



BUNDLED WIND POWER PROJECT BY MYTRAH GROUP

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Summary:

Earthood has performed the VCS second verification of the project “Bundled Wind Power Project by Mytrah Group” (VCS Ref. Number 1728). During the current verification, PP have chosen the monitoring period from 25-11-2017 to 31-07-2019 (including both days).

The objective of this verification activity is to have an independent third party for the assessment of the project design, Actual ER sheet and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements.

The scope of verification includes confirming the implementation of the monitoring plan of the registered VCS PD (version 03) and the application of the monitoring methodology Approved consolidated baseline and monitoring methodology ACM 0002 version 17.

The verification is consisted of three phases: i) desk review of the project; ii) follow-up onsite visit and interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted following Earthood internal quality procedures.

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 total capacity of the project activity is 493.5 MW out of which 466.4 MW has been commissioned till date. The commissioning of the balance 27.1 MW is under process. The generated electricity is exported to the regional grid system which is under the purview of the Indian grid of India. The project is promoted by Mytrah Energy (India) Pvt. Limited with different SPVs. The details of the project activity and owners are given below;

S. No.	Project site	Location (State)	Name of SPVs	Project Capacity (MW)
1	Bhesada	Rajasthan	Mytrah Vayu (Indravati) Pvt. Ltd.	8.4
2	Pottipadu	Andhra Pradesh	Mytrah Vayu (Indravati) Pvt. Ltd.	105
3	Nidhi	Rajasthan	Mytrah Vayu (Som) Pvt. Ltd.	90
4	Nipaniya	Madhya Pradesh	Mytrah Vayu (Som) Pvt. Ltd.	30
5	Nazeerabad	Telangana	Mytrah Vayu (Godavari) Pvt. Ltd.	100.8
6	Burgula-II	Andhra Pradesh	Mytrah Vayu (Krishna) Pvt. Ltd.	10.4
7	Aspari	Andhra Pradesh	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	148.9
	Total			493.5

A risk-based approach has been followed to perform this verification activity. During the verification process 06 CARs, 01 CL and 00 FARs were raised and are discussed in detail in Appendix 4. The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and project owners have provided ESPL with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

Therefore, the emission reductions from the project activity “Bundled Wind Power Project by Mytrah Group” in India during this verification period 25-11-2017 to 31-07-2019 (including both days) could be verified.

Vintage wise representation of the emission reductions is as follows:

Period ¹	Baseline Emissions (tCO ₂ e)	Project Emissions (tCO ₂ e)	Leakages (tCO ₂ e)	Emission Reductions (tCO ₂ e)
2017	65,993	0	0	65,993
2018	1,053,564	0	0	1,053,564
2019	626,166	0	0	626,166
Total²	1,745,723	0	0	1,745,723

¹ JMRs are not ending on 31st December for year 2017 & 2018. Hence, exact yearwise vintage breakup i.e 1 January to 31 December is not possible.

² Rounddown baseline emissions and Roundup project emissions

1	Introduction	6
1.1	Objective	6
1.2	Scope and Criteria	6
1.3	Level of Assurance.....	7
1.4	Summary Description of the Project	7
2	Verification Process.....	9
2.1	Method and Criteria.....	9
2.2	Document Review	9
2.3	Interviews	9
2.4	Site Inspections.....	11
2.5	Resolution of Findings	11
2.5.1	Forward Action Requests.....	12
2.6	Eligibility for Validation Activities	12
3	Validation Findings.....	13
3.1	Participation under Other GHG Programs	13
3.2	Methodology Deviations.....	13
3.3	Project Description Deviations.....	13
3.4	Grouped Project	13
4	Verification Findings.....	14
4.1	Project Implementation Status	14
4.2	Safeguards	22
4.2.1	No Net Harm	22
4.2.2	Local Stakeholder Consultation	22
4.3	AFOLU-Specific Safeguards	22
4.4	Accuracy of GHG Emission Reduction and Removal Calculations	23
4.5	Quality of Evidence to Determine GHG Emission Reductions and Removals	23
4.6	Non-Permanence Risk Analysis.....	27
5	VERIFICATION CONCLUSION.....	28
	APPENDIX 1: Documents Reviewed or Referenced (Verification)	30
	APPENDIX 2: Competency Statement.....	32

APPENDIX 3: ABBREVIATIONS	33
APPENDIX 4: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)	34
APPENDIX 5: CALIBRATION DETAILS OF THE METERS.....	37

1 INTRODUCTION

1.1 Objective

Mytrah Energy (India) Private Limited has commissioned Earthood Services Private Limited (Earthood) to perform second VCS verification of the “Bundled Wind Power Project by Mytrah Group” (hereafter called project) for the monitoring period 25-11-2017 to 31-07-2019 (including both days) with VCS Ref number 1728³. The objective of this verification is a thorough and independent verification for the emission reductions reported for “Bundled Wind Power Project by Mytrah Group” and managed by Mytrah Energy (India) Private Limited.

The verification is the periodic independent review and ex post determination by Earthood Services private limited of the monitored reductions in GHG emissions that have occurred as a result of the registered VCS project activity during a defined monitoring period. Certification is the written assurance by Earthood that, during a specific period in time, a project activity achieved the emission reductions as verified.

1.2 Scope and Criteria

The scope of the verification is to establish and verify that;

- a) The project activity has been implemented and operated as per the registered PD or any approved revised PD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- b) The monitoring report and other supporting documents provided are complete in accordance with the latest applicable version of the completeness checklist for requests for issuance of VERs, verifiable, and in accordance with applicable VCS requirements;
- c) The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan, any revised approved monitoring plan, the approved methodology including applicable tool(s) and/or, where applicable, the approved standardized baseline;

The data recorded and stored as per the monitoring methodology including applicable tool(s) and, where applicable, the standardized baseline.

³ https://www.vcsprojectdatabase.org/#/project_details/1728

1.3 Level of Assurance

A draft verification report that is prepared by assessment team will be reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable VCS and CDM (Clean Development Mechanism) requirements as appropriate. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team. The report approved by Quality Manager is endorsed by Managing Director, who is overall responsible to ensure quality, before final release. The further details of applicable procedures and responsibilities about Earthood Quality Management System (QMS) are available on its website (www.earthood.in).

Earthood's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 25-11-2017 to 31-07-2019 are fairly stated in the Monitoring Report Version 02 dated 05-05-2020^{2/}. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM 0002 version 17^{7/}, and the standard^{13/}.

For more information, please refer to section 6 of this verification report.

