activity. This parameter is calculated on a monthly basis and verified with monthly statements/credit notes issued by state utility. The net electricity exported to the grid on the monthly statements/credit notes has been cross checked with the invoices raised by the PP to state utility and found to be consistent. This parameter is directly used in the emission reduction calculations. As required by the validated monitoring plan, the net electricity supplied to the grid by the project during the current monitoring period is found to be lesser than the summation of electricity generated by projects WTGs as measured at the individual controller (LCS meters). The value of this parameter for the current monitoring period is 91,650 MWh.

2. **Quantity of Electricity exported by the Project WTGs connected to the feeder i to the grid during the year y ($EG_{JMR, NSL, export,y}$) (MWh):**
3. **Quantity of Electricity imported by the Project WTGs connected to the feeder i to the grid during the year y ($EG_{JMR, NSL, import,y}$) (MWh):**

Both the above parameters (2 & 3) are calculated using the measured values and considered directly from the monthly credit notes/11/ issued by state utility. The parameters directly measured through energy meters at the state utility sub-station and LCS meters of individual wind

turbines are used in the apportioning procedure to calculate the value of export and import by the project activity. The apportioning procedure described in section 3.3 of the MR/3/ is found to be consistent with the procedure outlined in section 4.3 of the validated VCS PD/1/ and the observations during the site visit. These parameters are not used directly in the emission reduction calculations. Monthly values of both the parameters have been cross verified against the monthly invoices/12/ raised by the PP and found to be consistent and correct.

Value of the parameters $\mathbf{EG_{JMR,\ NSL,\ export,y}}$ & $\mathbf{EG_{JMR,\ NSL,\ import,y}}$ for the current monitoring period is verified as 91,712 MWh and 62 MWh respectively.

There are 2 meters of accuracy class 0.2% (one main meter and one check meter) are installed at the state utility substation to measure the electricity exported/imported to the grid by all WTGs(Project and non-project WTGs) connected to the particular feeder.

The main meter is also called “joint meter” which has been kept under custody of state utility (MSEDCL). Apart from main meter, a check meter is also installed which is identical with main meter in make and technical standards and is of 0.2% accuracy class and calibration. As mentioned in the PPA and confirm with site personnel during the site visit, the check meter is installed just to check the redundancy.

The joint meter reading is taken and certified by state utility (MSEDCL) in presence of project participant’s representative. The state utility is responsible entity to carry out the calibration, periodical testing, sealing, and maintenance of meters in the presence of PPs representative. As verified through the validated monitoring plan frequency of meter testing is once in 3 years. The calibration certificates for the energy meters installed at substation have been checked for validity. The calibration reports indicate that the meters are working within acceptable accuracy limits.

4. **Quantity of Electricity generated at the controller of project activity WTGs connected to the feeder,i ($EG_{Controller,\ gen}$) (MWh):**

This parameter is continuously measured through the LCS meter installed at each individual WTG.The LCS readings are also recorded in the CMS system maintained by the O&M contractor. Value of this parameter is used to calculate the $EG_{facility,\ y}$ and not used directly in the emission reductions calculations. LCS meters don’t require calibration, as the electricity generation recorded at the LCS meter is cross verified by the energy calculated by inverting system installed in the WTGs. In case there is any mismatch in the energy values recorded by the LCS meter and the energy values calculated by the inverting system; the machine will stop working and generate the error report. Monthly values of this parameter are verified with monthly generation reports/10/, ER calculations sheet/2/ and found to be consistent.

Conclusion:

The verification team is able to confirm that the project is implemented as per the validated VCS PD and 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 validated VCS PD/1/.

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 $EG_{facility,\ y}$ is calculated as the difference of apportioned values of electricity exported and imported by the project activity. The PP has provided the complete set of data for all the monitored parameters in the ER spreadsheet/2/. 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 16/9/.

