



**Verified Carbon
Standard**

VERIFICATION REPORT FOR AMBATOLAMPY 20 MW SOLAR PV



Carbon
— C H E C K —

Document Prepared By: Carbon Check (India) Private Limited,

Unit No.: 1701, Logix Office Tower, Plot No.: BW - 58, Sector - 32, NOIDA
(Uttar Pradesh) - 201301, India, Phone: +91 120 4373114

<http://www.carboncheck.co.in>

Project Title	<i>Ambatolampy 20 MW solar PV</i>
Version	<i>Version 03</i>
Report ID	<i>CCIPL1194/FVR</i>

Report Title	<i>Verification Report for Ambatolampy 20 MW solar PV</i>
Client	<i>GreenYellow Madagascar</i>

Pages	30 Pages
Date of Issue	26-August-2022 report issued
Prepared By	Carbon Check (India) Private Ltd.
Contact	Unit No.: 1701, Logix Office Tower, Plot No.: BW - 58, Sector - 32, NOIDA (Uttar Pradesh) - 201301, India, Phone: +91 120 4373114
Approved By	Vikash Kumar Singh 
Work Carried Out By	Anubhav Dimri (Team Leader, Technical Expert and Local Expert) Shivaji Chakraborty (Technical Reviewer and Technical Expert)

Summary:

GreenYellow Madagascar has appointed the validation/verification body Carbon Check (India) Private Ltd. to perform verification of the registered Project Activity (VCS PA Reference Number: 2307/ UN PA 10481) “Ambatolampy 20 MW solar PV” in Madagascar (hereafter “project activity”) for the second monitoring period from 01 May 2020 to 31 December 2021.

The main purpose of this project activity is to generate electricity through renewable energy sources (solar photovoltaic). GreenYellow Madagascar is the promoter and project proponent of the project activity. The project activity involves installations of 73,008 number of solar modules of Jinko Solar Make (14,832 of 270 W and 58,176 of 275 W aggregating to 20.003 MWp) located in Ambatolampy, 90km South of Antananarivo, Madagascar. The electricity generated from the solar PV plant is sold to the national grid of the host country, Madagascar – RI-Tana grid operated by JIRAMA. The project achieved emission reductions of 31,766 tCO₂e for the monitoring period by displacing net 47,392 MWh amount of electricity from the generation-mix of power plants connected to the national grid, which is mainly dominated by thermal/fossil fuel based power plant.

The purpose of the verification is to review the monitoring results and verify that monitoring methodology was implemented according to monitoring plan and monitoring data, used to confirm the reductions in anthropogenic emissions by sources is sufficient, definitive and presented in a concise and transparent manner. In particular, monitoring plan, monitoring report and the project’s compliance with relevant VCS, UNFCCC and Host Party criteria are verified in order to confirm that the project has been implemented in accordance with previously registered design and conservative assumptions, as documented.

The verification scope is defined as an independent and objective review of the monitoring report (MR). The MR is reviewed against the relevant criteria and guidance documents provided by VCS which include the following: VCS Program Guide (v4.1, dated 20/01/2022), VCS Standard (v4.2, dated

20/01/2022), Program Definitions (v4.1, dated 20/01/2022), Registration & Issuance Process (v4.1, dated 20/01/2022) and in line with the VCS Validation and Verification Manual (v 3.2, dated 19/10/2016) applicable at the time in order to confirm that the emission reductions produced during the monitoring period are in accordance with the project activity as provided in the registered VCS PD/B04/. The CDM approved methodology ACM0002, Version 19 has been applied for the project activity.

The verification consisted of the following three phases: i) a desk review of the Monitoring Report ii) Remote Audit Assessment; iii) the resolution of outstanding issues and internal technical review followed by the issuance of the final verification report and opinion. In the course of the verification process 01 CARs and 04 CLs were raised, all the CARs and CLs are closed now. The list of Clarification and Corrective Actions Requests (CL and CAR) is presented in this report.

CC IPL confirms that the project is implemented in accordance with the validated VCS-PD and the monitoring plan; and then, claimed emissions reductions are calculated without material misstatements.

CC IPL has performed the verification of the project activity “Ambatolampy 20 MW solar PV” on the basis of all issues and criteria of VCS Standard version 4.2 and VCS Program Guide version 4.1 for VCS projects and also on the criteria given to provide for consistent project operations, monitoring and reporting. Hence, in CC IPL’s opinion the project correctly applies the baseline and monitoring methodology ACM0002, version 19 and meets the relevant UNFCCC requirements for the CDM Methodology, Voluntary Carbon Standard requirements and the relevant host country criteria.

Therefore, CC IPL is able to certify that the emissions reductions from the “Ambatolampy 20 MW solar PV” project during the period from 01 May 2020 to 31 December 2021 amount to 31,766 tCO_{2e}. The year-wise break up of verified emission reduction is as below:

Year	Baseline emissions or removals (tCO _{2e})	Project emissions or removals (tCO _{2e})	Leakage emissions (tCO _{2e})	Net GHG emission reductions or removals (tCO _{2e})
2020 (01/05/2020 to 31/12/2020)	14,328	0	0	14,328
2021 (01/01/2021 to 31/12/2021)	17,438	0	0	17,438
Total	31,766	0	0	31,766

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	7
2	Verification Process.....	7
2.1	Method and Criteria.....	7
2.2	Document Review	8
2.3	Interviews.....	8
2.4	Site Inspections.....	10
2.5	Resolution of Findings	12
2.6	Eligibility for Validation Activities	17
3	Validation Findings.....	17
3.1	Participation under Other GHG Programs	17
3.2	Methodology Deviations.....	17
3.3	Project Description Deviations.....	17
3.4	Grouped Project	17
4	Verification Findings.....	17
4.1	Project Implementation Status	17
4.2	Safeguards	19
4.3	AFOLU-Specific Safeguards	19
4.4	Accuracy of GHG Emission Reduction and Removal Calculations	19
4.5	Quality of Evidence to Determine GHG Emission Reductions and Removals	25
4.6	Non-Permanence Risk Analysis.....	25
5	Verification conclusion	26
	APPENDIX X: <title of appendix>	27

1 INTRODUCTION

1.1 Objective

GreenYellow Madagascar (Project Proponent) has appointed the VVB, CCIPL for the verification service for the CDM registered project activity - “Ambatolampy 20 MW solar PV” located in Ambatolampy, 90km South of Antananarivo, Madagascar (hereafter referred to as “project activity”) against the requirement of VCS Program.