1.4 Summary Description of the Project

The project activity involves installation of total generating capacity of 493.5 MW. The project is promoted by Mytrah Energy (India) Pvt. Limited with different SPVs. The purpose of the project activity is to generate electrical energy using renewable energy source (wind) and selling the generated electrical energy to the respective state utility. 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 regional grid system which is under the purview of the Indian grid of India. Details of the installation of project in respective state is as follows:

S.No.	Project site	Location (State)	Name of SPVs	Project Capacity (MW)
1	Bhesada	Rajasthan	Mytrah Vayu (Indravati) Pvt. Ltd.	8.4
2	Pottipadu	Andhra Pradesh	Mytrah Vayu (Indravati) Pvt. Ltd.	105
3	Nidhi	Rajasthan	Mytrah Vayu (Som) Pvt. Ltd.	90
4	Nipaniya	Madhya Pradesh	Mytrah Vayu (Som) Pvt. Ltd.	30
5	Nazeerabad	Telangana	Mytrah Vayu (Godavari) Pvt. Ltd.	100.8
6	Burgula-II	Andhra	Mytrah Vayu (Krishna) Pvt. Ltd.	10.4

S.No.	Project site	Location (State)	Name of SPVs	Project Capacity (MW)
		Pradesh		
7	Aspari	Andhra Pradesh	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	148.9
	Total			493.5

The total capacity of the project activity is 493.5 MW out of which 466.4 MW has been commissioned till date. The commissioning of the balance 27.1 MW is under process^{/9/}.

The project activity is located in the states of Rajasthan, Madhya Pradesh, Andhra Pradesh and Telangana.

The technology employed, is environment friendly technology since there are no GHG emissions associated with the electricity generation^{/9/}.

The total capacity of the project activity is 493.5 MW out of which 466.4 MW has been commissioned till date^{/9/}. Duration of this second VCS periodic verification of the project activity is from 25-11-2017 to 31-07-2019 (inclusive both days) and total emission reductions achieved during this monitoring period is 1,745,723 tCO₂e.

The commissioning details of the WTGs mentioned in MR^{/2/} was verified from the commissioning certificates provided^{/10/} by the PP.

Technical description was found to be consistent with the on-site observation^{/9/} and registered VCS PD^{/1/}.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Earthood internal procedures.

The Project was verified against the latest requirements and guidance set out in VCS and CDM standards.

Sampling approach has been applied by the verification team for the on-site visit however no sampling approach have been applied for document review as all the monthly reported figures in the MR/^{2/} and the ER sheet/^{3/} were checked from the actual records/^{6/}.

2.2 Document Review

The verification is performed primarily as a document review of the documents submitted at various stages of assessments. The review is performed by assessment team using dedicated protocols. The assessment team cross checks the information provided in the documents (PDD, MR, validation report) and information from sources other than those used, if available, and also conducts independent background investigations. Earthood conducted a desk review as under;

- A review of the data and information presented to verify their completeness.
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures.
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

2.3 Interviews

Earthood performed an on-site visit and interviews on 23/02/2020 & 25/02/2020 with project stakeholders to confirm selected information and to resolve issues identified in the document review. During the on-site visit, the PP representatives of were interviewed

No.	Interviews			Date	Subject	Team Member
	Last Name	First Name	Affiliation			
Nidhi project Site, Rajasthan						
1.	Pramanik	Amit	PP Representa tive	23/02/20 20	Project implementation, WTG operation, maintenance JMR,	Dr. Atul Takarkhede

No.	Interviews			Date	Subject	Team Member
	Last Name	First Name	Affiliation			
					Calibration etc.	
2.	Singh	Karan	O&M Team, Dhar site	23/02/2020	WTG operation, maintenance, JMR, Calibration	
Aspari I site, Andhra Pradesh						
3.	Pramanik	Amit	PP Representative	25/02/2020	Project implementation, WTG operation, maintenance, JMR, Calibration etc.	Dr. Atul Takarkhede
4.	Reddy	P.	O&M Team, ReGen	25/02/2020	WTG operation, maintenance, JMR, Calibration	

In addition, the location specified for the WTG were verified from the registered PD^{/1/} along with the help of mobile GPS. The operation of the WTGs was checked through the JMRs^{/6/} issued from the government authorities. Based on the site visit and desk review, the verification team is sufficiently confident of the implementation of the project activity as per registered PD^{/1/} except 27.1 MW which yet to be commissioned^{/9/}.

2.4 Site Inspections

A site visit was undertaken by Earthood from on 23/02/2020 & 25/02/2020 to carry out following;

- a. An assessment of the implementation and operation of the registered project activity as per the registered PD^{1/}.
- b. A review of information flows for generating, aggregating and reporting the monitoring parameters.
- c. Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PD^{1/}.
- d. A cross check between information provided in the monitoring report and data from other sources such as invoices.
- e. A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline.
- f. A review of calculations and assumptions made in determining the GHG data and emission reductions.
- g. An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

There are 7 project sites involved in the project activity. Thus due to multiple locations, site visit was conducted where random sampling was applied and 90/30 precision and confidence level. Nidhi site, Rajasthan (90 MW) and Aspari I site, Andhra Pradesh (79.9 MW) were visited by assessment team. The approach was found to be justified as per the CDM standard of sampling version 8.0^{17/}. Technical descriptions as seen on site was found to be in line with the registered VCS PD^{1/}. The locations of visited WTGs was recorded through mobile application of Google earth^{16/}. The geo-coordinates were found inline with the registered VCS PD^{1/}.

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and onsite assessment. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and nonconformities, which may be of following types;

CAR (Corrective Action Request) is raised if one of the following occurs:

- a) Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient
- b) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants
- c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions

- d) Change to the key sustainable development indicators
- e) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

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

FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

A total of 06 CAR and 01 CL were raised in the current verification. No FAR was raised. All the findings that are raised and communicated to project participant during the verification are included under Appendix 4. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise

2.5.1 Forward Action Requests

This is second periodic verification of the project activity and no FAR was raised from validation or previous verifications.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

This section is not applicable for present verification

3.2 Methodology Deviations

This section is not applicable for present verification.

3.3 Project Description Deviations

The total capacity of the project activity is 493.5 MW out of which 466.4 MW has been commissioned till date. The commissioning of the balance 27.1 MW is under process^{/9/}.

The delay in commissioning is due to the regulatory issues and under the control of the PP^{/9/}. The deviation is appropriately described in the monitoring report^{/2/}. The deviation does not have any impact on the scale, methodology and additionality of the project activity and accordance with VCS standard^{/13/}.

As the applied deviation is valid and do not have impact on the scale, methodology, additionality and monitoring of the project activity accepted by assessment team.

3.4 Grouped Project

This is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

This project activity involves installation of WTG's to generate electricity from wind energy. The total capacity of the project activity is 493.5 MW out of which 466.4 MW has been commissioned till date. The commissioning of the balance 27.1 MW is under process. Which, was verified on site^{/9/} and through commissioning certificates^{/10/}.

The details of the project is given below:

Sl. No.	Name of the SPVs	Project Site	Location (State)	Project Capacity (MW)	Commissioned Capacity (MW)
1	Mytrah Vayu (Indravati) Pvt. Ltd.	Bhesada	Rajasthan	8.4	8.4
2	Mytrah Vayu (Indravati) Pvt. Ltd.	Pottipadu	Andhra Pradesh	105	105
3	Mytrah Vayu (Som) Pvt. Ltd.	Nidhi	Rajasthan	90	62.9
4	Mytrah Vayu (Som) Pvt. Ltd.	Nipaniya	Madhya Pradesh	30	30
5	Mytrah Vayu (Godavari) Pvt. Ltd.	Nazeerabad	Telangana	100.8	100.8
6	Mytrah Vayu (Krishna) Pvt. Ltd.	Burgula-II	Andhra Pradesh	10.4	10.4
7	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	Aspari	Andhra Pradesh	148.9	148.9
	Total			493.5	466.4

The installation and specification of WTGs have been checked with commissioning certificates^{/10/} and during on-site assessments^{/9/}. There was no major breakdown or shut downs during the monitoring period which might affect the applicability of methodology or might cause material errors in emission reductions.