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 5/5/. 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. "CO2 Baseline Database for Indian Power sector", version 10/13/ 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/13/. 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 0.9857 tCO_2/MWh and 0.9495 tCO_2/MWh respectively. Applying the weights, the grid emission factor has been calculated to be 0.9767 tCO_2/MWh. The calculation of the grid emission factor has been validated and reported in the VCS validation report/4/ of this project activity.

As per ER excel spreadsheet/2/ submitted by the PP, the net emission reductions for the current monitoring period was verified as 89,514 tCO_2e for the current monitoring period.

The assessment team able to confirm that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

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 4.2 of this report. All the data recorded is in compliance with the VCS Monitoring Report/3/ and validated VCS PD/1/. The assessment team has checked the monthly generation reports (MGRs)/10/, monthly statements/credit notes for electricity generated and supplied by project activity/11/ 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 generation reports prepared by O&M contractor and credit notes have been issued by state utility, they are found to be reliable and authentic.

As per the validated VCS PD/1/ (version 3, dated 08/02/2016), the operations, maintenance and monitoring of the project activity is being carried out by the WTG supplier (ReGen Power Tech Pvt. Ltd) whose operation and maintenance activities are ISO 9001:2008 certified. 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:

Meter Location	Meter Serial No-	Meter Type	Calibration date	Calibration due date
NSL1 & NSL2	13277639 (Main) 13277640 (Check)	A1800	06/03/2014	05/03/2017
NSL10, NSL11, NSL12, NSL13, NSL14 NSL15	13277635 (Main) 13277636 (Check)	A1800	06/03/2014	05/03/2017
Below WTG are also commissioned on same meter NSL3, NSL6 & NSL7			For commissioning again calibration done on 30/03/2014	29/03/2017
NSL20 & NSL22	13277633 (Main) 13277634 (Check)	A1800	30/03/2014	29/03/2017
Below WTG are also commissioned on same meter			For commissioning again calibration done on 31/03/2014	30/03/2017

NSL17, NSL23, NSL28, NSL34, NSL36, NSL37				

Meters used to measure the parameters are of accuracy class 0.2s, as verified through calibration certificates/xx/ and also physical inspection during the site visit. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006 and its amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I /19/ 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 equipment's involved in the project activity and their calibration details/18/ are mentioned in the table under section 3.3 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 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 validated VCS PD.

The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006/19/ which is considered as national standard mentions that "All interface meters shall be tested at least once in five years." Hence, the stipulated annual calibration frequency is appropriate. As indicated through the dates of calibration mentioned in the table under section 3.3 of the VCS MR, all meters are calibrated once in 3 years. The date of calibration has been verified against the calibration certificates/18/. The validated VCS PD/1/; the corresponding VCS validation report/4/ 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 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 for the project activity.

5 SAFEGUARDS

5.1 No Net Harm

This simple wind project and there are no any potential negative environmental and socio-economic impacts identified by the project proponent. The same was verified by validation team during site visit and found to be correct and hence accepted.

5.2 Local Stakeholder Consultation

The local stakeholder consultation process has been described in detail, by the PP, in section 6 of the PD. The project participant identified the relevant stakeholder like the local village head and the villagers (from the villages listed in the PD) and ReGen Power Tech Pvt Ltd officials as local stakeholders for the project activity. Thus, the validation team is of the opinion that the relevant stakeholders have been consulted appropriately and adequately.

The PP has conducted the stakeholder consultation meeting on 06/10/2012 at P.C Shah Memorial Hall, Hotel Pankaj Executive, Pune-Bangalore highway, Karad in coordination with ReGen Power Tech Private Limited, the technology provider. Stakeholders were invited through public notices and newspaper advertisements (dated 29/09/2012) given by the PP. The documentary evidence provided as proof of date of the invitation, meeting; and mode of invitation/9/ has been checked by the assessment team and found to be appropriate.

After sharing information with the local stakeholders about the company and the purpose of proposed activity, the stakeholders were briefed about non-conventional energy sources and their importance. The PP also informed the stakeholders about their intention of securing carbon cerdit benefits for the proposed project activity. The Minutes of the meeting of the stakeholder meeting and attendance sheet/9/ have been submitted by the PP.