Verification is the periodic independent review and ex post determination of both quantitative and qualitative information by a Validation and Verification Body (VVB) of the monitored reductions in GHG emissions that have occurred as a result of the VCS project activity during a defined monitoring period (monitoring period 2).

The purpose of verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data, and used to confirm the reductions in emissions is sufficient, definitive and presented in a concise and transparent manner. Carbon Check’s objective is to perform a thorough, independent assessment of the registered projects activities. In particular, the monitoring plan, monitoring report and the project’s compliance are verified against the relevant criteria and guidance documents provided by VCS. This allows for the confirmation that the project has been implemented in accordance with the VCS PD/B04/ and conservative assumptions, as documented. And, also to confirm if the monitoring plan is in compliance with the VCS PD/B04/ and approved monitoring methodology, ACM0002, version 19/B02/. The objective of this verification was to verify and certify emission reductions reported for the “Ambatolampy 20 MW solar PV” for the period 01/05/2020 to 31/12/2021.

1.2 Scope and Criteria

The verification of this project is based on the registered Project Description/B04/, the Monitoring Report of this monitoring period /02/, emission reduction calculation spread sheet /04/, supporting documents made available to the verifier and information collected through performing interviews and during the remote audit assessment. Furthermore, publicly available information was considered as far as available and required.

Carbon Check has employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The verification is carried out on the basis of the following requirements (latest available on VCS website at the time of verification), applicable for this project activity:

- VCS Program Guide (v4.1, dated 20/01/2022)
- VCS Standard (v4.2, dated 20/01/2022)
- Program Definitions (v4.1, dated 20/01/2022)
- Registration & Issuance Process (v4.1, dated 20/01/2022)
- VCS Validation and Verification Manual (v 3.2, dated 19/10/2016)

- CDM Methodology: ACM0002: Grid-connected electricity generation from renewable sources -- Version 19
- Other relevant rules, including the host country legislation

The scope of this verification, by independent checking of objective evidence, is as follows:

- To verify that the project is implemented as described in the project description
- To assess the project’s compliance with other relevant rules including the host country legislation.
- To assess the implementation of the monitoring plan content as mentioned in the VCS-PD/B04/
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions (VERs/VCUs) without any double counting and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation /03/, /04/.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

The method and criteria used for verification consisted of the following phases:

1. Completeness check and desk review:
2. Remote audit assessment;
3. Resolution of outstanding issues and issuance of final verification report and applicable VCS Validation and Verification Deeds of Representation.

Carbon Check (India) Private Ltd. conducts all its work under strict rules to safeguard impartiality and ensure the independence of the verification team. The verification does not provide any consulting or recommendations for the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

1.3 Level of Assurance

Reasonable level of assurance

Limited level of assurance

The level of assurance of the verification report falls under reasonable assurance engagements as selected by the Client. The verification team verified the complete monitoring data for all the parameters of the monitoring plan and confirms that the reported emission reductions are free from any type of material errors.

1.4 Summary Description of the Project

The project activity 'Ambatolampy 20 MW solar PV' is a Greenfield project activity consisting of a 20 MW solar photovoltaic power plant which involves generation of grid-connected renewable energy. The power plant is connected to the RI-Tana grid of Madagascar. The project is located in Ambatolampy, 90km South of Antananarivo, Madagascar. The start date for the project is 10/07/2018, the date of commissioning on which the project activity is connected to the grid and begins generating GHG emission reductions.

The total emission reductions for the reported monitoring period 01/05/2020 to 31/12/2021 are 31,766 tCO₂e.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The method and criteria used for verification:

The verification consists of the following three phases:

1. Completeness check and desk review of the validation report, monitoring plan, monitoring report, monitoring methodology, CDM PDD/VCS PD, applicable tools in particular attention to the frequency of measurements, quality of metering equipment's including calibration requirements, QA/QC procedures and other relevant documents;
2. Remote audit (including follow-up interviews with project stakeholders, when deemed necessary). The remote audit assignment includes the following:
 - An assignment of implementation and operation of project activity with respect to validated CDM PDD/VCS PD;
 - Review of information flows for generating, aggregating and reporting the monitoring parameters;
 - Interview with relevant personals to determine whether the operational and data collection procedures are implemented and in accordance with monitoring plan of the validated CDM PDD/VCS PD;
 - Cross check of information and data provided in the monitoring report with plant logbooks, inventories, purchase records or similar data sources;
 - Check of monitoring equipment's, calibration frequency and monitoring practice in-line with methodology and validated CDM PDD/VCS PD;
 - Review of assumptions made in calculating the emission reduction;
 - Implementation of QA/QC procedure in-line with the validated CDM PDD/VCS PD and methodology requirement.

Resolution of outstanding issues and the issuance of the final Verification report and if applicable, the VCS Validation and Verification Deeds of Representation.

2.2 Document Review

The registered VCS PD/B04/, VCS MR /01/, /02/, emission reduction calculation spread sheet/03/, /04/ and supporting documents related to the project implementation, project design, monitoring and baseline were reviewed as per VCS version 04.2 standard requirements. The desk review included:

- A review of the data and information presented to verify completeness and consistency in accordance with VCS version 04 requirements/B01/;
- A review of the approved monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, quality of monitoring equipment (including calibration requirements) and the quality assurance and quality control (QA/QC) procedures;
- An evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of emission reductions.