The project activity is located in the states of Rajasthan, Madhya Pradesh, Andhra Pradesh and Telangana and details are as follows:

The location details for the Bhesada project site:

WTG Location No	Village	District	Latitude (N)	Longitude (E)
RSA 126	Naya luna kalan	Jaisalmer	26.6985	71.4897
RSA 128	Naya luna kalan	Jaisalmer	26.6859	71.4923
RSA 286	Pratap pura	Jaisalmer	26.5989	71.6356
RSA 280	Khuda	Jaisalmer	26.6027	71.6137

The location details for the Pottipadu project site:

WTG Location No	Village	District	Latitude (N)	Longitude (E)
PPD-045	Pottipadu	Anantapur	15.0403	77.3681

WTG Location No	Village	District	Latitude (N)	Longitude (E)
PPD-046	Pottipadu	Anantapur	15.0442	77.3645
PPD-047	Pottipadu	Anantapur	15.0483	77.3662
PPD-058	Pottipadu	Anantapur	15.0478	77.3818
PPD-076	Pottipadu	Anantapur	15.0515	77.4067
PPD-077	Pottipadu	Anantapur	15.0559	77.3951
PPD-078	Pottipadu	Anantapur	15.0602	77.3949
PPD-081	Pottipadu	Anantapur	15.0731	77.3780
PPD-082	Pottipadu	Anantapur	15.0793	77.3781
PPD-084	Pottipadu	Anantapur	15.0720	77.4075
PPD-085	Pottipadu	Anantapur	15.0673	77.4060
PPD-052	Gulyapalyam	Anantapur	15.0712	77.3578
PPD-055	Gulyapalyam	Anantapur	15.0603	77.3668
PPD-056	Vajrakarur	Anantapur	15.0567	77.3694
PPD-057	Vajrakarur	Anantapur	15.0532	77.3721
PPD-001	Gadehothur	Anantapur	15.0324	77.3214
PPD-002	Gadehothur	Anantapur	15.0274	77.3169
PPD-005	Gadehothur	Anantapur	15.0123	77.3205
PPD-006	Gadehothur	Anantapur	15.0086	77.3231
PPD-011	Pottipadu	Anantapur	15.0308	77.3411
PPD-012	Pottipadu	Anantapur	15.0354	77.3414
PPD-013	Pottipadu	Anantapur	15.0393	77.3407
PPD-014	Pottipadu	Anantapur	15.0442	77.3287
PPD-015	Pottipadu	Anantapur	15.0520	77.3317
PPD-016	Vajrakarur	Anantapur	15.0378	77.3228
PPD-038	Ganjikunta	Anantapur	15.0150	77.3756
PPD-039	Tatrakallu	Anantapur	15.0078	77.3709
PPD-040	Vajrakarur	Anantapur	15.0014	77.3654
PPD-060	Vajrakarur	Anantapur	15.0378	77.3899
PPD-061	Vajrakarur	Anantapur	15.0347	77.3933
PPD-062	Vajrakarur	Anantapur	15.0266	77.3957
PPD-063	Vajrakarur	Anantapur	15.0304	77.3946
PPD-064	Vajrakarur	Anantapur	15.0206	77.3980
PPD-073	Vajrakarur	Anantapur	15.0366	77.4091
PPD-074	Vajrakarur	Anantapur	15.0416	77.4102
PPD-075	Kamalapadu	Anantapur	15.0462	77.4074
PPD-049	Konakondla	Anantapur	15.0811	77.3511
PPD-050	Konakondla	Anantapur	15.0768	77.3517
PPD-053	Gulyapalyam	Anantapur	15.0669	77.3609
PPD-054	Gulyapalyam	Anantapur	15.0659	77.3696
PPD-027	Gulyapalyam	Anantapur	15.0637	77.3432
PPD-028	Gulyapalyam	Anantapur	15.0577	77.3453
PPD-029	Vajrakarur	Anantapur	15.0537	77.3471
PPD-030	Vajrakarur	Anantapur	15.0492	77.3496
PPD-031	Vajrakarur	Anantapur	15.0446	77.3500
PPD-032	Vajrakarur	Anantapur	15.0361	77.3539
PPD-033	Vajrakarur	Anantapur	15.0319	77.3562
PPD-034	Vajrakarur	Anantapur	15.0272	77.3528
PPD-035	Vajrakarur	Anantapur	15.0207	77.3548
PPD-044	Vajrakarur	Anantapur	15.0322	77.3748

The location details for the Nidhi project site for all 53 WTGs:

WTG Location No	Village	District	Latitude (N)	Longitude (E)
NDH-001	Habur	Jaisalmer	27.1770	70.6009
NDH-002	Habur	Jaisalmer	27.1712	70.6035
NDH-003	Habur	Jaisalmer	27.1687	70.6069
NDH-004	Habur	Jaisalmer	27.1646	70.6093
NDH-005	Habur	Jaisalmer	27.1606	70.6123
NDH-006	Habur	Jaisalmer	27.1562	70.6147
NDH-007	Habur	Jaisalmer	27.1520	70.6182
NDH-008	Habur	Jaisalmer	27.1480	70.6210
NDH-009	Habur	Jaisalmer	27.1426	70.6231
NDH-010	Habur	Jaisalmer	27.1403	70.6258
NDH-011	Habur	Jaisalmer	27.1340	70.6296
NDH-012	Habur	Jaisalmer	27.1306	70.6328
NDH-013	Habur	Jaisalmer	27.1264	70.6457
NDH-014	Habur	Jaisalmer	27.1303	70.6428
NDH-015	Habur	Jaisalmer	27.1401	70.6367
NDH-016	Habur	Jaisalmer	27.1439	70.6337
NDH-017	Habur	Jaisalmer	27.1484	70.6290
NDH-018	Habur	Jaisalmer	27.1540	70.6268
NDH-019	Habur	Jaisalmer	27.1575	70.6242
NDH-020	Habur	Jaisalmer	27.1616	70.6214
NDH-021	Habur	Jaisalmer	27.1657	70.6191
NDH-022	Habur	Jaisalmer	27.1701	70.6160
NDH-023	Habur	Jaisalmer	27.1741	70.6130
NDH-024	Habur	Jaisalmer	27.1792	70.6095
NDH-025	Habur	Jaisalmer	27.1827	70.6066
NDH-026	Habur	Jaisalmer	27.1856	70.6040
NDH-027	Habur	Jaisalmer	27.1531	70.6382
NDH-028	Habur	Jaisalmer	27.1490	70.6412
NDH-029	Habur	Jaisalmer	27.1437	70.6439
NDH-030	Habur	Jaisalmer	27.1409	70.6470
NDH-031	Habur	Jaisalmer	27.1359	70.6493
NDH-032	Habur	Jaisalmer	27.1321	70.6526
NDH-033	Habur	Jaisalmer	27.1283	70.6552
NDH-034	Habur	Jaisalmer	27.1242	70.6571
NDH-035	Habur	Jaisalmer	27.1139	70.6741
NDH-036	Habur	Jaisalmer	27.1174	70.6718
NDH-037	Habur	Jaisalmer	27.1216	70.6693
NDH-038	Habur	Jaisalmer	27.1256	70.6667
NDH-039	Habur	Jaisalmer	27.1287	70.6636
NDH-040	Habur	Jaisalmer	27.1337	70.6390
NDH-041	Habur	Jaisalmer	27.1331	70.6707