During the site visit the assessment team interviewed some of the local villagers. Based on the replies of the villagers, the validation team was convinced that the process of stakeholder consultation was carried out as described in the PD/1/. The villagers also confirmed that they were invited for the meeting through public notice. This was found to be consistent with the invitation process mentioned in the PD/1/.

Overall, there was agreement among the stakeholders that the proposed project activity would lead to the overall development of the area, mainly by generating employment opportunities and improving the infrastructure leading to an improved life for the villagers. The local stakeholders interviewed during the site visit endorsed this view.

It is also confirmed that local stakeholders were invited by the project proponent to comment on the proposed project activity prior to the submission of the PD for validation.

6 VERIFICATION CONCLUSION

NSL Wind Power Company (Satara) Pvt. Ltd has contracted the LGAI Technological Center, S.A. (also referred to as Applus+ LGAI) to verify that the greenhouse gas (GHG) emission reductions reported for the "Satara Wind Power Project in Maharashtra, India." (Project ID 1519) for the period from 06/03/2014 to 31/12/2015 in the VCS Monitoring Report Version 02 dated 10/08/2017 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 the project "Satara Wind Power Project in Maharashtra, India" (Project ID 1519), as well as an additional confirmation of the compliance of the VCS PD with the requirements of VCS Standard version 3.7.

Applus+ LGAI is an entity accredited by the United Nations Framework Convention on Climate Change (UNFCCC) to undertake certification and verification services in the sectoral scope in which the Project is undertaken.

The VCS Monitoring Report, together with other information examined, was prepared as per the VCS Monitoring Report Template, Version 3.4.

The information in the VCS Monitoring Report together with other information examined by the assessment team, including all the information necessary to determine that the emission reductions achieved have been determined correctly.

In view of the information provided in the VCS Monitoring Report and other relevant information, it can be concluded that the project meets all the requirements of the VCS Standard Version 3.7/15/. Also on the basis of our examination of the VCS Monitoring Report and other relevant information, the emission reductions during the monitoring period from 06/03/2014 to 31/12/2015 (both the days included) are verified as 89,514 tCO_2e.

The management of NSL Wind Power Company (Satara) Pvt. Ltd is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions. Applus+ LGAI is responsible for verification and confirming emission estimates for the project, as described in the VCS Monitoring Report.

The certification approach followed by Applus+ LGAI, 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.

Based on process and procedures conducted, in our opinion, NSL Wind Power Company (Satara) Pvt. Ltd assertion on GHG emission reductions for the "Satara Wind Power Project in Maharashtra, India." (Project ID 1519) project during the reporting period 06/03/2014 to 31/12/2015 is materially correct and is a fair representation of the GHG data and information and the emission reductions are fairly stated. The GHG emission reductions were calculated correctly on the basis of approved monitoring methodology ACM0002 version 16. The verification team also confirms that the project is implemented as described in the validated VCS PD.

Therefore, Applus+ LGAI is able to certify that the project is in full compliance with the VCS Standard Version 3.7, and the quantity of the reported emission reductions during below reporting period are completely, comparably, accurately and correctly reported.

Verification period: From [06/03/2014] to [31/12/2015]

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)
Year 2014	39,161	0	0	39,161
Year 2015	50,353	0	0	50,353
Total	**89,514**	**0**	**0**	**89,514**

