AMBATOLAMPY SOLAR PV

Document Prepared by

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Report ID	BELL_VCS_VER_PRC_12623
Project title	Ambatolampy Solar PV
Project ID	2307[1]
Verification period	01-January-2022 to 31-December-2023 (both dates included)
Original date of issue	06-September-2024
Most recent date of issue	27-January-2025
Version	1.3
VCS Standard Version	VCS Standard, Version 4.7

[1] https://registry.verra.org/app/projectDetail/VCS/2307

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Summary:

LGAI Technological Center, S.A. (hereinafter referred to as Applus+ Certification) has been contracted/2/ by AERA Group to conduct the third verification and validation of project description deviations for the project - "Ambatolampy Solar PV", VCS ID-2307/27/ regarding the relevant requirements of VCS programme guidelines and standard (VCS standard version 4.7, & VCS program guide version 4.4)/10/. Relevant requirements of the UNFCCC for CDM project activities/16//17//28/, as well as criteria for consistent project operations, monitoring and reporting have been applied for verification.

The monitoring period covered under this verification is from 01-January-2022 to 31-December-2023 (both days included).

The project activity was initially registered under CDM/34/, with UNFCCC project ID: 10481[2] on 03-May-2019. Afterwards, it was gap validated to VCS on 04-November-2020, with VCS project ID as 2307[3].

The verification includes confirming the implementation of the monitoring plan of the registered CDM PDD/4/, registered and revised VCS PD-MR (VCS ID 2307)/4//6/ and the application of the monitoring methodology as per ACM0002, Version 22.0: "Grid-connected electricity generation from renewable sources"/17/.

[2] https://cdm.unfccc.int/Projects/DB/RWTUV1556909746.23/view

[3] https://registry.verra.org/app/projectDetail/VCS/2307

The main purpose of this project activity is to generate clean form of electricity through renewable energy sources (solar photovoltaic). New Energy Africa Ambatolampy[4] (NEA Ambatolampy) (formerly known as Green Yellow Madagascar)/23/ is the project proponent/developer, operator & owner of the project and AERA Group is the carbon consultant. The project consists of the construction and operation of a greenfield solar power plant in Ambatolampy, in the South-East of Vakinankaratra region, 90km South of Antananarivo, Madagascar. It involves the setting up of photovoltaic (PV) panels which captures solar energy and convey such energy to the convertor station in order to produce electricity exported to the national grid. Besides the initial capacity of 20 MWp operating since 10-July-2018/1/, the second phase (with capacity of 20 MWp) of the Ambatolampy project was commissioned on 17-August-2022/1/, bringing the total installed capacity to 40 MWp.

The project activity has been operational since commissioning (10-July-2018)/1/ and during 3rd monitoring period i.e., from 01-January-2022 to 31-December-2023 (including both days) has generated 87,271 MWh of net electricity, thereby resulting in emission reductions of 58,394 tCO_2e.

The project being a renewable energy generation activity, leads to reduction in fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and plays beneficial role in the mitigation of climate change.

The scope of the verification is the independent and objective review of the Monitoring Report (MR). The MR is reviewed against the relevant criteria and decisions by the CDM Executive Board and VCS executive board, including the approved baseline and monitoring methodology/17/. The verification was based on the guidance given in the CDM validation and verification standard for project activities, version 03.0/16/, reviewed against registered CDM PDD, version 1.4/4/, registered VCS PD-MR, version 1.2/4/, revised VCS PD-MR, version 2.2 /6/(revised during current monitoring period due to project description deviations) and final validation report /4/, VCS program guide version 4.4 and VCS Standard Version 4.7./10/

A risk-based approach has been followed to perform this verification. In the course of verification, 09 Corrective Action request (CARs), 00 Forward Action request (FARs), and 08 Clarification request (CLs) were raised. All the CARs and CLs have been closed successfully.

The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, onsite visit, follow-up interviews and project proponent have provided LGAI Technological Center S.A. (Applus+ Certification) with sufficient evidence to verify the fulfillment of the stated criteria of VCS.