WTG Location No	Village	District	Latitude (N)	Longitude (E)
NDH-042	Habur	Jaisalmer	27.1289	70.6744
NDH-043	Habur	Jaisalmer	27.1266	70.6777
NDH-044	Habur	Jaisalmer	27.1192	70.6606
NDH-045	Habur	Jaisalmer	27.1351	70.6808
NDH-046	Habur	Jaisalmer	27.1407	70.6771
NDH-047	Habur	Jaisalmer	27.1431	70.6942
NDH-048	Habur	Jaisalmer	27.1398	70.6974
NDH-049	Habur	Jaisalmer	27.1357	70.7002
NDH-050	Habur	Jaisalmer	27.1306	70.7023
NDH-051	Habur	Jaisalmer	27.1267	70.7054
NDH-052	Habur	Jaisalmer	27.1358	70.7070
NDH-053	Habur	Jaisalmer	27.1430	70.7026

The location details for the Nipaniya project site:

WTG Location No	Village	District	Latitude (N)	Longitude (E)
NPY-P-58	Jamuniya	Mandsaur	24.2041	75.6108
NPY-P3-41	Dhamniya Diwan	Mandsaur	24.1484	75.6209
NPY-P3-114	Nariya Bujurg	Mandsaur	24.2625	75.6194
NPY-P3-116	Manpura	Mandsaur	24.2537	75.6161
NPY-P3-117	Nariya Bujurg	Mandsaur	24.2484	75.6159
NPY-P3-120	Aakli Shivdas	Mandsaur	24.2349	75.6133
NPY-P3-127	Sagoriya	Mandsaur	24.2197	75.6075
NPY-P-59	Sagoriya	Mandsaur	24.2145	75.6107
NPY-P3-157	Jamuniya	Mandsaur	24.2073	75.6093
NPY-P3-112	Bardiya Amra	Mandsaur	24.2740	75.6223
NPY-P3-124	Jamuniya	Mandsaur	24.2257	75.5991
NPY-P3-154	Guradiyamata	Mandsaur	24.2361	75.6432
NPY-P3-119	Manpura	Mandsaur	24.2300	75.5993
NPY-P-51	Barkheda Uda	Mandsaur	24.1654	75.6055
NPY-P3-128	Sagoriya	Mandsaur	24.2174	75.6098

The location details for the Nazeerabad project site:

WTG Location No	Village	District	Latitude (N)	Longitude (E)
NRB01	Nazeerabad	Rangareddy	17.2224	77.9471
NRB02	Nazeerabad	Rangareddy	17.2187	77.9479
NRB03	Nazeerabad	Rangareddy	17.2162	77.9491
NRB04	Nazeerabad	Rangareddy	17.2129	77.9502
NRB05	Nazeerabad	Rangareddy	17.2099	77.9513
NRB06	Nazeerabad	Rangareddy	17.2068	77.9510
NRB07	Nazeerabad	Rangareddy	17.2040	77.9518
NRB11	Nazeerabad	Rangareddy	17.1909	77.9314

WTG Location No	Village	District	Latitude (N)	Longitude (E)
NRB14	Nazeerabad	Rangareddy	17.1886	77.9362
NRB15	Nazeerabad	Rangareddy	17.1844	77.9300
NRB16	Nazeerabad	Rangareddy	17.1788	77.9233
NRB17	Nazeerabad	Rangareddy	17.1752	77.9234
NRB18	Nazeerabad	Rangareddy	17.1716	77.9242
NRB19	Nazeerabad	Rangareddy	17.1700	77.9295
NRB20	Nazeerabad	Rangareddy	17.1675	77.9230
NRB22	Nazeerabad	Rangareddy	17.1617	77.9171
NRB23	Nazeerabad	Rangareddy	17.1598	77.9247
NRB24	Nazeerabad	Rangareddy	17.1554	77.9300
NRB26	Nazeerabad	Rangareddy	17.1506	77.9221
NRB27	Nazeerabad	Rangareddy	17.1480	77.9295
NRB28	Nazeerabad	Rangareddy	17.1473	77.9220
NRB29	Nazeerabad	Rangareddy	17.1442	77.9128
NRB30	Nazeerabad	Rangareddy	17.1443	77.9282
NRB31	Nazeerabad	Rangareddy	17.1420	77.9208
NRB34	Nazeerabad	Rangareddy	17.1352	77.9174
NRB35	Nazeerabad	Rangareddy	17.1328	77.9273
NRB36	Nazeerabad	Rangareddy	17.1299	77.9436
NRB39	Nazeerabad	Rangareddy	17.1307	77.9328
NRB40	Nazeerabad	Rangareddy	17.1247	77.9443
NRB41	Nazeerabad	Rangareddy	17.1267	77.9321
NRB43	Nazeerabad	Rangareddy	17.1223	77.9303
NRB44	Nazeerabad	Rangareddy	17.1203	77.9405
NRB48	Nazeerabad	Rangareddy	17.1189	77.9478
NRB49	Nazeerabad	Rangareddy	17.1155	77.9566
NRB54	Nazeerabad	Rangareddy	17.1047	77.9537
NRB56	Nazeerabad	Rangareddy	17.0990	77.9548
NRB57	Nazeerabad	Rangareddy	17.0960	77.9551
NRB58	Nazeerabad	Rangareddy	17.0895	77.9509
NRB60	Nazeerabad	Rangareddy	17.1978	77.9525
NRB62	Nazeerabad	Rangareddy	17.1431	77.9875
NRB63	Nazeerabad	Rangareddy	17.1390	77.9877
NRB64	Nazeerabad	Rangareddy	17.1354	77.9894
NRB66	Nazeerabad	Rangareddy	17.1292	77.9909
NRB67	Nazeerabad	Rangareddy	17.1248	77.9920
NRB68	Nazeerabad	Rangareddy	17.1214	77.9941
NRB69	Nazeerabad	Rangareddy	17.1153	77.9932
NRB71	Nazeerabad	Rangareddy	17.1042	77.9862
NRB72	Nazeerabad	Rangareddy	17.0866	77.9500

The location details for the Burgula-II project site:

WTG Location No	Village	District	Latitude (N)	Longitude (E)
BRG-552	Burugula	Kurnool	15.19516	77.93793
BRG-553	Burugula	Kurnool	15.19682	77.93758

The location details for the Aspari-I project site:

WTG Location No	Village	District	Latitude (N)	Longitude (E)
ASP-005	Aspari	Kurnool	15.4721	77.3977
ASP-006	Aspari	Kurnool	15.4685	77.3975
ASP-007	Aspari	Kurnool	15.4651	77.3981
ASP-008	Aspari	Kurnool	15.4613	77.3984
ASP-009	Aspari	Kurnool	15.4561	77.3998
ASP-010	Aspari	Kurnool	15.4527	77.3985
ASP-011	Aspari	Kurnool	15.4491	77.4002
ASP-012	Aspari	Kurnool	15.4455	77.4004
ASP-013	Aspari	Kurnool	15.4424	77.3998
ASP-014	Aspari	Kurnool	15.4383	77.3990
ASP-015	Aspari	Kurnool	15.4350	77.3975
ASP-016	Aspari	Kurnool	15.4315	77.3978
ASP-017	Aspari	Kurnool	15.4280	77.3981
ASP-018	Aspari	Kurnool	15.4228	77.4094
ASP-019	Aspari	Kurnool	15.4191	77.4079
ASP-021	Aspari	Kurnool	15.4149	77.4068
ASP-022	Aspari	Kurnool	15.4093	77.4092
ASP-023	Aspari	Kurnool	15.4057	77.4099
ASP-024	Aspari	Kurnool	15.4011	77.4110
ASP-025	Aspari	Kurnool	15.4455	77.4124
ASP-026	Aspari	Kurnool	15.4413	77.4126
ASP-027	Aspari	Kurnool	15.4369	77.4140
ASP-028	Aspari	Kurnool	15.4319	77.4140
ASP-029	Aspari	Kurnool	15.4266	77.4136
ASP-061	Aspari	Kurnool	15.3893	77.4220
ASP-062	Aspari	Kurnool	15.3856	77.4186
ASP-063	Aspari	Kurnool	15.3826	77.4137
ASP-064	Aspari	Kurnool	15.3792	77.4111
ASP-065	Aspari	Kurnool	15.3754	77.4103
ASP-066	Aspari	Kurnool	15.3721	77.4079
ASP-030	Aspari	Kurnool	15.4416	77.4269
ASP-031	Aspari	Kurnool	15.4379	77.4272
ASP-032	Aspari	Kurnool	15.4339	77.4278
ASP-033	Aspari	Kurnool	15.4305	77.4279

WTG Location No	Village	District	Latitude (N)	Longitude (E)
ASP-035	Aspari	Kurnool	15.4242	77.4302
ASP-036	Aspari	Kurnool	15.4200	77.4328
ASP-037	Aspari	Kurnool	15.4165	77.4356
ASP-038	Aspari	Kurnool	15.4124	77.4365
ASP-039	Aspari	Kurnool	15.4089	77.4376
ASP-042	Aspari	Kurnool	15.4211	77.4504
ASP-043	Aspari	Kurnool	15.4159	77.4571
ASP-087	Aspari	Kurnool	15.4340	77.4495
ASP-088	Aspari	Kurnool	15.4406	77.4480
ASP-089	Aspari	Kurnool	15.4444	77.4465
ASP-090	Aspari	Kurnool	15.4474	77.4443
ASP-091	Aspari	Kurnool	15.4518	77.4434
ASP-092	Aspari	Kurnool	15.4553	77.4430

The location details for the Aspari-II project site:

WTG Location No	Village	District	Latitude (N)	Longitude (E)
ASP-001	Aspari	Kurnool	15.4834	77.4121
ASP-002	Aspari	Kurnool	15.4791	77.4161
ASP-003	Aspari	Kurnool	15.4745	77.4177
ASP-040	Aspari	Kurnool	15.3942	77.4422
ASP-044	Aspari	Kurnool	15.4117	77.4612
ASP-046	Aspari	Kurnool	15.4053	77.4667
ASP-047	Aspari	Kurnool	15.3907	77.4695
ASP-048	Aspari	Kurnool	15.3969	77.4698
ASP-050	Aspari	Kurnool	15.4208	77.4773
ASP-052	Aspari	Kurnool	15.4161	77.4829
ASP-053	Aspari	Kurnool	15.4096	77.4789
ASP-054	Aspari	Kurnool	15.4059	77.4797
ASP-055	Aspari	Kurnool	15.3993	77.4840
ASP-071	Aspari	Kurnool	15.3902	77.4451
ASP-072	Aspari	Kurnool	15.3864	77.4443
ASP-073	Aspari	Kurnool	15.3826	77.4443
ASP-074	Aspari	Kurnool	15.3779	77.4442
ASP-081	Aspari	Kurnool	15.3792	77.4878
ASP-082	Aspari	Kurnool	15.3758	77.4913
ASP-083	Aspari	Kurnool	15.3722	77.4924
ASP-084	Aspari	Kurnool	15.3688	77.4934
ASP-086	Aspari	Kurnool	15.3616	77.4953
ASP-093	Aspari	Kurnool	15.4658	77.4388
ASP-094	Aspari	Kurnool	15.4705	77.4381
ASP-095	Aspari	Kurnool	15.4740	77.4383

WTG Location No	Village	District	Latitude (N)	Longitude (E)
ASP-130	Aspari	Kurnool	15.4631	77.4228
ASP-131	Aspari	Kurnool	15.4528	77.4126
ASP-132	Aspari	Kurnool	15.4492	77.4123
ASP-138	Aspari	Kurnool	15.4570	77.4138
ASP-139	Aspari	Kurnool	15.4758	77.3987

Assessment team concludes the following:

- The implementation status of project activity was found to be in compliance with registered PD/^{1/} except commissioning of the balance 27.1 MW which is under process/^{2/}.
- DOE has conducted the on-site visit to confirm the implementation status of the project/^{9/}.
- The commissioning date of the project activity was found to be accurately and consistently recorded/^{10/}.
- The actual operation of project activity was found to be in compliance with the flow diagram provided in registered PD/^{1/}.
- The emission reductions achieved during the current monitoring period are 1,745,723 tCO₂e/^{2/}, /^{3/}.

The project activity contributes to the sustainable development by utilising wind energy for generating electricity which otherwise would have been generated through fossil fuels. Thereby reduction in usage of non-renewable sources used to generate energy.

Further the GHG emission reductions generated by the project activity has not been included by any other an emissions trading program or any other mechanism that includes GHG allowance trading. Also the project has not received any other form of environmental credit and has not been participated/rejected under any other GHG programs.

Sustainable Development- The project will contribute to the sustainable development in the following ways

1. Environmental: Since the project activity leads to cleaner production of energy, it is leading to displacement of fossil fuel based energy.
2. Social: Setting up of the project activity has created new job openings hence is supporting employment of the local people around.
3. Cleaner Air: Since the project activity leads to lesser GHG emission it results in better air quality.

Further the project has been implemented as described in the Project Description^{/1/}.

The total emission reductions achieved in this monitoring period i.e. from 25-11-2017 to 31-07-2019 are 1,745,723 tCO₂e.

CL 02, CAR 03, CAR 04 & CAR 05 was raised by assessment team and same was closed by PP by submitting revised MR and supporting documents^{/2/}.

