

# WIND POWER PROJECT IN MAHARASHTRA STATE, INDIA



Document Prepared By (SUKANTA DAS - LEAD AUDITOR)

**LGAI Technological Center S.A.**

Ctra. Acceso a la facultad de Medicina, s/n, Campus UAB

E – 08193 Bellaterra (Barcelona) – Spain

Tel: +34 935 672 008

Fax: +34 935 672 001

[www.appluscertification.com](http://www.appluscertification.com)

<b>Project Title</b>	Wind Power Project in Maharashtra State, India
<b>Version</b>	01.0
<b>Report ID</b>	Internal project ID:1917

<b>Report Title</b>	Wind Power Project in Maharashtra State, India
<b>Client</b>	Baidyanath Power Private Limited
<b>Pages</b>	30
<b>Date of Issue</b>	08/09/2017
<b>Prepared By</b>	LGAI Technological Center S.A. Ctra. Acceso a la facultad de Medicina, s/n, Campus UAB E – 08193 Bellaterra (Barcelona) – Spain Tel.:+34 935 672 008 Fax : +34 935 672 001 <a href="http://www.appluscertification.com">www.appluscertification.com</a>

<b>Contact</b>	Tel.:+34 935 672 008 Fax.+34 935 672 001 <i>www.appluscertification.com</i>
<b>Approved By</b>	Juan Sendin Caballero, Applus LGAI Managing Director
<b>Work Carried Out By</b>	SUKANTA DAS -Lead Auditor

**Summary:**

**Verification purpose:**The main purpose of this project activity is to generate clean form of electricity through renewable energy sources. The Project Participant, Mahalaxmi Commercial Services Private Limited, has developed a 10.5 MW wind power project at site-Jath, Taluka-Jath, District-Sangli, State-Maharashtra in India. M/s Baidyanath Power Private Limited (earlier owner was Mahalaxmi Commercial Services Private Limited. The Business Transfer Agreement is executed between Mahalaxmi Commercial Services Private Limited and Baidyanath Power Private Limited on 13th October 2015) is the new project proponent of the proposed project activity.

The project activity generates electricity utilizing wind energy and the generated electricity is supplied to the regional MSEDCL grid which is under purview NEWNE grid. Net electricity supplied to the grid by project activity is measured on continuous basis with the 0.2s accuracy meters. In absence of the project activity equivalent amount of electricity would have otherwise been generated by existing and new power plants connected to the emission intensive NEWNE electricity grid. Thus the project activity would result in avoidance of Green House Gases (GHGs) emission and contribute to mitigation of global warming.

Details of commissioning date of all WTGs:

Sl. No	Location	Capacity of WTG (MW)	Commissioning Date*
1	JTH- 247	2.1	08/06/2013
2	JTH- 292	2.1	08/06/2013
3	JTH- 293	2.1	08/06/2013
4	JTH- 294	2.1	11/02/2014
5	JTH- 300	2.1	11/02/2014

\* Reference foot note no. 1 is applicable.

The Project Participant has placed the purchase orders to Suzlon Energy Limited and its group companies to supply and install the proposed wind power project. Suzlon shall also provide operation and maintenance services to the project activity.

A risk based approach has been followed to perform this verification activity. In the course of verification, 03 Corrective Action request (CAR) and 00 Clarification Requests (CLs) were raised and successfully closed. The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and PP have provided APPLUS with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

**Validation purpose:** The main purpose of this project activity is to generate clean form of electricity through renewable energy sources. The project is registered under CDM mechanism (reference number: 10026). The present validation (gap validation) is under VCS mechanism and assessment of clause 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 of the VCS Project Description Template. The same is in line with Para 3.11.10 of VCS standard.

A risk based approach has been followed to perform this verification activity. In the course of gap validation, 01 Corrective Action request (CAR) and 00 Clarification Requests (CLs) were raised and successfully closed. The review of the project description and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and PP have provided APPLUS with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

## Table of Contents

### CONTENTS

1	Introduction .....	5
1.1	Objective .....	5
1.2	Scope and Criteria .....	5
1.3	Level of Assurance.....	6
1.4	Summary Description of the Project .....	6
2	Verification Process .....	7
2.1	Method and Criteria.....	7
2.2	Document Review .....	9
2.3	Interviews .....	9
2.4	Site Inspections .....	10
2.5	Resolution of Findings.....	10
2.5.1	Forward Action Requests.....	11
2.6	Eligibility for Validation Activities .....	11
3	Validation Findings.....	11
3.1	Participation under Other GHG Programs .....	11
3.2	Methodology Deviations .....	15
3.3	Project Description Deviations .....	15
3.4	Grouped Project .....	15
4	Verification Findings.....	16
4.1	Project Implementation Status .....	16
4.2	Accuracy of GHG Emission Reduction and Removal Calculations .....	19
4.3	Quality of Evidence to Determine GHG Emission Reductions and Removals .....	19
4.4	Non-Permanence Risk Analysis.....	20
5	safeguards .....	20
5.1	No Net Harm .....	20
5.2	Local Stakeholder Consultation .....	20
6	Verification conclusion .....	22
	APPENDIX 1: Documents reviewed or referenced (Verificaton) .....	23
	APPENDIX 2: Clarification requests, corrective action requests (CAR/CL/FAR).....	25
	APPENDIX 3: Competence of team members and technical reviewers .....	27
	APPENDIX 4: Abbreviations .....	28