APPENDIX 1: <DOCUMENT REFERENCES >

Ref. No	Document
1	VCS PD, version 03, dated 08/02/2016
2	Emission Reductions Calculation Spreadsheet, version 02, dated 10/08/2017
3	VCS Monitoring report version 02, dated 10/08/2017
4	VCS validation report version 01 ,dated 10/02/2016
5	Tool to calculate the emission factor for an electricity system, version 5.0(EB 87,annex 09)
6	VCS pipeline http://www.vcsprojectdatabase.org/#/pipeline_details/PL1519
7	Commissioning Certificates for all the WTGs involved in the project activity
8	Power purchase agreement signed by PP with state electricity authority
9	Approved consolidated methodology ACM0002, Version 16.0
10	Monthly controller generation records issued by O&M contractor for the current monitoring period
11	Monthly statements/credit notes issued by state utility for the current monitoring period
12	Monthly Invoices for the project activity issued by the PP for the current monitoring period
13	CO_2 baseline database published (in December 2014) by Central Electricity Authority, Govt. Of India, version 10 available at http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm
14	Staff Training Documents
15	VCS Standard Version 3.7
16	VCS Programme Guide Version 3.7
17	Declaration issued by the PP
18	Calibration Certificates for current monitoring period
19	CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006 Amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I
20	VCS Monitoring report version 01, dated 18/01/2016
21	Emission Reductions Calculation Spreadsheet, version 01, dated 18/01/2016
22	Purchase Order of WTGs

APPENDIX 2: <ABBRIVATIONS>

ABT	Availability Based Tariff
BEF	Baseline Emission Factor
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMP	Conference of Parties Serving as Meeting of Parties
CO_2	Carbon dioxide
DISCOM	Distribution Company
EB	Executive Board
EPC	Engineering, Procurement and Construction
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
JMR	Joint Meter Reading
kW	Kilowatt
kWh	Kilowatt hour
MFR	Multi-Function Relay
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MW	Megawatt
MWh	Megawatt-hour
NEWNE	Northern Eastern Western Northern-Eastern
O&M	Operation and Maintenance
PD	Project Description
PLF	Plant Load Factor
PP	Project Proponent
PPA	Power Purchase Agreement
CMS	Central Monitoring System
QA/QC	Quality Assurance and Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
WTG	Wind Turbine Generator
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 3: <FINDINGS OVERVIEW>

Findings Overview Summary

Type	CAR	CL	FAR
Total Number raised	09	02	00

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#1
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 1.1
Description of the audit finding			**Date:**	02/03/2016
1. Font in title page is inconsistent with the instructions for completing the monitoring report Monitoring report version 3. 2. Date format is inconsistent with the instructions for completing the monitoring report version 3. 3. Latest available tool to calculate the emission factor for an electricity system, Version 5.0 is available in UNFCCC website. The Project Proponent is requested to clarify why version 04.0.0 is used for the same. 4. Inappropriate terminology “Project Participant “is used in some places. The Project Proponent is requested to clarify the same. 5. This project is a VCS project. The project Proponent is requested to clarify why CDM project activity is mentioned for calculation of baseline emission in section 4.1 of MR. 6. According to the instruction for completing the Monitoring report form version 3, the project proponent has to mention following points under Monitoring plan (section 3.3 of the MR):- • The procedures used for handling any internal auditing performed and any non-conformities identified. • The implementation of sampling approaches, including target precision levels, sample sizes, sample site locations, stratification, frequency of measurement and QA/QC procedures. Where applicable, demonstrate whether the required confidence level or precision has been met				
Project Participant’s response			**Date:**	10/08/2017
Monitoring Report Modified and submitted to DOE.				
Documentation provided as evidence by Project Participant				
NSL VCS Monitoring Report Template, v3.4_Version 02				
Auditor’s assessment comment			**Date:**	11/08/2017
Based on review of Monitoring Report, it was found that all comments are satisfactorily addressed in revised Monitoring Report, hence accepted.				

Conclusion by Lead Auditor	**Date:**	11/08/2017
Based on review of MR and response provided by the PP, it is found that all issues raised under CAR#1 is completely addressed in revised MR, hence CAR#1 is closed.		