4.2 Safeguards

4.2.1 No Net Harm

Not applicable

4.2.2 Local Stakeholder Consultation

- *Local stakeholder consultation has been conducted at the time of project registration. For on-going stakeholders communication, PP have maintained feedback/complaint register at the site office^{/09/}. Assessment team checked the grievance registers available at sites and found that local stakeholders can anytime lodge their grievances if any in the register over the operational life time of the project. During site visit and interviews with PP, it was confirmed that Site Manager/In-charge is responsible to address any grievances received from stakeholders^{/9/}. During current monitoring period no grievance was received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.*

4.3 AFOLU-Specific Safeguards

This section is not applicable as this project activity is a non-AFOLU project activity.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS PD/^{1/} and the monitoring report/^{02/}. The monitoring plan laid in the registered PD is being followed at the site/^{9/}. The assessment team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the MR/^{2/}.

The emission reductions are purely based on the net electricity generated and exported from the machines. PP has provided all the sufficient data for current monitoring period. The values of the parameter $EG_{PJ,y}$ used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/^{3/} provided by PP. the verification of each monitoring parameter has been discussed later in section 4.3.

The calculation method and formulae used in calculating baseline emission is in compliance to the methodology used i.e. ACM0002 version 17/^{7/}. Since project activity is a wind power project, leakage emission and project emission has been considered as zero/^{1/}.

CAR 06 was raised for the submission of invoices, PPA and commissioning certificates. Same was closed by PP submitting supporting documents.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The below tables describe how the parameter, that is to be measured according to the monitoring plan, has been verified to confirm that the actual monitoring complies with the monitoring plan, monitoring data has been thoroughly assessed and that the calibration requirements are fulfilled.

Parameter	$EG_{PJ,y}$ (MWh) Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is continuously measured and monthly recorded in Monthly electricity form B /Credit Note as JMR/ ^{6/} .
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/ ^{1/} and monitoring methodology/ ^{7/} .
	Monitoring equipment	Dedicated meters located at the sub-station/delivery points/ ^{9/} .

	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	Accuracy class of the equipment is 0.2s, which is in line to registered PD/ ^{1/} and consistent with calibration certificate/ ^{4/} as well. Information was found consistent onsite/ ^{9/} .
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Accuracy class is valid for entire range.
	Calibration frequency /interval:	The meters are calibrated by respective State Utility once in five years/ ^{1/} . Same are verified from the calibration certificates provided by the PP/ ^{4/} . Details of the calibration are provided in FVR Appendix 5 and revised MR Appendix 3.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, Pending untill the findings are closed.or as per the manufacturer's specifications?	Yes
	Is the calibration of measuring equipment carried out by an accredited person or institution?	The meters are calibrated by respective State Utility's testing division once in five years/ ^{4/} .
	Is(are) calibration(s) valid for the whole reporting period?	Yes. The calibration dates are presented in appendix 5 of this report. The dates have been checked from the calibration certificates/ ^{4/} . Thus, it is valid for the whole monitoring period.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes
	How were the values in the monitoring report verified?	A value of Net Electricity export by the project activity for the monitoring

		period (1,808,485 MWh) verified from Monthly electricity form B /Credit Note i.e. monthly joint meter reading issued by State Utility logbooks maintained at the plant ^{6/} . Apportioning is carried out by the PP for the period where start & end dates of JMR are not matching with start & end dates of monitoring period, based on ratio of daily generation data recorded at the plant of this particular period & the Joint Meter Reading issued by State Utility. However, import is considered for complete month. The procedure is conservative and hence accepted by verification team. The value was found to be consistently reported in MR ^{2/} and ER sheet ^{3/} .	
	If applicable, has the reported data been cross-checked with other available data?	The readings were cross checked with the monthly bills raised by PP to respective State Utility and daily generation logbooks maintained at the plant ^{6/} .	
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the calibration of the monitoring meters is done by state utility periodically. Check meters also help in verifying main meter readings ^{4/} .	
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.	
Findings	CAR 07 and CAR 08 was raised and resolved.		
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The implementation of the project is as per the registered PD^{1/} could be confirmed by the verification team.		

Parameters fixed ex ante:

EF_{grid,OM,y}; tCO₂e/MWh: It is the operating margin emission factor of Indian grid at the time of project registration the mentioned value of 0.9843 tCO₂e/MWh is consistent with the registered PD^{1/}.

EF_{grid,BM,y}; tCO₂e/MWh: it is build margin emission factor of Indian grid fixed and at the time of project registration the mentioned value of 0.9083 tCO₂e/MWh is consistent with the registered PD^{1/}.

EF_{grid,CM,y}; tCO₂e/MWh: it is the combined margin emission factor of Indian grid fixed at the time of project registration the mentioned value of 0.9653 tCO₂e/MWh is consistent with the registered PD^{1/}.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering was checked^{4/}. The installation and working conditions of the meters were checked during the on-site inspection^{9/}. Calibration details of the meters are given in Appendix 5 of this report.

In line with the registered PD^{1/}, calibration frequency of the billing meters is once in five years and no delay in calibration has been observed in this periodic verification^{4/}. Further, there was not any significant period of shut-down or break-down period during this monitoring period.

GHG Calculations

The emission reduction as per the applied methodology equals the baseline emissions (project emissions and leakage emissions for such project activities is considered zero)^{1/}. The formula provided for the calculation of baseline emissions is:

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

Where:

BE_y = Baseline Emissions in year y (tCO₂)

EG_{PJ,y} = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)

EF_{grid,CM,y} = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO₂/MWh)

Baseline emissions (BE_y) are calculated as follows:

$$\begin{aligned}
 BE_y &= EG_{PJ, y} * EF_{grid, CM, y} \\
 &= 1,808,485 \times 0.9653 \\
 &= 1,745,723 \text{ tCO}_2\text{e}
 \end{aligned}$$

Project Emissions:

No project emissions are applicable to this wind electric power project as per the registered PD/^{1/}.

Leakage:

No leakage emissions are applicable to this wind electric power project as per the registered PD/^{1/}.

Emissions Reductions for Project activity:

Year ⁴	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2017	65,993	0	0	65,993
2018	1,053,564	0	0	1,053,564
2019	626,166	0	0	626,166
Total	1,745,723	0	0	1,745,723

4.6 Non-Permanence Risk Analysis

Not applicable

⁴ Start & end dates of JMR not coinciding to start and end dates of each month including December. Hence, exact yearwise vintage breakup not possible.

5 VERIFICATION CONCLUSION

Earthood Services Private Limited (Earthood), contracted by Mytrah Energy (India) Private Limited, has performed the independent verification of the emission reductions for the VCS project activity reference number 1728 “Bundled Wind Power Project by Mytrah Group”^{/12/} in India for the monitoring period 25-11-2017 to 31-07-2019 reported in the Monitoring Report Version 02 dated 05-05-2020^{/2/}.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

Earthood commenced the verification on the basis of the baseline and monitoring methodology ACM 0002 version 17^{/7/}, the monitoring plan contained in the VCS PD Version 03^{/1/} and VCS guidelines version 4.0^{/13/}, Monitoring Report Version 02 dated 05-05-2020^{/2/} as per the process described under Section 2 of this report.