Data input values were also checked from the records maintained by the project proponents. Results of calculations reported in the monitoring report were checked against data values as available from the project proponent in VER calculation sheet /03/, /04/.

These data values and other information related to project performance are available in the form of data records duly archived and maintained as per the quality assurance/quality control procedure specified as a part of monitoring plan in the registered VCS-PD/B04/.

Furthermore, the verification team used additional documentation by third parties like host-party legislation, technical reports referring to the project design or to the basic conditions and technical data.

2.3 Interviews

A remote audit of the project activity was undertaken on 22/03/2022 to 23/03/2022 to assess the implementation and operation of the project activity and to review evidence, and interview key personnel to confirm evidence associated with the data generation, aggregation, and calculation and reporting of the monitoring parameters. The remote audit assessment addressed:

- An assessment of the project implementation and operation as per the VCS PD/B04/ (including physical inspection to confirm physical existence and operation of project components);

- Review of information flows for generating, aggregating and reporting the monitoring parameters;
- Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the monitoring report /01/,/02/.

The key personnel interviewed, and the main topics of the interviews are summarized in the table below:

	Date	Name	Organisation	Topic
/a/	22/03/2022 - 23/03/2022	Kevan Khansari Raffi	GreenYellow Madagascar	<ul style="list-style-type: none"> • Project Design • Project Implementation and Operation status • Project start date and Project Location • Roles and responsibility, Project Implementation and Operation status, Qualification and Training, Roles and responsibility. • Grievance Mechanism and Local Stakeholder Consultation • Involved in Emissions Trading Programs and Other Binding Limits or Other Forms of Environmental Credit.
/b/	22/03/2022 - 23/03/2022	Alexandre Dunod	aera Group	<ul style="list-style-type: none"> • CER calculation and completeness of monitoring report, Electronic Monitoring system • Project implementation and operation, Project design, monitoring procedure, data and information flow, compliance of monitoring plan with monitoring methodology and approved CDM PDD/VCS-PD. • Project Implementation status • Monitoring and operating system • Quantification of emission reductions

				<ul style="list-style-type: none"> Monitoring parameters Emission factor for the grid Roles and responsibility
/c/	22/03/2022 - 23/03/2022	Jean-Luc Randriarison	GreenYellow Madagascar	<ul style="list-style-type: none"> Project design PV details Monitoring plan Monitoring procedures and monitoring equipment Maintenance and operation plan Data and information flow, Data input device, Roles and responsibility, Project implementation and operation, monitoring procedure.
/d/	22/03/2022 - 23/03/2022	Harold Goret	aera Group	<ul style="list-style-type: none"> CER calculation and completeness of monitoring report, Electronic Monitoring system Monitoring parameters Emission factor for the grid

2.4 Site Inspections

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for Verra guidance on site visits, notification of Covid-19 Travel Guidance for Projects <https://verra.org/covid-19-travel-guidance/> and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has not conducted an on-site visit for the verification of the project activity.

Therefore, where a VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for an exemption or pre-approval from Verra is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, please ensure that the applicable section of the verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit”.

Accordingly, Carbon Check has not conducted an on-site inspection. A reasonable level of assurance has been maintained through the alternative means used for the purpose of verification as follows:

- 1) An assessment of the implementation and operation of the project activity as per the registered VCS PD /B04/
- 2) A review of information aggregating and reporting of the monitoring parameters
- 3) Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the MP (section 2.3 above)
- 4) A cross-check between the electricity sales information provided in the MR /01/ and data from other sources (section 2.3 above).
- 5) A check of the monitoring equipment including calibration performance, and observations of monitoring practices against the requirements of the VCS PD and the applied monitoring methodologies /B02/
- 6) A review of calculations and assumptions made in determining the GHG data and ERs /02/, and
- 7) An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters
- 8) The duly calibration/testing of all metering equipment was checked.
- 9) The monitoring processes, routines and documentations were audited to check their proper application.
- 10) The monitoring data were checked completely.

The verification team carried out remote interviews with representatives of PP to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for the VCS.

Hence, the VVB has used other standard auditing techniques for validation or verification as referred to in the VCS Rules/ requirements, VCS Validation and Verification Manual, version 3.2.

- Verification team has performed google meet interview with PP to check implementation, project boundary, current situation, monitoring and metering equipment, monitoring procedures, calibration etc.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in MR /01/ and supporting documents.
- A check of the monitoring equipment including performance and observations of monitoring practices against the requirements of the registered VCS PD /B04/ and the selected methodology /B02/.

During the remote audit assessment, all monitoring data with respect to accuracy to ensure the calculation of emission reductions was checked. All the procedures and records were found authenticated and properly maintained as per the requirements of the project.

The verification team has carried out interviews in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for the VCS.

2.5 Resolution of Findings

Material discrepancies identified in the course of the verification are addressed either as CARs, CLs or FARs. **Corrective action requests (CAR)** are issued, where:

- i. Mistakes have been made with a direct influence on project results requiring adjustments of the VERs/VCUs monitoring report;
- ii. Applicable methodological specific requirements have not been met.

A **Clarification request (CL)** may be used where additional information is needed to fully clarify an issue or where the information is not transparent enough to establish whether a requirement is met.

A **forward action request (FAR)** should be issued, where:

- i. The actual project monitoring and reporting practices requires attention and /or adjustment for the next consecutive verification period, or
- ii. An adjustment of the MP is recommended.

In the context of FARs, risks have been identified, which may endanger the delivery of high-quality emissions reductions in the future, i.e. by deviations from standard procedures as defined by the MP. As a consequence, such aspects should receive a special focus during the next consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions.