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#2
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 1.1.
Description of the audit finding			**Date:**	02/03/2016
Geodetic coordinates is not mentioned in the project location.				
Project Participant's response			**Date:**	10/08/2017
Monitoring Report Modified and submitted to DOE.				
Documentation provided as evidence by Project Participant				
NSL VCS Monitoring Report Template, v3.4_Version 02				
Auditor's assessment comment			**Date:**	11/08/2017
Based on review of Monitoring Report, it was found that all comments are satisfactorily addressed in revised Monitoring Report, hence accepted.				
Conclusion by Lead Auditor			**Date:**	11/08/2017
Based on review of MR and response provided by the PP, it is found that all issues raised under CAR#2 is completely addressed in revised MR, hence CAR#2 is closed.				

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#3
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 1.1
Description of the audit finding			**Date:**	02/03/2016
Technical specification of WTGS are not provided				
Project Participant's response			**Date:**	10/08/2017

Monitoring Report Modified and submitted to DOE.		
Documentation provided as evidence by Project Participant		
NSL VCS Monitoring Report Template, v3.4_Version 02		
Auditor's assessment comment	**Date:**	11/08/2017
Based on review of Monitoring Report, it was found that all comments are satisfactorily addressed in revised Monitoring Report, hence accepted.		
Conclusion by Lead Auditor	**Date:**	11/08/2017
Based on review of MR and response provided by the PP, it is found that all issues raised under CAR#3 is completely addressed in revised MR, hence CAR#3 is closed.		

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#4
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 2.2 Table 1
Description of the audit finding			**Date:**	02/03/2016
The data / Parameter ID for monitoring parameters are inconsistent with the project description				
Project Participant's response			**Date:**	10/08/2017
Monitoring Report Modified and submitted to DOE.				
Documentation provided as evidence by Project Participant				
NSL VCS Monitoring Report Template, v3.4_Version 02				
Auditor's assessment comment			**Date:**	11/08/2017
Based on review of Monitoring Report, it was found that all comments are satisfactorily addressed in revised Monitoring Report, hence accepted.				
Conclusion by Lead Auditor			**Date:**	11/08/2017
Based on review of MR and response provided by the PP, it is found that all issues raised under CAR#4 is completely addressed in revised MR, hence CAR#4 is closed.				

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#5
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 2.2 Table 1
Description of the audit finding			**Date:**	02/03/2016
The description of measurement methods and procedures to be applied for monitoring parameters are not consistent with the Project Description**.**				
Project Participant's response			**Date:**	10/08/2017
Monitoring Report Modified and submitted to DOE.				
Documentation provided as evidence by Project Participant				
NSL VCS Monitoring Report Template, v3.4_Version 02				
Auditor's assessment comment			**Date:**	11/08/2017
Based on review of Monitoring Report, it was found that all comments are satisfactorily addressed in revised Monitoring Report, hence accepted.				
Conclusion by Lead Auditor			**Date:**	11/08/2017
Based on review of MR and response provided by the PP, it is found that all issues raised under CAR#5 is completely addressed in revised MR, hence CAR#5 is closed.				

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#6
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 2.2 Table 1
Description of the audit finding			**Date:**	02/03/2016
As per the instruction for completing the monitoring report form version 3, the Project Proponent is required to provide details of the monitoring equipment that includes type, accuracy class, and serial number of equipment, as appropriate.				
Project Participant's response			**Date:**	10/08/2017
Monitoring Report Modified and submitted to DOE.				

Documentation provided as evidence by Project Participant		
NSL VCS Monitoring Report Template, v3.4_Version 02		
Auditor's assessment comment	**Date:**	11/08/2017
Based on review of Monitoring Report, it was found that all comments are satisfactorily addressed in revised Monitoring Report, hence accepted.		
Conclusion by Lead Auditor	**Date:**	11/08/2017
Based on review of MR and response provided by the PP, it is found that all issues raised under CAR#6 is completely addressed in revised MR, hence CAR#6 is closed.		