Earthood’s verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 25-11-2017 to 31-07-2019 are fairly stated in the Monitoring Report Version 02 dated 05-05-2020. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM 0002 version 17 and the VCS standard.

Monitoring period: 25-11-2017 to 31-07-2019 (both days inclusive)

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

Year ⁵	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2017	65,993	0	0	65,993
2018	1,053,564	0	0	1,053,564
2019	626,166	0	0	626,166
Total	1,745,723	0	0	1,745,723

⁵ JMRs are not ending on 31st December for year 2017 & 2018. JMR period is different for each site. Hence, exact yearwise vintage breakup not possible.

Approved by



Dr. Kaviraj Singh

Managing Director

Earthood Services Privated Limited

Date: 27/05/2020

Place: Gurgaon, Haryana

APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

S. No	Title of Document	Version	Date
1.	Registered VCS Joint VCS PD & MR	03	20-12-2017
2.	VCS Monitoring Report	01	05-02-2020
		02	05-05-2020
3.	ER spread sheet (corresponding to the final monitoring report)	01	05-03-2020
4.	Certificates of Calibration for all the meters belongs to project activity	-	-
5.	Invoice issued by PP for the duration of 25-11-2017 to 31-07-2019	-	-
6.	Joint Meter Readings for the duration of 25-11-2017 to 31-07-2019	-	-
	Daily generation logbooks maintained at the plant for daily generation from each WTG		
7.	"Consolidated baseline methodology for grid-connected electricity generation from renewable sources", ACM0002	17	-
8.	CO2 Baseline Database for the Indian Power Sector published by the Central Electricity Authority (CEA), Ministry of Power, Govt.	12	-
9.	On-site assessment, interviews of plant staff	-	23/02/2020 (Rajasthan) & 25/02/2020 (Andhra Pradesh)
10.	Commissioning certificate for all the WTGs of the project activity	-	-
11.	Power Purchase Agreements	-	-
12.	VCS webpage for the project, VCS ID 1728; https://www.vcsprojectdatabase.org/#/project_details/1728	-	Last accessed on 31/03/2020
13.	VCS Standard	Version 4.0	Last accessed on 31/03/2020
14.	VCS Program Guide	Version 4.0	Last accessed on 31/03/2020
15.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period and double counting	-	-
16.	Google Earth desktop/Mobile application	-	Last accessed on 31/03/2020
17.	Sampling and surveys for CDM project activities and programmes of activities	Version 08.0	Last accessed on 18/05/2020

APPENDIX 2: COMPETENCY STATEMENT

Competence Statement			
Name	Atul Takarkhede		
Education	Ph.D. Environmental Science		
Experience	12 years		
Field	Climate Change and environment		
Approved Roles			
Team Leader	YES		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert	YES (1.2)		
Reviewed by	Shreya Garg	Date	24/04/2019
Approved by	Anshika Gupta	Date	25/04/2019

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	Date	01/03/2018
Approved by	Ashok Gautam	Date	01/03/2018

APPENDIX 3: 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 ₂	Carbon dioxide
CO _{2e}	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
RBI	Reserve Bank Of India
PP	Project Participant

APPENDIX 4: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)

Table 1. Remaining FAR from validation and/or previous verification

FAR ID	01	Section no.	E.2	Date : DD/MM/YYYY
Description of FAR				
There is no FAR from the validation of the project activity				
Project participant response				Date : DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 2. CL from this verification

CL ID	02	Section no.	4.1	Date : 03/03/2020
Description of CL				
PP requested to provide the status of the commissioning of the balance 35.9 MW till date.				
Project participant response				Date : 06/03/2020
The status of the remaining commissioning balance is now being updated in the VCS Monitoring report.				
Documentation provided by project participant				
VCS MR V2				
DOE assessment				Date: 18/03/2020
PP has updated the status of the commissioning of remaining WTGs in Section 4.1 of revised MR. A total of 466.4 MW have been commissioned. CL is closed.				

Table 3. CAR from this verification

CAR ID	03	Section no.	4.1	Date : 03/03/2020
Description of CAR				
Alteration in VCS MR template observed during review of MR. Further, PP requested to remove editorial mistakes. Correction sought.				
Project participant response				Date : 06/03/2020
Alteration in VCS MR template has now been Corrected. Also, the editorial mistakes throughout this monitoring report are corrected.				
Documentation provided by project participant				
VCS MR V2				
DOE assessment				Date: 18/03/2020

PP has corrected the alteration of VCS MR template and editorial mistakes throughout the MR. CAR thus closed.

CAR ID	04	Section no.	4.1	Date : 03/03/2020
Description of CAR				
Section 3.1 of the MR missing information on “The operation of the project activity(s) during this monitoring period, including any information on events that may impact the GHG emission reductions or removals and monitoring”.				
Section 2.3.2 of MR lacks information on deviation due to non-implementation of balance capacity inline with guidelines to complete MR.				
Project participant response				Date : 06/03/2020
In the MR, the Sec 3.1 is updated about the “operation of the project activity during this monitoring period and information about any other impact that may impact the GHG emission reductions or removals”.				
Documentation provided by project participant				
VCS MR V2				
DOE assessment				Date: 18/03/2020
PP has updated the Sec 3.1 is updated about the “operation of the project activity during this monitoring period and information about any other impact that may impact the GHG emission reductions or removals”.				
PP has also updated the section 2.3.2. The total project capacity is 493.5 MW out of which 466.4 MW is commissioned till date and 27.1 MW is still under process.				
CAR is closed.				

CAR ID	05	Section no.	4.1	Date : 03/03/2020
Description of CAR				
PP requested to submit declaration in effect of avoiding double counting with regard to Participation under other GHG Programs/Other forms credits.				
Project participant response				Date : 06/03/2020
Declaration regarding no double counting is included in this submission.				
Documentation provided by project participant				
VCS Declaration				
DOE assessment				Date: 18/03/2020
PP has submitted the declaration in effect of avoiding double counting with regard to Participation under other GHG Programs/Other forms credits.				
CAR is closed.				

CAR ID	06	Section no.	4.4	Date : 03/03/2020
Description of CAR				
PP requested to submit all supporting documents for calculation of net electricity delivered by the project activity along the copies of invoices for cross checking. Further, PP requested to submit copies of PPAs and commissioning certificates.				
Project participant response				Date : 05/03/2020
JMRs as the supporting documents for the calculation of net electricity delivered by the project activity is being submitted along with the copies of the invoices for cross checking. Also, the copies of PPAs and commissioning certificates for the project activity are included in this submission.				
Documentation provided by project participant				
JMRs, Invoices, PPAs and commissioning certificates.				
DOE assessment				Date: 19/03/2020

PP has submitted supporting documents i.e. JMRs, Invoices, PPAs and commissioning certificates of WTGS, Assessment team has reviewed the supporting documents and confirms that net electricity supplied to the grid are matching with the data provided in the ER sheet. CAR is closed.