## 1 INTRODUCTION

### 1.1 Objective

LGAI Technological Center S.A. has been appointed by “Baidyanath Power Private Limited” to perform the 1<sup>st</sup> periodic verification of the “Wind Power Project in Maharashtra State, India” under VCS standard and guideline version 3.7. The objective of this verification activity is to have an independent third party for the assessment of the project design, Monitoring report and Final Validation report and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular;

- the project's baseline is assessed against “AMS-I.D. Version 17.0”
- the project’s monitoring plan is assessed against “AMS-I.D. Version 17.0”
- the projects compliance with, the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country legislation and sustainability criteria along with VCS guideline and standard version 3.7
- CDM Validation and Verification Standard version 09.0
- CDM Project Standard version 09.0
- CDM Project Cycle Procedure version 09.0
- VCS standard v3.7
- VCS guideline v3.7

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

### 1.2 Scope and Criteria

The scope of the verification is the independent and objective review of the Monitoring report (MR). The MR is reviewed against the relevant criteria (see 1.1) and decisions by the CDM Executive Board and VCS executive board, including the approved baseline and monitoring methodology. The verification was based on the guidance given in the CDM Validation and Verification Standard version 09.0, review against VCS PD version 01 dated 16/05/2017, revised VCS PD Version 02 dated 29/08/2017, CDM Project Standard version 09.0, CDM Project Cycle Procedure version 09.0 and VCS guideline and standard version 3.7

The assessment team has employed a risk based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the MR. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VERs. The verification is not meant to provide any consulting towards the project participants. However, stated

requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring report combined.

The only purpose of the verification is its usage during the issuance process as part of the VCS project cycle. Therefore, LGAI Technological Center S.A. can't be held liable by any party for decisions made or not made based on the verification opinion, which will go beyond that purpose.

### 1.3 Level of Assurance

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for site visit or document verifications. The entire documents checked/WTGs verification conducted to arrive at positive verification conclusions.

### 1.4 Summary Description of the Project

The purpose of the project activity is to generate power using renewable energy source (wind) and sell the power generated to the state grid. The project activity generates electricity using wind potential and converts it into kinetic energy using Wind turbines, which drives the alternators to generate energy. The generated electricity is exported to the Indian grid system.

**Verification purpose:**The main purpose of this project activity is to generate clean form of electricity through renewable energy sources. The Project Participant, Mahalaxmi Commercial Services Private Limited, has developed a 10.5 MW wind power project at site-Jath, Taluka-Jath, District-Sangli, State-Maharashtra in India. M/s Baidyanath Power Private Limited (earlier owner was Mahalaxmi Commercial Services Private Limited. The Business Transfer Agreement is executed between Mahalaxmi Commercial Services Private Limited and Baidyanath Power Private Limited on 13th October 2015) is the new project proponent of the proposed project activity.

The project activity generates electricity utilizing wind energy and the generated electricity is supplied to the regional MSEDCL grid which is under purview NEWNE grid. Net electricity supplied to the grid by project activity is measured on continuous basis with the 0.2s accuracy meters. In absence of the project activity equivalent amount of electricity would have otherwise been generated by existing and new power plants connected to the emission intensive NEWNE electricity grid. Thus the project activity would result in avoidance of Green House Gases (GHGs) emission and contribute to mitigation of global warming.

Details of commissioning date of all WTGs:

Sl. No	Location	Capacity of WTG (MW)	Commissioning Date*
1	JTH- 247	2.1	08/06/2013
2	JTH- 292	2.1	08/06/2013
3	JTH- 293	2.1	08/06/2013
4	JTH- 294	2.1	11/02/2014
5	JTH- 300	2.1	11/02/2014

\* Reference foot note no. 1 is applicable.

The Project Participant has placed the purchase orders to Suzlon Energy Limited and its group companies to supply and install the proposed wind power project. Suzlon shall also provide operation and maintenance services to the project activity.

Start date of the project activity is the date of commissioning of the first WTG i.e.08-06-2013. An undertaking has been submitted by PP for double counting would never happens with any other GHG program.

## 2 VERIFICATIONPROCESS

### 2.1 Method and Criteria

**Verification Scope:** The scope is defined as an independent and objective review of the Monitoring report (MR) prepared as per the PD and registered approved methodology AMS-I.D. Version 17.0. The MR is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board and VCS standard and guideline version 3.7, including the approved baseline and monitoring methodology AMS-I.D. Version 17.0. The verification was based on the requirements in the Validation and Verification Standard (VVS version 09.0), project standard version 09.0, project cycle procedure version 09.0 and VCS guideline and standard version 3.7.

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

**Verification Process:** The project assessment is based on the “Clean Development Mechanism Validation and Verification Standard version 09.0 and VCS standard and guideline version 3.7and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed.

Once the project is received by the assessment team, the members of the assessment team carried out:

1. A desk review of the Monitoring report against the registered PD and final validation report;
2. Follow-up interviews with project participant;
3. The resolution of outstanding issues and the issuance of the final verification report and opinion.

The prepared verification report and other supporting documents then undergo an internal quality control at the HQ (Accredited office) before being submitted to the VCS executive board.

### **Appointment of the assessment team**

According to the sectoral scopes / technical area and experiences in the sectoral or national business environment, Applus+ LGAI has composed a project assessment team in accordance with the appointment rules in Applus+ LGAI. The composition of assessment team has to be approved by the Applus+ LGAI ensuring that the required skills are covered by the team. The four qualification levels for team members that are assigned by formal appointment rules as below:

- Leader Auditor (LA)

- Auditor (A)
- Auditor Trainee (T)
- Technical Experts (E)
- Internal Technical Review (ITR)

It is required that the sectoral scope / technical area related to the methodology has to be covered by the assessment team.