The monitoring is transparent, adequate and in line with applied baseline and monitoring methodology of ACM0002, Version 22: “Grid-connected electricity generation from renewable sources”./17/

The assessment team has employed a risk-based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the MR. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VCUs. The

[4] In 2020, the Madagascan company Axian Energy acquired the majority of the shares of Green Yellow Ambatolampy. On January 9, 2023, Green Yellow Ambatolampy, the sole shareholder of Green Yellow Madagascar, changed its corporate name to “New Energy Africa Ambatolampy (NEA Ambatolampy)”

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

The only purpose of the verification is its usage during the issuance process as part of the VCS project cycle. Therefore, LGAI Technological Center S.A. (Applus+ Certification) can't be held liable by any party for decisions made or not made based on the verification opinion, which will go beyond that purpose. The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for document verifications. The entire documents checked/verification conducted to arrive at positive verification conclusions.

LGAI Technological Center S.A. (Applus+ Certification) confirms that the project is implemented in accordance with the registered CDM PDD/4/, registered and revised VCS PD-MR/4//6/. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the project's GHG emissions, and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated, we confirm that the emission reductions from the project activity "Ambatolampy Solar PV" during the period 01-January-2022 to 31-December-2023 (including both days) amount to 58,394 tCO_2e.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (hereinafter referred to as "Applus+ Certification" or the VVB) has been contracted/2/ by "AERA Group" to perform the third periodic verification and validation of project description deviations of the renewable energy project titled "Ambatolampy Solar PV " (VCS ID-2307) under VCS Program guide V4.4 and VCS standard version 4.7/10/. The verifiers have reviewed the GHG data collected to date for monitoring period from 01-January-2022 to 31-December-2023 (both days included) covered in this verification. The objective of this verification is a thorough and independent assessment of the registered project activity against the applicable VCS requirements by the VVB. The verification process shall determine whether the proposed project activity complies with the requirements of latest VCS guidelines/10/, applicability conditions of the selected methodology/17/, relevant host country regulations and guidance issued by the VCS Board. The objective of this verification activity is to have an independent third party for the assessment of project design, Monitoring Report and Final Verification report and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular;

- the project's baseline is assessed against "ACM0002 – Version 22.0" /17/
- the project's monitoring plan is assessed against "ACM0002 – Version 22.0" /17/
- CDM validation and verification standard for project activities, Version 03.0/16/
- VCS Program Guide v.4.4/10/
- VCS Standard Version v.4.7/10/
- VCS Program Definitions v4.5 /10/
- VCS Registration & Issuance Process v4.5 /10/
- VCS Validation and Verification Manual v3.2 /10/

LGAI Technological Center, S.A. (Applus+ Certification) as the Validation/Verification Body (VVB) for the project activity is accredited as a DOE by UNFCCC and also meets the competence requirements as set out in the normative reference ISO 14065:2020.

Verification is a requirement for all VCS projects and is seen as necessary through the provision of objective evidence, provide assurance to stakeholders of the quality of the project and that the requirements for a specific intended future use or application have been fulfilled regarding its intended GHG claims (i.e. generation of verified certified units (VCUs)).

The objective of verification is to have an independent review and ex post determination by a Validation/Verification Body (VVB) of the monitored reductions in GHG emissions that have occurred as a result of the registration of VCS project and its continuous monitoring. Certification is the written assurance by the VVB that, during a specific time period, a proposed VCS project activity achieved an amount of reductions in anthropogenic emissions by sources of GHGs as verified.

1.2 Scope and Criteria

The scope of verification is to assess the claims and assumptions made in the VCS monitoring report (MR) against the VCS criteria /10/, including but not limited to, VCS standard/10/, applied methodology/17/ and other relevant rules and requirements established for VCS project activities./10/

The scope is defined as an independent and objective review of the Monitoring report MR/6/prepared as per the registered CDM PDD/4/, registered and revised PD-MR/4/and registered approved methodology ACM0002 – Version 22.0/17/. The MR is reviewed against the criteria (See Section 1.1 above) including the approved applied methodology ACM0002 – Version 22.0/17/. The verification has been conducted in accordance with the VCS Standard version 4.7/10/, other valid and applicable VCS Regulatory Documents and template (see Appendix 2 of this verification report below). UNFCCC rules and requirements (where applicable) and associated decisions of the VCS Secretariat and the UNFCCC Executive Board (where applicable) (hereinafter also can be referred to as regulatory documents).

The verification is not meant to provide any consulting towards the project proponent. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the Monitoring report. In line with Guidelines for Application of materiality in verifications (Version 02.0) /20/, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reductions calculation spread sheet. It follows the paper trail back to the raw data such as meter reading records and invoices/11/. There are no material errors, overestimation of Emission Reductions, omission or misstatement. Verification team conducted an onsite audit to verify metering/monitoring arrangement. The verification team has reviewed all the documents like commissioning date supportive evidences/1/, technical specifications/3/, O & M practices, Monthly electricity generation records (monthly production statements)/11/, Invoices /11/, grievance register/15/.