A total of 01 CAR and 04 CLs had been raised for the verification of the project activity and all are closed. The findings are provided below:

Finding	CL 01		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	The latest version of the MR template (version 4.1) has not been used by the PP in accordance with the §3.4.3 of the VCS Standard, version 4.2.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further</i>	The latest version of the MR template has been used in the project's Monitoring Report. A footnote has been added to explain why Sustainable Development		

information for clarification as per finding)	Contributions are not displayed in the shape of a table yet.
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	PP has clarified that the latest version of the MR template (version 4.1) has been used. A footnote has been added in the section 1.11 of the MR to justify the demonstration of the sustainable development contributions. CLO1 is closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CL 02		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 1.8 of the MR, the version of the methodology ACM0002 has been provided as version 19. However, the version of the methodology as per the registered PD is version 20. PP shall clarify the discrepancy.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	Indeed, the version of the methodology for this project is version 20. Therefore, section 1.8 of the MR has been updated.		
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	PP has clarified that version 20 of the methodology ACM0002 is applicable to the project activity. PP has revised the version of the methodology referred in the version 1.8 of the MR. CL02 is closed.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed		

Finding	CL 03		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 2.2 of the MR, PP shall clarify if any local stakeholder comments were received during the monitoring period.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further</i>	During this monitoring period and regarding the current project, no local stakeholder comments were received. This statement has been added to section 2.2 of the MR.		

information for clarification as per finding)	The only comments received during this MP relate to the construction of the extension phase, which will be reflected under post-registration changes along with the next monitoring period verification.
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	PP has clarified that no local stakeholder comments or grievances were received during the reported monitoring period. CL03 is closed.
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CL 04		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	<ol style="list-style-type: none"> The total electricity export for the month of June 2020 does not match with the invoice provided. It is not clear how the electricity import data has been derived from the invoice provided. Emission reduction calculation spreadsheet has not been provided to the verification team. PP shall provide the justification for low electricity export for the month of November 2021 and December 2021. 		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<ol style="list-style-type: none"> Total electricity export for the month of June 2020 now matches with the invoice. The ER sheet and MR have been updated with corresponding data of the invoices provided for electricity importation from JIRAMA (previously displayed data we used as imports corresponded to self-consumption instead, that is already taken into account in net electricity exportation). The ER sheet is now provided to the DOE According to the PPs, the low electricity exportation at the end of the year 2021 (Nov/Dec) was due to the unavailability of the regional interconnected network, which caused a temporary shutdown of the plant. 		
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	<ol style="list-style-type: none"> PP has revised the total electricity export for the month of June 2020. The revised value is consistent with the invoice provided. CL04.1 is closed. PP has revised the values provided for the import data in the section 5.1 of the MR and the ER sheet. CL04.2 is closed. 		

	<ol style="list-style-type: none"> 3. PP has provided the ER sheet for the project activity. However, it is noted that the value for export in the month of November 2021 is not consistent with the MR. CL04.3 remains open. 4. PP has clarified that the low electricity export during the period November/ December 2021 was due to the unavailability of the regional interconnected network causing plant shutdown. This information was also shared during the remote audit. CL04.4 is closed.
Corrective Action or clarification #2 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	<ol style="list-style-type: none"> 3. Indeed, there was a wrong entry in export data on the MR section 5.1 for November 2021. The data was updated to match with the ER sheet and the export invoices.
VVB Assessment #2 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	<ol style="list-style-type: none"> 1. Closed. 2. Closed. 3. PP has rectified the incorrect value for export data in the section 5.1 of the MR. CL04.1 is closed. 4. Closed.
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CAR 01		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 4.2 of the MR, the electricity meter serial numbers have not been provided. PP shall also provide the details of replacement meters as discussed during the remote audit calls.		
Corrective Action or clarification #1 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>	Serial numbers of the meters have been added to section 4.2 of the MR. Details of replacement meters have also been added to the MR, section 4.2		
VVB Assessment #1 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i>	PP has provided the make and models of all the meters replaced during the monitoring period. However, the serial numbers of all the meters replaced during the monitoring period is not provided. PP shall also provide the calibration dates and validity of calibration of each of the meters during the monitoring period. CAR01 remains open.		

<p>Corrective Action or clarification #2 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Serial numbers of all the meters were added in section 4.2, as well as the calibration dates : for each replaced meter, calibration was done on the same day as their installation. For the main meter which has not been replaced since the start of the project, calibration was done in the factory and does not require any further calibration during its entire service life (Ambatolampy 20 MW solar PV, PDD B.7.1).</p>
<p>VVB Assessment #2 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i></p>	<p>PP has provided the serial numbers of the backup electricity meters. The calibration of each replaced meter has been done by Jirama prior to installation. PP has also stated that calibration for main meter was done in the factory and does not require any further calibration during its entire service life.</p> <p>However, the calibration frequency for the backup meter is not clear. As per the QA/QC procedures for the parameter “As per PPA §9.3, meters’ testing, inspection, repairs, re-calibration or replacement will be ensured by the Parties according to best practices. Yet as per manufacturer’s manual, meters are calibrated at the factory and do not require any further calibration during their entire service life.” Furthermore, since the manufacturer’s for the replaced meters are different, PP shall clarify if none of the replaced meters require calibration during their life based on the manufacturer’s manual. PP shall also confirm if the stated QA/QC procedures are being complied for the meters. CAR01 remains open.</p>
<p>Corrective Action or clarification #3 <i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i></p>	<p>Calibration frequency is not specified in the available documentation of the manufacturer's websites. PPs were asked about the calibration frequencies of the back-up meters, but JIRAMA state utility is in charge of these, with sovereign but unspecific periodicity.</p> <p>As a result, a conservative deduction of meters error confidence interval was applied to the net electricity generation value, corresponding to the accuracy class of the meters: 0.2S ($\pm 0.2\%$)</p>
<p>VVB Assessment #3 <i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i></p>	<p>PP has clarified that the details on the calibration frequency of the installed backup meters is not available on the manufacturer’s websites. Furthermore, the state electricity regulator, JIRAMA is responsible for the calibration of the meters, but has not provided information on the frequency of the calibration. PP has justified that the calibration of backup meter is not in the control of the PP. PP has thus applied the applicable error in accordance with the Table 1 of the Appendix of the VVS for the project activities, version 3. CAR01 is closed.</p>

Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed
---	--

2.5.1 Forward Action Requests

No FAR has been raised for the project activity during the monitoring period.