The detail regarding the assessment team is provided below in this report as Appendix 3

### **Document review**

The Monitoring report submitted by the Client was reviewed against the approved methodology, VCS PD version 01 dated 16/05/2017, revised VCS PD Version 02 dated 29/08/2017, and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in this report below in appendix 1

### **Follow-up interviews**

A site visit is conducted by Applus+ LGAI performed interviews, telephone conferences, and physical site inspection with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report

### **Resolution of Clarification and Corrective Action Request**

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ LGAI's positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ LGAI were resolved during communications between the Client and Applus+ LGAI to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the appendix 2.

The final MR Version02 submitted by PP on 29/08/2017 serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

### **Internal quality control**

As final step of a verification of the final documentation including the verification report and the checklist have to undergo an internal quality control by the technical review committee, i.e. each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these

two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of Interest.

After confirmation of the PP the positive verification opinion and relevant documents are submitted to the VCS board through the VCS web-platform

## 2.2 Document Review

The details of the document observed during the verification process are listed below in Appendix 1 of this report

## 2.3 Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Damblekar	Ashok	Site In charge	17-20/07/2017	Implementation of the project, monitoring and emission reduction calculations.  Baseline emission calculation, achieved emission reduction for the monitoring period, monitoring process	Sukanta Das

## 2.4 Site Inspections

Duration of on-site inspection:28/06/2017				
No.	Activity performed on-site	Site location	Date	Team member
1.	<p>Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring.</p> <p>Assessment team also checked that whether the monitoring plan as described in the PD is actually practised onsite. Also assessment team checked any change in host country criteria which may affect the baseline of the project activity.</p>	<p>The project activity is located at Jath site, District-Sangli, State-Maharashtra.</p> <p>The complete details of the site is as below:</p> <p><b>District-Sangli</b> <b>Taluka-Jath</b> <b>Villages-</b> Mendhegiri, Muchandi</p>	17-20/07/2017	Sukanta Das

## 2.5 Resolution of Findings

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues from validation which need to be clarified for Applus+ LGAI's positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ LGAI were resolved during communications between the Client and Applus+ LGAI to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the appendix 2.

The final MR Version02 submitted by PP on 29/08/2017 serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Areas of validation and verification findings	No. of CL	No. of CAR	No. of FAR
Project design document and Monitoring report	00	02	00
Description of project activity	00	00	00
Application of selected baseline and monitoring methodology and selected standardized baseline			
- Applicability of methodology and standardized baseline	00	00	00
- Deviation from methodology	00	00	00
- Clarification on applicability of methodology, tool and/or standardized baseline	00	00	00
- Project boundary	00	00	00
- Establishment and description of baseline scenario	00	00	00

Areas of validation and verification findings	No. of CL	No. of CAR	No. of FAR
- Demonstration of additionality	00	00	00
- Emission reductions	00	01	00
-Calibration details	00	00	
- Monitoring plan	00	00	00
Others (please specify)-Matter related to breakdown details	00	01	00
<b>Total</b>	00	04	00

The list of findings and there resolution is presented in Appendix 2 of this report.

### 2.5.1 Forward Action Requests

This is 1<sup>st</sup> periodic verification of the project activity and no FAR raised from CDM validation.

## 2.6 Eligibility for Validation Activities

### 3 VALIDATION FINDINGS

#### 3.1 Participation under Other GHG Programs

The project activity has gone through validation under UNFCCC CDM<sup>1</sup>. Registered CDM PDD and validation report is available on UNFCCC website<sup>2</sup>. In-line with the **clause 3.11.10** of VCS standard DOE has carried out gap validation as below:

#### Project Details:

The Project Participant, Mahalaxmi Commercial Services Private Limited, has developed a 10.5 MW wind power project at site-Jath, Taluka-Jath, District-Sangli, State-Maharashtra in India. M/s Baidyanath Power Private Limited (earlier owner was Mahalaxmi Commercial Services Private Limited. The Business Transfer Agreement is executed between Mahalaxmi Commercial Services Private Limited and Baidyanath Power Private Limited on 13th October 2015) is the new project proponent of the proposed project activity.

The project activity generates electricity utilizing wind energy and the generated electricity is supplied to the regional MSEDCL grid which is under purview NEWNE grid. Net electricity supplied to the grid by project activity is measured on continuous basis with the 0.2s accuracy meters. In absence of the project activity equivalent amount of electricity would have otherwise been generated by existing and new power plants connected to the emission intensive NEWNE electricity grid. Thus the project activity would result in avoidance of Green House Gases (GHGs) emission and contribute to mitigation of global warming.

Details of commissioning date of all WTGs:

\_\_\_\_\_

<sup>1</sup><https://cdm.unfccc.int/Projects/DB/SGS-UKL1435153630.26/view>

<sup>2</sup><https://cdm.unfccc.int/Projects/DB/Applus1492530362.26/view>

Sl. No	Location	Capacity of WTG (MW)	Commissioning Date*
1	JTH- 247	2.1	08/06/2013
2	JTH- 292	2.1	08/06/2013
3	JTH- 293	2.1	08/06/2013
4	JTH- 294	2.1	11/02/2014
5	JTH- 300	2.1	11/02/2014

\* Reference foot note no. 1 is applicable.

The Project Participant has placed the purchase orders to Suzlon Energy Limited and its group companies to supply and install the proposed wind power project. Suzlon shall also provide operation and maintenance services to the project activity

**Project Start Date:**

The start date of the project activity is the earliest date of commissioning of the WTG involved in the project activity i.e. 08/06/2013.