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#7
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 2.2 Table 2
Description of the audit finding			**Date:**	02/03/2016
The details of Monitoring equipment for parameter EG_{exp} and EG_{imp} are inconsistent with the Project Description				
Project Participant's response			**Date:**	10/08/2017
Monitoring Report Modified and submitted to DOE.				
Documentation provided as evidence by Project Participant				
NSL VCS Monitoring Report Template, v3.4_Version 02				
Auditor's assessment comment			**Date:**	11/08/2017
Based on review of Monitoring Report, it was found that all comments are satisfactorily addressed in revised Monitoring Report, hence accepted.				
Conclusion by Lead Auditor			**Date:**	11/08/2017
Based on review of MR and response provided by the PP, it is found that all issues raised under CAR#7 is completely addressed in revised MR, hence CAR#7 is closed.				

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#8
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 2.2 Table 2
Description of the audit finding			**Date:**	02/03/2016
The apportioning procedure is inconsistent with the Project Description. The formula and description of parameters are not consistent with those mentioned in the Project Description. The Project Proponent is requested to clarify the same				
Project Participant's response			**Date:**	10/08/2017
Monitoring Report Modified and submitted to DOE.				
Documentation provided as evidence by Project Participant				
NSL VCS Monitoring Report Template, v3.4_Version 02				
Auditor's assessment comment			**Date:**	11/08/2017
Based on review of Monitoring Report, it was found that all comments are satisfactorily addressed in revised Monitoring Report, hence accepted.				
Conclusion by Lead Auditor			**Date:**	11/08/2017
Based on review of MR and response provided by the PP, it is found that all issues raised under CAR#8 is completely addressed in revised MR, hence CAR#8 is closed.				

Type:	☒ **CAR** ☐ **CL** ☐ **FAR**		**Number:**	#9
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 2.1
Description of the audit finding			**Date:**	02/03/2016
It is not clear why the parameter $EG_{Controller, gen}$ is not included in the MR and ER calculation sheet .				
Project Participant's response			**Date:**	10/08/2017
Monitoring Report and ER sheet Modified and submitted to DOE.				

Documentation provided as evidence by Project Participant		
NSL VCS Monitoring Report Template, v3.4_Version 02 NSL VCS Satara_VER Sheet Version 2.0		
Auditor's assessment comment	**Date:**	11/08/2017
Based on review of Monitoring Report and ER sheet, it was found that all comments are satisfactorily addressed in revised Monitoring Report and ER sheet, hence accepted.		
Conclusion by Lead Auditor	**Date:**	11/08/2017
Based on review of MR and ER sheet; response provided by the PP, it is found that all issues raised under CAR#9 is completely addressed in revised MR, hence CAR#9 is closed.		

Type:	☐ **CAR** ☒ **CL** ☐ **FAR**		**Number:**	#1
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 2.1
Description of the audit finding			**Date:**	02/03/2016
The Project Proponent is requested to provide supporting document to confirm the date of purchase order placed.				
Project Participant's response			**Date:**	10/08/2017
Purchase Order of WTGs are submitted to DOE.				
Documentation provided as evidence by Project Participant				
Purchase Order of WTGs				
Auditor's assessment comment			**Date:**	11/08/2017
The Purchase Order of WTGs verified for purchase order date.				
Conclusion by Lead Auditor			**Date:**	11/08/2017
Based on review of Purchase Order provided by the PP, it is found that date of purchase order is correct, hence CL#1 is closed.				

Type:	☐ **CAR** ☒ **CL** ☐ **FAR**		**Number:**	#1
Raised by:	**Vivek Kumar Ahirwar**	**Ref. to checklist in table 1&2:**		**Section** 1.3
Description of the audit finding			**Date:**	02/03/2016
The Project Proponent is requested to provide supporting evidence for personnel training.				
Project Participant's response			**Date:**	10/08/2017
Staff Training Supporting Submitted to DOE				
Documentation provided as evidence by Project Participant				
Staff Training Records				
Auditor's assessment comment			**Date:**	11/08/2017
Based on review of Staff training records, it confirmed the monitoring personal trained regularly.				
Conclusion by Lead Auditor			**Date:**	11/08/2017
Based on review above response provided by the PP, it is found that all issues raised under CL#2 is completely addressed, hence CL#2 is closed.				

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