2.6 Eligibility for Validation Activities

Validation/Verification body (VVB), Carbon Check (India) Private Ltd. holds accreditation for validation for the relevant sectoral scope 1 and is eligible for validation/verification for the project activity.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

It has been confirmed through the description in PD /B04/, MR/02/ and through interviews (section 2.3) that the project activity is registered with CDM (UNPA 10481). PP is not claiming emission reductions for the same monitoring period in both the programs. PP has clarified that the monitoring report was webhosted with CDM, however, the issuance request has not been submitted for the same. PP has also provided a declaration/16/ to confirm that double counting does not take place during the monitoring period.

3.2 Methodology Deviations

Not Applicable.

3.3 Project Description Deviations

Not Applicable.

3.4 Grouped Project

Not Applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity, “Ambatolampy 20 MW solar PV” was registered as a CDM project activity with UNPA reference number 10481 with the application of methodology ACM0002 version 19. The

project was subsequently registered with VCS ID 2307 applying the methodology ACM0002, version 19, “Grid-connected electricity generation from renewable sources” /B02/. The Project Proponent for the project activity is GreenYellow Madagascar. For the purpose of VCS verification ACM0002 version 19 has been used for the verification.

The project activity involves an installation of 73,008 number of solar modules of Jinko Solar make (14,832 of 270 W and 58,176 of 275 W aggregating to 20.003 MWp)/02/. The solar PV plant is located in Ambatolampy, 90km South of Antananarivo, Madagascar and the electricity generated is exported to the RI-Tana grid of Madagascar. Verification team confirmed from the registered VCS PD/B04/ and remote audit that the location of the project activity including the coordinates is same as mentioned in the registered VCS PD/B04/.

The project boundary includes the electricity generation equipment at the site and JIRAMA substation and the national grid of the host country, Madagascar.

The ex-ante fixed grid emission factor of 0.6703 tCO₂/MWh has been used for the baseline emission calculation, which is line with the registered VCS PD and CDM PDD/B04/.

The registered VCS-PD/B04/ clearly describes the monitoring and responsibility of monitoring is with PP. During the remote audit, monitoring and reporting procedures were confirmed with the relevant staff and through the document review.

PP has also provided a declaration to confirm that double counting does not take place during the monitoring period.

The monitoring plan is in accordance with the UNFCCC approved methodology ACM0002, version 19/B02/. All the data is collected and archived in accordance with the methodology and included in the monitoring plan. The monitoring has been carried out in accordance with the provision of monitoring plan, the verification team reviewed if:

- The monitoring of reductions in GHG emissions resulting from the proposed VCS project activity were implemented in accordance with the monitoring plan contained in the registered VCS-PD/B04/.
- The monitoring plan and the applied methodologies had been properly implemented and followed by the project participants.
- All parameters stated in the monitoring plan, the applied methodologies and relevant CDM and VCS requirements had been sufficiently monitored and updated.
- The responsibilities and authorities for monitoring and reporting were in accordance with the responsibilities and authorities stated in the monitoring plan.

The GHG emission reductions generated by the project activity are not included in an emissions trading program or any other mechanism that includes GHG allowance trading, this has been confirmed from the review of the PD/B04/ and also confirmed during the remote audit. The project activity has not received or sought any other form of environmental credit, this has been confirmed from the review of the PD/B04/ and also confirmed during the remote audit.

The sustainable development contribution of the project activity to the host country, Madagascar have been provided in the PD/B04/ and the contributions were confirmed with the PP during the remote audit. The main sustainable development contributions have been listed under Energy security and supply, Health, Employment opportunities and Technology transfer.

Overall, the project has been implemented in accordance with the registered VCS-PD/B04/.

4.2 Safeguards

4.2.1 No Net Harm

No negative environmental and social impacts have been identified by the project proponent for the project activity, thus there exists no net harm to the project activity. This was also confirmed through the review of the VCS PD/B04/, MR/02/ and confirmed during the remote audit.

4.2.2 Local Stakeholder Consultation

PP has confirmed that no comments have been received from the local stakeholders during the reported monitoring period. Local stakeholder consultation has been carried out for the project activity at the time of the project validation and found appropriate.

Verification team confirms that the local stakeholder consultation conducted meets the requirements as provided.

PP has also provided for a continuous grievance mechanism process for the project activity. The details for the project proponent and the environmental assessment practitioner have been provided for the continuous grievance mechanism. During the reported monitoring period (01 May 2020 to 31 December 2021), no LSC comments were received. PP has provided the Environmental and Social Report, 2021/17/ to confirm that no comments related to the project activity during grievance process.

4.3 AFOLU-Specific Safeguards

Not Applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The total Emission Reductions for the project activity are calculated as:

Emission reductions = Baseline emission – Project emission – Leakage

Being a solar PV project, the project activity does not lead to any form of emission; Hence Project Emission (PE_y) = 0.

Also, the leakage for the project activity is nil as per the registered CDM PDD, the VCS PD and the applied methodology. Hence Leakage (Ly) = 0

So, Emission Reductions = Baseline Emissions

The Baseline Emissions (BE_y) are calculated as follows:

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

Where:

BE_y = Baseline emissions in year y (t CO₂/yr)

$EG_{PJ,y}$ = 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/yr)

$EF_{grid,CM,y}$ = 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)

Since the project activity consists in the installation of new grid-connected renewable power plant at site where no renewable power plant was operated prior to the implementation of the project activity, it verifies the case of Greenfield renewable energy power plant, option (a) whereby:

$$EG_{PJ,y} = EG_{facility,y}$$

Where:

$EG_{PJ,y}$ = 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/yr)

$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

The verification team has determined whether the registered monitoring plan in the VCS PD and CDM PDD /B04/ has been properly implemented and followed by the PP and whether all parameters fixed ex-ante for emission reduction calculation are as per the registered PDD /B04/. The verification team’s assessment of each data and parameter fixed ex-ante is provided below:

Parameter	Description	Value	Unit	Source	Assessment
$EF_{grid,CM,y}$	Combined margin CO ₂ 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”	0.6703	tCO ₂ /MWh	JIRAMA 2015-2017 data	The emission factor is fixed for the 1 st renewable crediting period and shall be revised at the renewal of each crediting period. The value is consistent with registered CDM PDD and VCS PD/B04/ and fixed ex-ante for the project activity.
$EF_{grid,OM,y}$	Operating Margin CO ₂ 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	0.668	tCO ₂ /MWh	JIRAMA 2015-2017 data	The parameter is used for the ex-ante calculation of the emission factor for the project activity. The emission factor is fixed for the 1 st renewable crediting period and shall be revised at the renewal of each crediting period. The value is consistent with registered CDM PDD and VCS PD/B04/ and fixed ex-ante for the project activity.

	electricity system”				
EF _{grid, BM, y}	Build Margin CO ₂ 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”	0.677	tCO ₂ /MWh	JIRAMA 2015-2017 data	The parameter is used for the ex-ante calculation of the emission factor for the project activity. The emission factor is fixed for the 1 st renewable crediting period and shall be revised at the renewal of each crediting period. The value is consistent with registered CDM PDD and VCS PD/B04/ and fixed ex-ante for the project activity.
The percentage share of total installed capacity of solar PV	The percentage share of total installed capacity of the solar PV in the total installed grid connected power generation capacity in the host country.	0.1	%	https://www.africa-eu-renewables.org/marketinformation/madagascar/energy-sector/	The parameter is used for additionality demonstration at ex-ante stage. The value is consistent with registered CDM PDD and VCS PD/B04/ and fixed ex-ante for the project activity.
The total installed capacity of solar PV	The total installed capacity of the solar PV in the host country.	0.53	MW	-	The parameter is used for additionality demonstration at ex-ante stage. The value is consistent with registered CDM PDD and VCS PD/B04/ and fixed ex-ante for the project activity.

The values are consistent with the registered CDM PDD/B04/ and defined fixed ex-ante during 1st renewable crediting period of the project activity. The fixed ex-ante data and parameter have been listed in the monitoring report/02/ and confirmed by the verification team as correct and consistent with that stated in the registered CDM PDD/B04/. The verification team confirms that the MR/02/ and the ER calculation spreadsheet/04/ have considered the parameters fixed ex-ante correctly.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

CC IPL was able to confirm that the calculations are based on authentic data. The spreadsheets/04/ used to calculate the VCU calculations and all figures were tracked, checked with actual reported data from the grid invoices and found to be consistent.

The quality of supporting evidence submitted to the VVB for verification is adequate and found to be verifiable. The transfer of carbon rights and other supporting documents related to quality and maintenance were checked by the verification team during the remote audit to confirm the authenticity of the documents and to check the correctness of the calculation.

When verifying the reported emission reductions, CCIPL ensured that there was a clear audit trail that contained the evidence and records that validate the stated figures. All source documents that form the basis for assumptions and other information underlying the GHG data were checked by the verification team.

When assessing the audit trails, CCIPL also examined:

1. Whether sufficient evidence was available, both in terms of frequency and in covering the full monitoring period
2. The source and nature of the evidence
3. If comparable information was available from sources other than that used in the monitoring report, CCIPL cross-checked the monitoring report against the other sources to confirm that the stated figures were correct.

CC IPL also assessed that the data collection system met the requirements of the monitoring plan as per the applied methodology.

Proper data management inclusive of data acquisition and aggregation, data management system is being followed for the project activity.

The monitoring personnel at site are well trained and follow reproducible routines. Thus, they are competent to carry out the relevant tasks with sufficient accuracy.

Monitored Parameters

Data / Parameter	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{\text{facility},y}$)
Measuring frequency	Continuous measuring
Recording frequency	Monthly recording
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment	Bi-directional electricity Meters (installed at JIRAMA substation). The configuration of the meters is as provided below: <u>Main meter</u> Make: Landis+Gyr Dialog Model: N/A

	<p>Accuracy class: 0.2S</p> <p>Serial number of main meter: 3507387521272</p> <p>Backup meter (Since 02/08/2021)</p> <p>Make: DTSD</p> <p>Model: 178M</p> <p>Accuracy class: 0.2S</p> <p>Serial number of backup meter: 012000005221</p> <p>Backup meter (between 06/03/2021 and 02/08/2021)</p> <p>Make: Landis+Gyr</p> <p>Model: ZMD245</p> <p>Accuracy class: 0.2S</p> <p>Serial number of backup meter: 95766642</p> <p>Backup meter (between 27/02/2021 and 06/03/2021)</p> <p>Make: Sagem</p> <p>Model: CX3500</p> <p>Accuracy class: 0.2S</p> <p>Serial number of backup meter: 021074001552</p> <p>Backup meter (before 27/02/2021)</p> <p>Make: Landis+Gyr Dialog</p> <p>Model: ZMD405</p> <p>Accuracy class: 0.2S</p> <p>Serial number of second meter: 95766898</p>
Value(s) of monitored parameter	47 392 MWh
Is accuracy of the monitoring equipment as stated in the PDD?	Yes, the accuracy of the monitoring equipment is as stated in the CDM PDD and VCS PD/B04/.
Calibration frequency /interval	As per the manufacturer’s manual for the main meter, meters are calibrated at the factory and do not require any further calibration during their entire service life. This was confirmed through the review of the monitoring plan provided in the CDM PDD and VCS PD/B04/.