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

1.3 Level of Assurance

Applus+ Certification has planned and performed the verification by obtaining evidence and other information and explanations that assessment team considers necessary to give reasonable assurance that reported estimated GHG emission reductions are fairly stated. All documentary evidences were checked, remote audit was conducted initially through video conferencing using ICT tool "Microsoft Teams" and later on an onsite audit was performed (please refer to section 2.3 and 2.4 for further explanation about this). Technical details including metering/monitoring arrangement verified through photos and supportive evidences shared by PP to arrive at a verification conclusion by the assessment team.

The level of assurance of the verification report falls under reasonable assurance engagements. Reasonable assurance is a high level of assurance regarding material misstatements, but not an absolute one.

Reasonable assurance includes the understanding that there is a remote likelihood that material misstatements will not be prevented or detected on a timely basis. To achieve reasonable assurance, the auditor needs to obtain sufficient appropriate audit evidence to reduce audit risk to an acceptably low level. This means that there is some uncertainty arising from the use of sampling (where applicable), since it is possible that a material misstatement will be missed.

Through an exhaustive process of documentary review, interviews with the project proponent, onsite audit, assessment on GHG Emission Reductions calculations against applicable methodology and any other regulatory document and reporting of objective evidence, the VVB is able to reach a reasonable level of assurance on the conduction of the verification process. The achieved level of assurance for this verification is thus a reasonable level of assurance as per the requirements set out in the applied VCS Standard version 4.7 clause 4.1.10 (1) /10/.

VVB applied a materiality threshold of 5% with respect to omission or misstatements concerning reported quantities as per VCS Standard version 4.7, clause 4.1.10 (4) /10/.

Additionally, according to the VCS Validation and Verification Manual version 3.2 /10/, while all material errors, omissions and misrepresentations must be addressed for a project to receive a positive validation or verification opinion, when non-material errors have been found in the project documents, the VVB requested the project proponent to correct them and ensured that such errors have been addressed where applicable. The evidence used to achieve a reasonable level of assurance is specified in section 2.3 and 2.4 of this report. Materiality for the project is 5% which is in accordance with para 4.1.10(4) of VCS Standard v4.7/10/, however the assessment team has verified 100% data (no sampling plan is applied), hence it is sufficient to meet the materiality requirements of the project.

In our opinion, the estimated GHG emissions reductions were calculated correctly on the basis of the approved baseline and monitoring methodology "ACM0002, Version 22.0"/17/ and the VCS standard v.4.7 (paragraph 4.1.10) /10/.

1.4 Summary Description of the Project

The project consists of the construction and operation of a greenfield 40 MWp solar power plant in Ambatolampy, in the South-East of Vakinankaratra region, Madagascar. It involves the setting up of photovoltaic (PV) panels which captures solar energy and convey such energy to the convertor station in order to produce electricity exported to the national grid. Besides the initial capacity of 20 MWp operating since 10-July-2018/1/, the second phase of the Ambatolampy project was commissioned on 17-August-2022/1/, bringing the total installed capacity to 40 MWp./24/

The project activity was initially registered under CDM, with UNFCCC project ID: 10481 on 03-May-2019/34/. Afterwards, it was gap validated to VCS on 04-November-2020, with VCS project ID as 2307/27/.

This clean energy supply thus implies a substantial reduction in the production of carbon from the predominantly thermal-based grid mix (dominated by imported fossil fuels currently consumed by thermal power stations (514 MW) versus hydropower plants (162 MW)[5]), thereby reducing the associated greenhouse impact upon the atmosphere.

The initial Phase-1 features total 73,008 units of solar PV modules manufactured by Jinko Solar/3/ of models Eagle 60 JKM 270 PP-60 (14,832 units) and Eagle 60 JKM 275 PP-60 (58,176 units) connected to the RI-TANA grid operated by JIRAMA. The first phase also comprised of 15 inverters of make INGECON SUN 1220TL./3/

The phase-2 (also called extension phase), which was commissioned on 17-Aug-2022 added 37,050 units of solar PV modules manufactured by JA solar/3/ of model JAM72S30-540/MR and 77 new inverters of model SUNGROW SG250HX/3/ for a total capacity of 20MWp. The extension phase also features the Battery Energy Storage System (BESS) of type M2L Series, which is manufactured by SUNGROW/3/. The BESS is mainly charged with electricity generated from the associated renewable energy power plant. Grid imported energy is only used on a minority basis, and corresponding GHG emissions shall be accounted for as project emissions. The extension phase is connected to the same RI-TANA grid operated by JIRAMA.