**Project Crediting Period:**

The crediting period of the project activity is for 10 years (fixed).

The crediting period of the present project activity is from 08/06/2013 to 23/07/2015, i.e. for a period of 02 years-01 month.

**Project Scale and Estimated GHG Emission Reductions or Removals:**

The project falls under the category of “Project” as per VCS requirements as the annual emission reductions from the project is expected to be 16,223tCO<sub>2</sub>e.

**Project Locations:**

The project activity is located at Jath site, District-Sangli, State-Maharashtra. The latitude and longitude of each WTG are as follows:

Survey Field No. / Gat No.	Latitude	Longitude	Location
59	N16° 58' 46.3"	E 75° 14' 31.3"	Loc. No. JTH - 292 Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)
128/1 & 128/2	N16° 59' 40.4"	E 75° 13' 46.5"	Loc. No. JTH - 293 Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)
109	N16° 59' 50.5"	E 75° 14' 10.4"	Loc. No. JTH - 247 Village-Mendhegiri, Taluka - Jath, District - Sangli(Maharashtra)

32	N17° 00' 9"	E 75° 17' 00.9"	Loc. No. 300, Village - Muchandi, Taluka - Jath, District - Sangli (Maharashtra)
91	N16° 58' 56.5"	E 75° 14' 18.9"	Loc. No. 294, Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)

**Project Ownership and Project proponent:**

The Project is owned by Individual investorshence it possessright of use of ER credits. The Ownership is demonstrated through the following documents.

- 1) Commissioning certificates for wind plant in the name of PP issued by respective state electricity board.
- 2) Power Purchase Agreement with respective State Electricity Board for sale of electricity by the PP

Assessment team checked the above documents and confirms the project ownership clause.

**Details of the project proponent:**

Organization name	Baidyanath Power Private Limited ( earlier PP "Mahalaxmi Commercial Services Private Limited")
Contact person	ShripadMoharil
Title	
Address	BaidyanathBhawan, Great Nag Road, Nagpur- 440024
Telephone	-
Email	-

**Description of the Project Activity:**

The Project Participant, Mahalaxmi Commercial Services Private Limited, has proposed to develop a 10.5 MW wind power project at site-Jath, Taluka-Jath, District-Sangli, State-Maharashtra in India. The project activity will generate electricity utilising wind energy and will supply the generated electricity to the regional MSEDCL grid which is under purview NEWNE grid. Export and import to/from the grid by project activity is measured on continuous basis with the 0.2s accuracy meters<sup>3</sup>. Net electricity exported to the grid is thus calculated from the difference of export and import. In absence of the project activity equivalent amount of electricity would have otherwise been generated by existing and new power plants connected to the emission intensive NEWNE electricity grid. Thus the project activity would result in avoidance of Green House Gases (GHGs) emission and contribute to mitigation of global warming.

**Details of commissioning date of all WTGs:**

Sl. No	Location	Capacity of WTG (MW)	Commissioning Date*
1	JTH- 247	2.1	08/06/2013
2	JTH- 292	2.1	08/06/2013
3	JTH- 293	2.1	08/06/2013
4	JTH- 294	2.1	11/02/2014
5	JTH- 300	2.1	11/02/2014

\* Reference foot note no. 2 is applicable.

<sup>3</sup>Commissioning certificates is provided for meter accuracy class and commissioning dates of WTGs.

The Project Participant has placed the purchase orders to Suzlon Energy Limited and its group companies to supply and install the proposed wind power project. Suzlon shall also provide operation and maintenance services to the project activity.

It is to be noted that, the project participant of the concerned project activity is Mahalaxmi Commercial Services Private Limited. However, the ownership has been now transferred to M/s Baidyanath Power Private Limited.

The Business Transfer Agreement between Mahalaxmi Commercial Services Private Limited and Baidyanath Power Private Limited was executed on 13th October 2015.

The technical details were checked by the assessment team from the details available from the manufacturers (2<sup>nd</sup> party) of the WTGs.

The assessment team also checked commissioning certificates issued by the (3<sup>rd</sup> party) to cross check the combined capacity. The commissioning details of the project activity is provided below which is checked by the assessment team and found correct.

The capacity of the project is below 15 MW type I small scale project activity and thus assessment team confirms that the project is small scale project activity. The technology being employed is well proven, safe & sound. No technology transfer to host party is there due to project activity.

Thus project activity description, capacity limitation and de-bundling criteria are checked and found correct by the assessment team. The PDD mentions all the criteria properly and found correct by the assessment team.

#### **Compliance with relevance laws and regulation:**

The Project has received necessary approvals for development and commissioning for each plants from the state Nodal agencies and thus confirms compliance to the local laws and regulations.

#### **Ownership and Other Programs:**

##### Project Ownership

The Project is owned by Individual investors hence it possess right of use of ER credits. The Ownership of the project has been confirmed through commissioning certificates for wind plant in the name of PP issued by state electricity board and power Purchase Agreement with respective State Electricity Board for sale of electricity by the PP.

##### Emissions Trading Programs and Other Binding Limits

Net GHG emission reductions or removals generated by the Project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits.

##### Other Forms of Environmental Credit

The project is recently registered with UNFCCC mechanism on 24/07/2015 (UNFCCC Reference No. 10164) with renewable crediting period 24/07/2015 – 23/07/2025 (Fixed). Thus the monitoring period for this VCS verification is chosen from (including both days) and the project activity achieved 27,582tCO<sub>2</sub>e emission reductions during this monitoring period. Refer CAR 01 for the same.

##### Participation under Other GHG Programs

Above projects is registered with UNFCCC (reference number 10164), however an undertaking has been submitted by PP for double counting would never happens with any other GHG program.