	<p>The manufacturer's specifications on the calibration requirements are not available for the backup meter. The state electricity regulator, JIRAMA is responsible for the calibration of the meters, but has not provided information on the frequency of the calibration. PP has justified that the calibration of backup meter is not in the control of the PP. PP has thus applied the applicable error in accordance with the Table 1 of the Appendix of the VVS for the project activities, version 3.</p>
<p>Is the calibration interval in line with the monitoring plan of the PDD?</p>	<p>Yes, the QA/QC procedures from the registered CDM PDD and VCS PD/B04/ have been followed.</p>
<p>Company performing the calibration</p>	<p>The calibrations are performed by JIRAMA (state regulator) prior to installation.</p>
<p>Did calibration confirm proper functioning of monitoring equipment? (Yes / No)</p>	<p>Yes, the calibrations confirmed proper functioning of the main meter. The backup meter was replaced three times during the monitoring period. The state electricity regulator, JIRAMA is responsible for the calibration of the meters, but has not provided information on the frequency of the calibration. PP has justified that the calibration of backup meter is not in the control of the PP. PP has thus applied the applicable error in accordance with the Table 1 of the Appendix of the VVS for the project activities, version 3.</p>
<p>Is(are) calibration(s) valid for the whole reporting period?</p>	<p>The state electricity regulator, JIRAMA is responsible for the calibration of the meters, but has not provided information on the frequency of the calibration. PP has justified that the calibration of backup meter is not in the control of the PP. PP has thus applied the applicable error in accordance with the Table 1 of the Appendix of the VVS for the project activities, version 3.</p>
<p>If applicable, has the reported data been crosschecked with other available data?</p>	<p>Yes, the reported data has been cross-checked with the electricity sales invoices/08/ in accordance with the QA/QC procedures provided in the section B.7.1 of the registered CDM-PDD and VCS PD/B04/.</p>
<p>How were the values in the monitoring report verified</p>	<p>The values in the monitoring report were verified through the comparison with the values in the ER sheet/04/ and the raw data provided therein, and cross checked with the electricity sales invoices/08/.</p>
<p>Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?</p>	<p>Yes, the data management ensures correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place.</p>

The verification team can confirm that sufficient evidence is available for the whole monitoring period and the same is verifiable and that the data collection system meets the requirements of the monitoring plan and the applied methodology according to the assessment carried out during the remote audit and in the document review.

Verification team confirms that the quality of evidence to determine the GHG reductions and removals produced was found satisfactory. The detailed information flow with the roles and responsibilities of the individuals and the monitoring system have been provided in the VCS-MR/02/.

4.6 Quality of Evidence to Determine GHG Emission Reductions and Removals

CCIPL was able to confirm that the calculations are based on authentic data. The spreadsheets/04/ used to calculate the VCU calculations and all figures were tracked, checked and found to be consistent.

The quality of supporting evidence submitted to the VVB for verification is adequate and found to be verifiable. The transfer of carbon rights and other supporting documents related to quality and maintenance were checked by the verification team during the remote audit to confirm the authenticity of the documents and to check the correctness of the calculation.

The verification team can confirm that sufficient evidence is available for the whole monitoring period and the same is verifiable and that the data collection system meets the requirements of the monitoring plan and the applied methodology according to the assessment carried out during the remote audit and in the document review

Verification team confirms that the quality of evidence to determine the GHG reductions and removals produced was found satisfactory. The detailed information flow with the roles and responsibilities of the individuals and the monitoring system have been provided in the VCS-MR/02/.

4.7 Non-Permanence Risk Analysis

Not applicable.

5 VERIFICATION CONCLUSION

Carbon Check (India) Private Limited has performed the verification of the grouped project activity “Ambatolampy 20 MW solar PV” in Madagascar, with regards to the relevant requirements for VCS project activities.

The conclusions can be summarised as follows:

- The project is implemented and installed as planned and described in the registered CDM-PDD and VCS PD/B04/ and the project activity confirms with the verification criteria for project and their GHG emission reductions or removals set out in the VCS rules.
- The monitoring plan is in accordance with the applied approved methodology, i.e. ACM0002, version 02/B02/ and monitoring plan as sought out in the registered CDM PDD and VCS-PD/B04/.
- The monitoring system is in place and functional. The project has generated verifiable GHG emission reductions.

As the result of the verification of project activities, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. Carbon Check (India) Private Ltd. herewith confirms that the project has achieved emission reductions in the below mentioned reporting period as follows. The project complies with the verification criteria for projects and their GHG emissions reductions or removals set out in VCS rules.

Verification period: From [01-May-2020] to [31-December-2021]

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

For non-AFOLU projects, use the following table:

Year	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)
<i>Year 2020</i>	14,328	0	0	14,328
<i>Year 2021</i>	17,438	0	0	17,438
<i>Total</i>	31,766	0	0	31,766