The project's monitoring equipment are composed of 7 meters in total, 3 for each phase (1 Main (Model: Landis+Gyr E650[6], class 0.2S) /3/, 1 Check (Model: ZTE DTSD178-M[7], class 0.5S) /3/ and 1 Internal Control (Model: Phoenix contact EEM-MA600[8], class 0.2S)) /3/, measuring the net electrical energy delivered to RI-Tana grid and located before 20/63kV transformer/3/ at JIRAMA

[5] IRENA, 2022. "Energy Profile : Madagascar" available online here

[6] https://www.landisgyr.eu/product/landisgyr-e650/

[7] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

[8] https://www.phoenixcontact.com/fr-fr/produits/appareil-de-mesure-eem-ma600-2901366

substation. They also measure the consumption of the plant, including BESS charging from the grid. The 7th meter (Model: ZTE DTSD178-M[9], class 0.5S) /3/, measuring office consumption, including lights, cameras, etc. (labelled as 'invoiced imports' on the ER sheet/7/), is located at the JIRAMA VIE base, next to the offices.

The verification team confirmed these technical details about the PV plant components by cross checking the manufacturer's technical specification documents/3/, photographs of component's nameplates provided by PP/18/ and through onsite audit/19/.

The location details of the project are as follows:

Sr. No.	Name of project Proponent	Location	Latitude	Longitude
1	New Energy Africa Ambatolampy [10] (NEA Ambatolampy) (formerly known as GreenYellow Madagascar)	Ambatolampy, in the South-East of Vakinankaratra region, 90km South of Antananarivo, Madagascar.	19°29'22"S	47°26'42"E

The location of the project activity mentioned in the MR is checked through the Google Maps (https://www.google.co.in/maps) and found consistent with registered CDM PDD/4/, registered/4/ and revised VCS PD-MR/6/ and it is accepted. The status of the project activity is verified through the maintenance and breakdown records/13/ of the plant and confirmed that the project activity was fully operational during the monitoring period, with few incidents of breakdown./13/

The project activity is developed by New Energy Africa Ambatolampy (NEA Ambatolampy) (formerly knows as Green Yellow Madagascar)/23/. The former entity has signed a Power Purchase Agreement with the company JIRO SY RANO MALAGASY (i.e. JIRAMA)/9/, which is the state-owned utility in Madagascar that is responsible for generation, transmission and distribution of electricity. AERA Group is the Carbon Consultant for the activity.

[9] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

[10] In 2020, the Madagascan company Axian Energy acquired the majority of the shares of Green Yellow Ambatolampy. On January 9, 2023, Green Yellow Ambatolampy, the sole shareholder of Green Yellow Madagascar, changed its corporate name to "New Energy Africa Ambatolampy (NEA Ambatolampy)"

Technical specifications/3/ of the equipments i.e. solar PV modules, invertors, transformers, BESS and monitoring equipment involved in the project activity as reported under section 3.1 and section 4.2 of the MR are verified through onsite visit and the latest photographs/18//19/ and are found to be consistent with the information as mentioned in the registered and revised PD-MR/4//6/ and the MR for this verification period/4/. The start date of the project activity is 10-July-2018, which is date of commissioning of phase-1 of the project activity, as verified though the commissioning documents/1/. The technical lifetime of the project activity is 25 years, the same is verified through the power purchase agreement/9/ signed for the project activity. VVB concluded that the project has been implemented as per the requirement of the registered CDM PDD/4/, registered and revised VCS PD-MR/4//6/ and approved monitoring plan.

During the current monitoring period, it was observed that few unforeseen incidents/events evolved that can impact the operation of the project activity, which was verified from breakdown records/13/. The project undergone continuous operation and only scheduled maintenance is observed as per the manufacture's specification as evident from generation. The only noteworthy event is the unavailability of an inverter which lasted from 10-December-2021 until 05-May-2023 on the initial tranche of the plant. The faulty inverter was sent in Europe for repair and was sent back on 22-February-2023; its return to service was effective on 05-May-2023. This unavailability therefore lasted during most of the monitoring period and impacted the plant's production on its initial phase. Please refer to the Appendix 6 for more information about the plant breakdowns.