##### Projects Rejected by Other GHG Programs

The Project is not rejected by other GHG programs.

**Application of Methodology:**

Assessment team confirms that the application of the baseline methodology is transparent and conservative, and confirms that the chosen baseline and monitoring methodology i.e. AMS.I.D version 17 is applicable to the project activity.

**Project Boundary:**

The spatial extent of project boundary diagram (including the metering system) referred by the methodology is now mentioned in the VCS PD as per the requirement of applied methodology and thus the same is acceptable to the assessment team.

**Baseline Scenario:**

Being a grid connected wind energy generation project, PP developed the project based on the Methodology AMS I-D Ver. 17. As per the methodology *“The baseline scenario is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.”*

As per VVS version 09, *“where the baseline scenario is not prescribed in the approved methodology, the DOE shall assess the list of identified credible alternatives to the project activity in the PDD selected to determine the most realistic baseline scenario.”* Thus, VCS PD should mention the credible alternatives to the project activity in order to determine the most realistic baseline scenario. As the selected small scale methodology clearly mention the baseline scenario and the same has been opted in this project, therefore, no further analysis on baseline is required.

Validation Team, therefore, concludes that the VCS PD conforms to the guidance given by EB via VVS version 09.

**3.2 Methodology Deviations**

This section is not applicable as there is no methodology deviation observed during this verification period.

**3.3 Project Description Deviations**

This section is not applicable as there is no project deviation observed during this verification period.

**3.4 Grouped Project**

This section is not applicable as the project is not a grouped project.

## 4 VERIFICATION FINDINGS

### 4.1 Project Implementation Status

During the verification site visit it was concluded that the project is implemented as per the instruction of the registered PD and Final Validation report. During the current monitoring period it was observed that no unforeseen situation evolved which can impact the operation of the project activity. Scheduled maintenance was carried out as per the instruction of the manufacturer and the same is acceptable to the assessment team.

The WTG wise latitudes and longitudes are confirmed as below:

Survey Field No. / Gat No.	Latitude	Longitude	Location
59	N16° 58' 46.3"	E 75° 14' 31.3"	Loc. No. JTH - 292 Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)
128/1 & 128/2	N16° 59' 40.4"	E 75° 13' 46.5"	Loc. No. JTH - 293 Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)
109	N16° 59' 50.5"	E 75° 14' 10.4"	Loc. No. JTH - 247 Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)
32	N17° 00' 9"	E 75° 17' 00.9"	Loc. No. 300, Village - Muchandi, Taluka - Jath, District - Sangli (Maharashtra)
91	N16° 58' 56.5"	E 75° 14' 18.9"	Loc. No. 294, Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)

The project activity capacity is 10.5 MW and the technical parameters have been verified with the nameplates as well as the technical specification as below:

Operating Data	
Rated Power	2.1 MW
Cut-in wind speed	4 m/s
Rated wind speed	14 m/s

Cut-out wind speed	25 m/s
Hub Height	79 m
Wind Class	IEC-IIA
Rotational speed	15 to 17.6 rpm
Rotor	
Pitch system	Pitch regulated, electrical
Diameter	88 m
Swept Area	6,082 m <sup>2</sup>
Blade material type	Epoxy bundled fibre glass
Generator	
Type	Asynchronous slip ring type induction generator
Rated Power	2,100 kW
Rated Voltage	690 / 600 V
Frequency	50/60 Hz
Protection	IP 54, IP 23 for slip ring unit
Cooling system	Air cooled
Insulation	Class H
Slip control	Unique Flexi-Slip providing slip up to 16.67%
Braking System	
Aerodynamic brake	3 Independent systems with blade pitching mechanism
Mechanical brake	Hydraulic fail-safe disc brake system
Gear box	
Type	3 stage (1 planetary and 2 helical)
Ratio	1:98.8/1:118.1

Nominal load	2,200 kW
Yaw system	
Type	Driven by 3 electrical driven planetary drives
Bearings	Polyamide slide
Certifications	
Design standards	GL 2003
Quality	ISO 9001:2000, ISO 9001:2008, ISO 14001:2004 & OHSAS 18001:2007
Tower	
Type	Tubular Tower (4 sections)
Corrosion Protection	Epoxy/PU coated

By comparing the actual ER claimed in this monitoring period with the estimate in the registered PDD, the actual emission reductions (tCO<sub>2</sub>e) are lower than what is stated in the registered CDM PDD (i.e. Actual is 26.40% lower than the estimated) which surely will not lead to the overestimation of VERs.

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period.

All required equipment's and procedures are available and implemented in an appropriate manner.

It was observed that the monitoring plan was implemented as per the requirement of the registered PD, FVR and approved methodology AMS-I.D. Version 17.0. The organisational role and responsibility as mentioned in the registered PD is followed onsite. All the monitoring equipment was calibrated as per the specified interval in the registered PD. All the emergency preparedness as mentioned in the registered PD is followed onsite and no discrepancies were found regarding the same.

The project is recently registered with UNFCCC mechanism on 24/07/2015 (UNFCCC Reference No. 10164) with renewable crediting period 24/07/2015 – 23/07/2025 (Fixed). Thus the monitoring period for this VCS verification is chosen from (including both days) and the project activity achieved 27,582tCO<sub>2</sub>e emission reductions during this monitoring period

The start date of the project activity is the earliest date of commissioning of the WTG involved in the project activity i.e. 08/06/2013. An undertaking has been submitted by PP for double counting would never happens with any other GHG program.