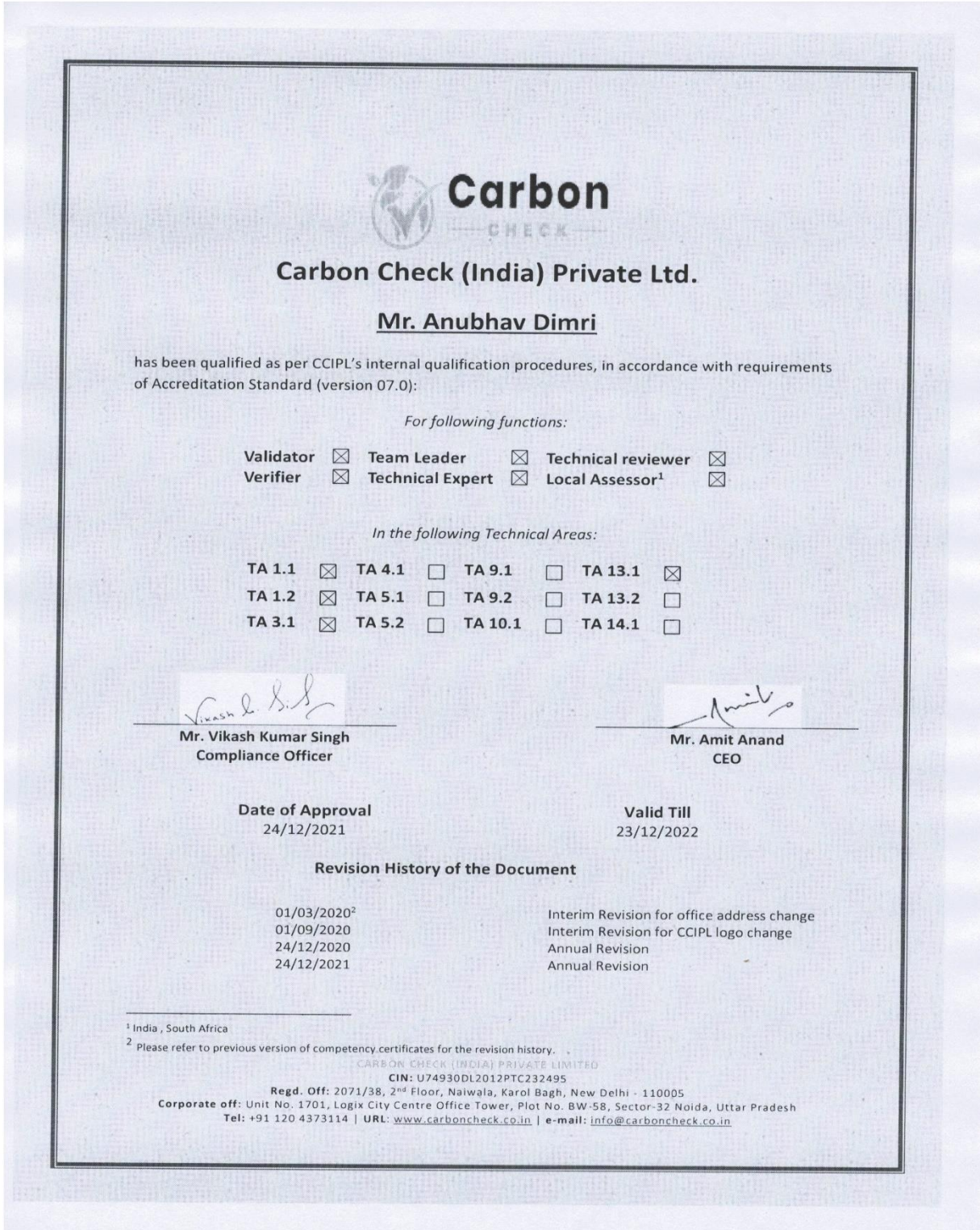
APPENDIX 1: REFERENCES

S. No.	Document
/01/	Monitoring report version 01, dated 22/02/2022
/02/	Monitoring Report (final) version 1.5, dated 24/08/2022
/03/	ER spread sheet corresponding to /01/
/04/	ER spread sheet corresponding to /02/
/05/	Electricity generation records (for total hours and any downtimes)
/06/	Electricity Sales/ Purchase Invoices for the period 01/05/2020 to 31/12/2021
/07/	Electricity meter specifications (Main Meter, Backup Meters)
/08/	Electricity meters calibration certificates/ records
/09/	Photographs of all the electricity meters
/10/	Technical specifications from the manufacturer for: <ol style="list-style-type: none"> 1. Solar panels 2. Inverters 3. Transformer
/11/	Approval for Plant Commissioning dated 20/07/2017 and the Plant commissioning Certificate Dated 10/07/2018, Issued by Ministry of Water, Energy and Hydrocarbons, Madagascar – The plant was commissioned on 10/07/2018
/12/	Line diagram for metering location
/13/	Organisation Structure
/14/	Production License/ Power Purchase Agreement , Dated 24/11/2016, Issued by Ministry of Energy and Hydrocarbons, Madagascar
/15/	Plant layout
/16/	Undertaking on double counting from the PP, dated 10/08/2022
/17/	Environmental and social report 2021
/B01/	<ol style="list-style-type: none"> 1. VCS Standard, version 04.2 2. VCS Program Guide version 04.1 3. VCS Validation and Verification Manual, version 03.2 4. Registration and Issuance Process v4.1 5. VCS Program Definitions version 04.1
/B02/	Large Scale CDM Methodology ACM0002: Grid-connected electricity generation from renewable sources, Version 19.0
/B03/	<ol style="list-style-type: none"> 1. VCS MR Template
/B04/	Registered CDM PDD (version 1.4 dated 05/07/2019 and the corresponding Validation Report VCS PD (version 1.2 dated 15/07/2020)

APPENDIX 2: ABBREVIATION

BAU	Business As Usual
CA	Corrective Action / Clarification Action
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO₂	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
DOE	Designated Operational Entities
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
FA	Final Approval
FAR	Forward Action Request
FVR	Final validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
IPCC	Intergovernmental Panel on Climate Change
JIRAMA	Jiro sy rano malagasy, Madagascar
MW	Megawatts
MWh	Mega Watt Hour
OSV	On Site Visit
PV	Solar Photovoltaic
QC/QA	Quality control/ Quality assurance
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VVB	Validation / Verification Body

APPENDIX 3: COMPETENCY CERTIFICATE





Carbon Check (India) Private Ltd.

SHIVAJI CHAKRABORTY


has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:


Validator Team Leader Technical reviewer
 Verifier Technical Expert Local Assessor¹

In the following Technical Areas:

TA 1.1 TA 4.1 TA 9.1 TA 13.1
 TA 1.2 TA 5.1 TA 9.2 TA 13.2
 TA 3.1 TA 5.2 TA 10.1 TA 14.1



Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO

Date of Approval
24/12/2021

Valid Till
23/12/2022

Revision History of the Document

01/03/2020 ²	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision
24/12/2021	Annual Revision

¹ India.

² Please refer to previous version of competency certificates for the revision history.

CARBON CHECK (INDIA) PRIVATE LIMITED

CIN: U74930DL2012PTC232495

Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005

Corporate off: Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh

Tel: +91 120 4373 114 | **URL:** www.carboncheck.co.in | **e-mail:** info@carboncheck.co.in