The organisational roles and responsibilities/8/ as mentioned in the registered CDM PDD, registered and revised PD-MR/4//6/ are followed onsite. All the emergency preparedness as mentioned in the CDM PDD, registered and revised PD-MR, MR/4//6/is followed onsite and no discrepancies were found regarding the same as confirmed during the interviews with the PP representatives.

The project uses the UNFCCC approved consolidated large-scale methodology ACM0002 "Grid-connected electricity generation from renewable sources" Version 22.0/17/ and pertains to the defined UNFCCC Sectoral Scope 1, Technical Area 1.2 Renewables.

The project activity was initially registered under CDM, with UNFCCC project ID: 10481/34/ on 03-May-2019. Afterwards, it was gap validated to VCS on 04-November-2020, with VCS project ID as 2307/27/. Project has not claimed any issuances till date under CDM.

The project is not registered under any other GHG Program other than the CDM and VCS, and can be found in the following links respectively: https://cdm.unfccc.int/Projects/DB/RWTUV1556909746.23/view and https://registry.verra.org/app/projectDetail/VCS/2307.

The VVB has cross-checked the available registries of Gold Standard (GS) /29/, International Carbon Registry (ICR) and the Global Carbon Council (GCC) /30/ and has not found this project activity registered in any of these schemes.

The current monitoring period is covered from 01-January-2022 to 31-December-2023 (inclusive of both dates) and the project activity has exported 87,271 MWh of net electricity to RI-TANA grid. As a result of exporting renewable energy to the fossil fuel intensive national grid of the host country, the accrued emission reductions for the current monitoring period are calculated and certified as a result of this verification to be 58,394 tCO_2e.

Based on the assessment of the documents, the assessment team can confirm that the project activity is fully functional and implemented as described in the registered and revised VCS PD-MR../4//6/

2 VERIFICATION PROCESS

The registered VCS project is undergoing 3rd verification period, the approach adopted to ensure the quality of emission reductions is described in the following sections.

2.1 Method and Criteria

Verification Process: The project assessment is based on the "CDM validation and verification standard for project activities, Version 03.0"/16/, "VCS program guide v.4.4" and "VCS standard v.4.7" /10/ and is conducted using standard auditing techniques and pre-approved audit plan/19/ to assess the correctness of the information provided by the project proponent as per following verification schedule:

Scope of the assessment	Date
Initial meeting/Interview	26-July-2024
Project design and characteristics	26-July-2024
Interview with relevant personnel during the onsite audit	26-July-2024
Documentary review	26-July-2024
Audit team internal meeting	26-July-2024
Final meeting.	26-July-2024

The Verification process has been conducted in accordance with the Applus+ Certification's procedures and in line with the applicable regulatory documents, *inter alia*, the VCS Standard version 4.7, other valid and applicable VCS Regulatory Documents and templates, the UNFCCC CDM M&P and the latest version of the applicable UNFCCC CDM regulatory documents and relevant requirements (where applicable); applying, as a minimum, standard auditing techniques.

The Verification process has been conducted following the regulatory documents and based on the ISO 14064-3:2019 and ISO 14065:2020 using standard auditing techniques as required by the VCS Standard v4.7./10/
The Verification process has been conducted through an onsite inspection[11] (see below), thus, no need for a risk analysis for on-site inspections has been determined for this Verification.

No ICT means have been used for the conduction of this verification process other than those for the provision of documents and transferring information and undertake normal communications with the PP(s). Those ICT means[12] supporting the process in this sense, have been used to an extent sufficient to cover the background necessities of the verification process and have demonstrated enough effectiveness to conduct it in accordance with the relevant applicable regulatory requirements.

This process has included: the review of data and information presented to verify their completeness; the review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements and the QA/QC procedures; an evaluation of data management; and an evaluation of the QA/QC system in place in the context of its influence on the generation and reporting of emission reductions.

No virtual sites have been included in the verification process (although it is to be noted that a remote audit was conducted by the audit team initially on 24-November-2023. But afterwards an onsite audit was performed owing to the nature of project description deviations) according to the definition in the IAF MD4:2023 document/33/. Instead, the documentation has been provided upon request from the VVB by other means (such as mail, transfer applications, etc.)