CAR ID	07	Section no.	4.5	Date : 03/03/2020
Description of CAR				
MR lacks the actual practices of the monitoring at the sites. Correction sought in this regard.				
Project participant response				Date : 05/03/2020
The actual site practices have now been mentioned in the revised MR.				
Documentation provided by project participant				
VCS MR V2				
DOE assessment				Date: 19/03/2020
PP has updated monitoring plan as per site which is now as per the requirement monitoring plan in registered VCS PD. CAR is closed.				

CAR ID	08	Section no.	4.5	Date : 03/03/2020
Description of CAR				
PP requested to submit copies of the calibration certificates/meter replacement records to justify calibration frequency compliance throughout monitoring period.				
Project participant response				Date : 05/03/2020
The calibration certificates have been submitted to justify the calibration frequency compliance throughout the monitoring period.				
Documentation provided by project participant				
Meter calibration certificates.				
DOE assessment				Date: 19/03/2020
PP has submitted the calibration certificates of all electricity meter including meter which was replaced. Assessment team has checked the calibration certificates and found that all meters are calibrated as per frequency of calibration in registered VCS PD i.e. once in five year. No discrepancies were found. CAR is closed.				

Table 4. FAR from this verification

FAR ID	NA	Section No.	NA	Date : DD/MM/YYYY
Description of FAR				
There is no FAR from this verification				
Project participant response				Date : DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

APPENDIX 5: CALIBRATION DETAILS OF THE METERS

The main meter and Check meter details of Nazeerabad Site:

Main Meter		Check Meter	
Make	L & T	Make	L & T
Meter Sl. No	15624894	Meter Sl. No.	15624896
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	22-08-2017	Calibration Date	22-08-2017
Calibration Due Date	21-08-2022	Calibration Due Date	21-08-2022

The Main meter and Check meter details of Pottipadu Site:

For 65.1 MW					
PPD-06 (21 MW)					
Main Meter		Check Meter		Backup Meter	
Make	Secure	Make	Secure	Make	Secure
Meter Sl. No.	XC559930	Meter Sl. No	XC559931	Meter Sl. No	XC559924
Accuracy Class	0.2 s	Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	20-11-2017	Calibration date	20-11-2017	Calibration date	20-11-2017
Calibration Due Date	19-11-2022	Calibration Due Date	19-11-2022	Calibration Due Date	19-11-2022

PPD-40 (23.1 MW)					
Main Meter		Check Meter		Backup Meter	
Make	Secure	Make	Secure	Make	Secure
Meter Sl. No.	XC559921	Meter Sl. No	XC559922	Meter Sl. No	XC559923
Accuracy Class	0.2 s	Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	20-11-2017	Calibration date	20-11-2017	Calibration date	20-11-2017
Calibration Due Date	19-11-2022	Calibration Due Date	19-11-2022	Calibration Due Date	19-11-2022

PPD-35 (21 MW)		
Main Meter	Check Meter	Backup Meter

Make	Secure	Make	Secure	Make	Secure
Meter Sl. No.	XC559932	Meter Sl. No.	XC559933	Meter Sl. No.	XC559934
Accuracy Class	0.2 s	Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	22-11-2017	Calibration date	22-11-2017	Calibration date	22-11-2017
Calibration Due Date	19-11-2022	Calibration Due Date	19-11-2022	Calibration Due Date	19-11-2022

For 39.9 MW					
Feeder-01					
Main Meter		Check Meter		Backup Meter	
Make	Elster	Make	Elster	Make	Elster
Meter Sl. No.	13720861	Meter Sl. No.	13720862	Meter Sl. No.	13720866
Accuracy Class	0.2 s	Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	21-11-2017	Calibration date	21-11-2017	Calibration date	21-11-2017
Calibration Due Date	19-11-2022	Calibration Due Date	19-11-2022	Calibration Due Date	19-11-2022

Feeder-02					
Main Meter		Check Meter		Backup Meter	
Make	Elster	Make	Elster	Make	Elster
Meter Sl. No.	13720867	Meter Sl. No.	13720868	Meter Sl. No.	13720872
Accuracy Class	0.2 s	Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	21-11-2017	Calibration date	21-11-2017	Calibration date	21-11-2017
Calibration Due Date	20-11-2022	Calibration Due Date	20-11-2022	Calibration Due Date	20-11-2022

The Main meter and Check meter details of Nidhi Site:

Feeder-09			
Main Meter		Check Meter	
Make	Genus	Make	Genus
Meter Sl.No.	A 3015605	Meter Sl.No.	A 3015606
Accuracy class	0.2 s	Accuracy class	0.2 s
Calibration date	29-05-2017	Calibration date	29-05-2017
Calibration Due Date	28-05-2022	Calibration Due Date	28-05-2022
Feeder-10			
Main Meter		Check Meter	
Make	Genus	Make	Genus
Meter Sl.No.	A 3015607	Meter Sl.No.	A 3015608
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	29-05-2017	Calibration date	29-05-2017
Calibration Due Date	28-05-2022	Calibration Due Date	28-05-2022

The Main meter and Check meter details of Bhesada Site:

Feeder 12 (SEL-197)			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No.	RJB 78188	Meter Sl. No	RJB 78189
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	28-04-2016	Calibration date	28-04-2016
Calibration Due Date	27-04-2021	Calibration Due Date	27-04-2021

Feeder 03 (SEL-195)			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No.	RJB 78194	Meter Sl. No	RJB 78200
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	28-04-2016	Calibration date	28-04-2016
Calibration Due Date	27-04-2021	Calibration Due Date	27-04-2021

Feeder 04 (SEL-04)			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No.	RJB 78201	Meter Sl. No	RJB 78203
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	28-04-2016	Calibration date	28-04-2016
Calibration Due Date	27-04-2021	Calibration Due Date	27-04-2021

The Main meter and Check meter details of Aspari Site:

Aspari-I			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No.	APX01010	Meter Sl. No	APX01011
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	13-10-2017	Calibration date	13-10-2017
Calibration Due Date	12-10-2022	Calibration Due Date	12-10-2022

Aspari-II			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No.	APX01012	Meter Sl. No	APX01013
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	13-10-2017	Calibration date	13-10-2017

Aspari-II			
Main Meter		Check Meter	
Calibration Due Date	12-10-2022	Calibration Due Date	12-10-2022

The Main meter and Check meter details of Burgulla Site

Burgulla-II			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No.	APX01021	Meter Sl. No	APX01022
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	30-03-2017	Calibration date	30-03-2017
Calibration Due Date	29-03-2022	Calibration Due Date	29-03-2022

The Main meter and Check meter details of Nipaniya Site

Nipaniya			
Main Meter ⁶		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No.	MPC70479	Meter Sl. No	MPC70480
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration date	10-01-2016	Calibration date	09-05-2016
Calibration Due Date	09-01-2021	Calibration Due Date	08-05-2021
Meter Replacement on 09/05/2016		-	-
Meter Sl. No.	MPC70481	-	-
Accuracy Class	0.2 s	-	-
Calibration date	09/05/2016	-	-

⁶ The main meter MPC70479 is replaced by new pre-calibrated meter of same accuracy class with serial number MPC70481.