It was also observed during the verification process is that project is not rejected by any other GHG program around the world. The following web sites were checked to confirm the same:

1. <https://www.reregistryindia.nic.in/>
2. <http://cdm.unfccc.int/>
3. <http://www.goldstandard.org/>
4. [www.v-c-s.org](http://www.v-c-s.org)

The assessment team observed that the project is in line with the registered PD, FVR, first verification and approved methodology and thus no clarification/deviation is sought

However, during verification CAR 1 related to undertaking for double counting & GSP comments was raised and closed successfully during the course of verification. The detail of the CAR can be obtained in Appendix 2 of this report.

#### 4.2 Accuracy of GHG Emission Reduction and Removal Calculations

<b>Means of verification</b>	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the VCS PD. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the VCS PD
<b>Findings</b>	CAR 3 was raised during the verification. The description of the CAR and its closure is described below in Appendix 2 of this report.
<b>Conclusion</b>	<p>The baseline Emissions for a given year is calculated by multiplying the energy baseline with the grid emission factor.</p> <p><b>Formula Used:-</b>  <math>BE_y = EG_{BL,y} * EF_{grid,y}</math></p> <p>Where,  <math>EG_{BL,y}</math> = Total quantity of net electricity delivered to the INDIAN grid  <math>EF_{grid,y}</math> = Combined Margin CO<sub>2</sub> emission factor in year y</p> <p><math>EG_{BL,y}</math> is a calculated value which is obtained from the difference of <math>EG_{export,y}</math> and <math>EG_{import,y}</math>. The <math>EG_{export,y}</math> and <math>EG_{import,y}</math> is obtained from the electricity meter installed at the HT side of the transformer. The value of <math>EG_{export,y}</math> and <math>EG_{import,y}</math> forms the part of JMR reports which is taken every month of the billing cycle in front of O&amp;M personal and state electricity board personal. The electricity meters are of Elster make, type A1800 and 0.2S accuracy class meters. Assessment team checked the details during the onsite visit.</p> <p>Moreover, the verification team has checked the entire monthly JMR report and invoices applicable for the monitoring period and found all the parameters are monitored and recorded as per the monitoring plan in the registered PDD. The verification team has crosschecked the revised emission reduction sheet and monitoring report data with the JMR sheet and invoice bills and found all the values are matching.</p>

#### 4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

<b>Means of verification</b>	The verification team checked the break down log for the monitoring period. During the verification site visit the feeder wise location of the WTGs is also checked. The Calibration details of the monitoring meters are also checked with calibration certificates.
------------------------------	---

<b>Findings</b>	No finding raised
<b>Conclusion</b>	<p>The metering arrangement is tri-vector bi-directional energy meters of Elster Make; accuracy class 0.2s (main and check) at the State Electricity Board (SEB) substation. These meters record several parameters including electricity exported &amp; imported. These electricity meters are being used by state electricity board for JMR (Joint Meter Reading) electricity generation statements.</p> <p>During commissioning of the WTGs monitoring meters of accuracy class i.e. 0.2s were installed. The meters are monitored continuously &amp; cumulative readings are taken at the end of the month by joint meter reading procedure. These are sealed by state electricity board to avoid malfunctioning with meter readings. Meter is calibrated once in 5 years by the meter testing division of the state utility in the presence of O&amp;M Contractor / investor's representatives and state electricity board officials to ensure the working of meter within permissible limits. The calculation of net electricity supplied to grid is under purview of state electricity board and PP do not have control on it. Calibration details of the monitoring meters checked with calibration certificates submitted by PP and found that calibration frequency of 5 yrs is complied.</p> <p>The break down log is checked and found that the WTG undergone scheduled maintenance and break down. No unforced error observed and feeder wise WTGS location is also checked and found correct.</p>

#### 4.4 Non-Permanence Risk Analysis

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	No risk	Nil	Not applicable	Complete verification of all the values indicated in the emission reduction spreadsheet in documents such as JMR/Invoices. No sampling approach adopted and complete site and verification is performed by the assessment team.

### 5 SAFEGUARDS

#### 5.1 No Net Harm

No potential environment or socio economic matter was found during the site visit. The project is renewable energy project and thus no negative impact observed in Air or water quality onsite.

#### 5.2 Local Stakeholder Consultation

All the stakeholders are happy with the implementation and operation of the project activity and no negative comments envisaged for the project activity. There was no change in project description form the registered VCS PD. Assessment team confirmed the same during the verification site visit.

This project was open for public comment from 06 June - 06 July 2017. No comments were received.

[http://www.vcsprojectdatabase.org/#/pipeline\\_details/PL1693](http://www.vcsprojectdatabase.org/#/pipeline_details/PL1693)

## 6 VERIFICATION CONCLUSION

Applus+ LGAI has been engaged by Baidyanath Power Private Limited to perform the 1<sup>st</sup> periodical verification of the “Wind Power Project in Maharashtra State, India”

The Baidyanath Power Private Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project’s Monitoring Plan in the registered VCS PD and the applied methodology AMS-I.D. Version 17.0.

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board. 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. The verification can confirm that:

- the project is operated as planned and described in the project document;
- the monitoring plan is as per the applied methodology;
- the monitoring process in Monitoring Report is as per the PD
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- The GHG emission reductions are calculated without material misstatements.

Verification period: 08/06/2013 to 23/07/2015 (including both days)

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

Year	Baseline emissions or removals (tCO <sub>2</sub> e)	Project emissions or removals (tCO <sub>2</sub> e)	Leakage emissions (tCO <sub>2</sub> e)	Net GHG emission reductions or removals (tCO <sub>2</sub> e)
Year 2013	4,390	0	0	4,390
Year 2014	13,786	0	0	13,786
Year 2015	9,406	0	0	9,406
<b>Total</b>	<b>27,582</b>	<b>0</b>	<b>0</b>	<b>27,582</b>

## APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

No.	Author	Title	References to the document	Provider
1.	NA	Commissioning certificates of the WTGs implemented in the project site.	NA	Project participant
2.	NA	Contract of the project participant with the DOE	Contract document signed between PP and DOE	Project participant
3.	NA	Technical specifications of wind turbine generators from manufacturers	Manufacturer technical specifications	Project participant
4.	NA	Power Purchase agreement for the project activity	NA	Project participant
5.	NA	VCS PD	Version 01, dated 16/05/2017	Project participant
6.	NA	Revised VCS PD	Version 01 dated 29/08/2017	Project participant
7.	NA	Registered CDM PDD	Version 1.9 dated 25/04/2015	Project participant
8.	NA	Final CDM Validation report	Version 02 dated 15/05/2015	Project participant
9.	NA	The operational lifetime of the project activity from the manufacturer=(Technical specifications)	Manufacturer technical specifications	Project participant
10.	NA	Ministry of Environment and forest: <a href="http://www.envfor.nic.in">www.envfor.nic.in</a> UNFCCC <a href="http://www.cdm.unfccc.int">www.cdm.unfccc.int</a> CEA: Central electricity authority <a href="http://www.cea.nic.in">www.cea.nic.in</a> VCS: Verified Carbon Standard <a href="http://www.v-c-s.org">www.v-c-s.org</a>	Reference link is provided.	Independent Search
11.	NA	Tools/ guidelines used in the project activity  <ul style="list-style-type: none"> <li>• Tool to determine the remaining lifetime of the project activity in line with Annex 15 EB 50</li> </ul>	UNFCCC CDM web site	UNFCCC

No.	Author	Title	References to the document	Provider
		<ul style="list-style-type: none"> <li>• Tool to calculate the emission factor for an electricity system</li> <li>• Glossary of CDM terms version 07</li> <li>• VCS verification report template version 03.3</li> </ul>		
12.	NA	JMR records for the complete monitoring period	JMR records	Project participant
13.	NA	MR version 01  MR version 02	16/05/2017  29/08/2017	Project participant
14.	NA	Emission Calculation sheet version 01  Revised Emission Calculation sheet version 02	16/05/2017  29/08/2017	Project participant
15.	NA	Invoices for the complete monitoring period	Invoice	Project participant
16.	NA	Break down details of the complete monitoring period	Log sheet	Project participant
17.	NA	Undertaking letter from PP for double counting of emission reductions	Letter dated 29/08/2017	Project participant

**APPENDIX 2: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS  
(CAR/CL/FAR)**

**VALIDATION FINDINGS**

<b>CAR ID</b>	01	<b>Section no.</b>		<b>Date:</b> 24/08/2017
<b>Description of CAR</b>				
<p>During the desk review it was observed that following undertaking is missing:</p> <ol style="list-style-type: none"> <li>1. Project Proponent will not claim other forms of environmental credit for the same crediting period under consideration.</li> <li>2. Project neither has not intends to generate any form of GHG related environmental credit for GHG emission reductions or removals claimed under the VCS program.</li> </ol> <p>The supporting documents are absent and thus clause 1.12.2, 1.12.3 and 1.12.4 in the VCS PD is thus reserved till further analysis. Corrective action is sought.</p>				
<b>Project participant response</b>				<b>Date:</b> 29/08/2017
<i>Declaration from PP is now provided to the assessment team.</i>				
<b>Documentation provided by project participant</b>				
<i>PP declaration</i>				
<b>DOE assessment</b>				<b>Date:</b> 08/09/2017
<p>The declaration mentioning that Project Proponent will not claim other forms of environmental credit for the same crediting period under consideration and Project neither has not intends to generate any form of GHG related environmental credit for GHG emission reductions or removals claimed under the VCS program. The respective documents are checked by the assessment team and thus the CAR is closed</p>				

**VERIFICATION FINDINGS**

<b>CAR ID</b>	01	<b>Section no.</b>		<b>Date:</b> 24/08/2017
<b>Description of CAR</b>				
<p>During the site visit and subsequent document review it was observed that the details of feeder wise WTGs location is missing in the MR. Corrective action is sought in the respective section of the MR</p>				
<b>Project participant response</b>				<b>Date:</b> 29/08/2017
<i>Feeder details are mentioned in section 3.3 of the revised MR-version-2.</i>				

<b>Documentation provided by project participant</b>	
<i>Revised MR-version-2</i>	
<b>DOE assessment</b>	<b>Date:</b> 08/09/2017
The feeder details are now mentioned in the revised MR version 02. CAR is closed.	

<b>CAR ID</b>	02	<b>Section no.</b>		<b>Date:</b> 24/08/2017
<b>Description of CAR</b>				
The breakdown details of the WTGs are missing in the MR. Moreover, the supporting document regarding the breakdown details are also not provided to the assessment team. Corrective action is sought in the respective section of the MR and supporting documents for further analysis.				
<b>Project participant response</b>				<b>Date:</b> 28/08/2017
<i>Breakdown details are provided in the MR and the supporting document is now submitted to the assessment team.</i>				
<b>Documentation provided by project participant</b>				
<i>Revised MR-version-2</i>				
<i>Breakdown detail</i>				
<b>DOE assessment</b>				<b>Date:</b> 08/09/2017
The breakdown details are checked by the assessment team and it is observed that no forced breakdown occurred except for the scheduled maintenance as per the manufacturer's instructions.				
CAR is thus closed.				

<b>CAR ID</b>	03	<b>Section no.</b>		<b>Date:</b> 24/08/2017
<b>Description of CAR</b>				
Assessment team noted that the billing period for the JMR is from 1st to 1st every month and hence the apportioning for the month June 2013 and July 2015 is not detailed out in MR. Corrective action is sought.				
<b>Project participant response</b>				<b>Date:</b> 29/08/2017

<p>Apportioning procedure is explained in section 3.3 of the revised MR-version-2. The apportioning procedure is applicable for last month of period and same is followed in ER sheet and MR has mentioned that process.</p> <p>June 2013 is start of commissioning period and VCS monitoring period is from start of commissioning, thus no apportioning is required for June 13 month.</p>	
<p><b>Documentation provided by project participant</b></p>	
<p>Revised MR-version-2</p>	
<p><b>DOE assessment</b></p>	<p><b>Date:</b>08/09/2017</p>
<p>Assessment team checked that the apportioning procedure is explained in section 3.3 of the revised MR-version-2. The apportioning procedure is applicable for last month of period and same is followed in ER sheet and MR has mentioned the same. The calculation is checked by the assessment team and found correct.</p> <p>June 2013 is start of commissioning period and VCS monitoring period is from start of commissioning, thus no apportioning is required for June 13 month.</p> <p>CAR is thus closed.</p>	

**APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS**

**Verification teammember**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader/Lead Assessor	OR	Das	Sukanta	TQC- Outsourced entity	Yes	Yes	Yes	Yes

**Technical reviewer and approver of the verification and certification report**

No.	Role	Type of resource	Last name	First name	Affiliation  (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer (TR)	IR	Xue	Hanshen (Denny)	Applus+ LGAI
2.	Approver	IR	Sendin	Juan	Applus+ LGAI

**Short CVs of the Team:**

1. Mr. Sukanta DAS, has done M. SC in (Electronics and Photonics) and M. Tech in (Energy technology) from Tezpur Central University/ Indian Institute of technology Bombay in India. He is a certified lead auditor for ISO 14001 EMS LA and ISO 9001 QMS LA from International registry for Certified Auditors (IRCA) and Certified Lean Management practitioner from Quality Council of India (QCI). He has more than eight years of working experience at TUV NoRD/ Reconsult/CRA/APPLUS certifications under various categories of projects stating from Renewable to waste to supercritical projects. He was JI/ CDM Lead Assessor in TUV NoRD and was involved in more than 100 CDM validation and verifications activities in Gold Standard, VCS, CDM projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1, 13 technical areas 1.2/1.1/13.1. Currently he is associated with True Quality Certifications Private Limited and is empanelled with APPLUS certification to carry out GHG audit.
2. Hanshen (Denny) Xue (Master Degree in Environmental Engineering, Bachelor Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment. He is based on Shanghai. He has 1.5 years of work experiences in CDM project development. Before he joined Applus+ LGAI, he has been worked for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development.

**APPENDIX 4: ABBREVIATIONS**

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CMS	Central Monitoring system
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
DNA	Designated National Authority

DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
JMR	Joint Metering reading
PP	Project Participant

Annex 1: Calibration details of the meters

Calibration Details of the WTGs installed in the project activity is provided below:

<b>33/11 KV, Pachchhapur substation, Pachchhapur Feeder</b>			
Connected WTGs: JTH292, JTH293, JTH294, JTH247, JTH300			
<b>Details of Main Meter</b>		<b>Details of Check Meter</b>	
<b>Serial No</b>	14953743	<b>Serial No</b>	14953564
<b>Make</b>	Elester	<b>Make</b>	Elester
<b>Type</b>	A 1800	<b>Type</b>	A 1800
<b>Accuracy Class</b>	0.2 s	<b>Accuracy Class</b>	0.2 s
<b>Calibration frequency</b>	Annual	<b>Calibration frequency</b>	Annual
<b>Date of Calibration</b>	<b>Calibration Validity</b>	<b>Date of Calibration</b>	<b>Calibration Validity</b>
17/07/2014 <sup>4</sup>	16/07/2019	17/07/2014	16/07/2019
<b>Details of new feeder connectivity<sup>5</sup></b>			
<b>110/33 KV Jath Substation, Feeder-1</b>			
Connected WTGs: JTH292, JTH293, JTH294, JTH247, JTH300			
<b>Details of Main Meter</b>		<b>Details of Check Meter</b>	
<b>Serial No</b>	13813605	<b>Serial No</b>	13813606
<b>Make</b>	Elester	<b>Make</b>	Elester
<b>Type</b>	A 1800	<b>Type</b>	A 1800
<b>Accuracy Class</b>	0.2 s	<b>Accuracy Class</b>	0.2 s
<b>Calibration frequency</b>	Annual	<b>Calibration frequency</b>	Annual
<b>Date of Calibration</b>	<b>Calibration Validity</b>	<b>Date of Calibration</b>	<b>Calibration Validity</b>
07/08/2015	06/08/2020	07/08/2015	06/08/2020

---

<sup>4</sup>Though calibrated meters were installed at the time of commissioning , PP do not have available the calibration certificate prior to 17/07/2014, Hence, maximum permissible error factor of 0.2% has been applied conservatively to all WTGs from June-13 ( since commissioning) to July-14. As per CEA notification and revised PDD, the calibration frequency is revised as once in five years.

<sup>5</sup>There has been a shift of the feeder connectivity on 01/10/2015 and the new feeder connectivity details are now provided in the table.