[11] Assessment team had performed a remote audit initially on 24-November-2023. Later on, it was decided to perform onsite audit owing to the nature of project deviations which have an impact on the applicability of methodology and additionality.

12 According to the IAF MD4:2023, ICT is the use of technology for gathering, storing, retrieving, processing, analysing and transmitting information. It includes software and hardware such as smartphones, handheld devices, laptop computers, desktop computers, drones, video cameras, wearable technology, artificial intelligence, and others.

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the Applus+ Certification's procedures and policies, that are in accordance with the ISO 14065:2020 regulatory provisions.

Applus+ Certification has completed a strategic review and risk assessment of the project's activities and processes in order to gain a full understanding of:

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

Based on the above, the VVB prepared a Verification Plan and applied an evidence-gathering plan designed to collect sufficient and appropriate evidence upon which to base the conclusion and to consider the inherent risk for the verification. The evidence-gathering plan is based on analytical procedures and tests and considers the thresholds for materiality as per the regulatory documents applied for this verification (5% as per the applied VCS Standard version 4.7)/10/.

The applied evidence-gathering plan is used by the VVB to determine the conformity of statements made by the client against the principles and requirements of the applied regulatory documents during this verification.

The evidence-gathering plan designed by the VVB takes into consideration, as a minimum:

- The selection and management of the data and information;
- The processes for collecting, processing, consolidating, aggregating and reporting the data and information;
- Systems and processes in place to ensure the validity and accuracy of the data and information;
- The design and maintenance of the system to control the data and information;
- Systems, processes and personnel that support system in place, including activities for ensuring data quality;
- The results of instrument maintenance and calibration where appropriate;
- The results of previous validation activities and verifications, where available and appropriate.

At the end of this phase, Applus+ Certification produced a verification plan which, based on the risk assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan (if applicable).
Applus+ Certification has verified the implementation of the monitoring plan and the data presented in the Monitoring Report (MR) version 1.5, dated on 24-January-2025/6/ for the monitoring period applicable to this verification process. This involved an on-site visit & interviews of project proponent representative's and a desk review of the Monitoring Report. This verification report describes the findings of this assessment.

The process of verification involved the following relevant milestones (respective dates are mentioned in the table below):

- The signature of the contract for verification between the PP and the VVB[/2/];
- A kick-off meeting/communication to require the documentary material to perform an initial desk review;
- An initial desk review of the documentary evidence prepared by the Project Proponent;
- The issuance of findings coming from this initial desk review (if any);
- The conduction of an onsite audit, including interviews and video-calls in addition to the site visit (see Sections 2.3 and 2.4 below);
- The issuance of findings from the onsite inspection and communication of such deviations (if any) to the Project Proponent;
- The assessment of their resolution and closure, when appropriate;
- Once all the findings have been closed, the elaboration of this Verification Report, in which such findings (if any) are described;
- The conduction of an independent Technical Review;
- Upon conclusion of the Technical Review, the VVB may perform a final quality check before the issuance of the Final Verification Report (FVR) and signature of the corresponding Verification Deed.

The process of this verification assessment has not implied any sampling plan.

Verification schedule is described in the below table:

Sr. No	Date	Milestones
1.	06-July2023	Initial Contract signed[13]
2.	08-July-2023 and 01-November-2023	A kick-off meeting/communication to request the documentary material to perform an initial desk review;
3.	04-December-2023	Initial Desk review and Findings issuance

[13] Revised contract signed on 18-June-2024.

4.	26-July-2024	Site Visit[14]
5.	30-July-2024	Findings from Onsite inspection
6.	05-September-2024	Findings Closure
7.	06-September-2024	Draft verification report
8.	27-January-2024	Final verification report

Appointment of the assessment team

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the LGAI Technological Center S.A. (Applus+ Certification) procedures and policies, that are in accordance with the ISO 14065:2020 regulatory provisions.

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center S.A. (Applus+ Certification) has composed an assessment team in accordance to compliance with the contract review and Assessment Team appointment rules in the internal Quality Management System of LGAI Technological Center S.A. (Applus+ Certification) as well as in compliance with the applicable requirements in the Accreditation Standard.

The composition of audit team (Applus+ Certification's verification team) has been approved by the LGAI Technological Center S.A. (Applus+ Certification) Central site during its Contract Review process, ensuring that the required skills and capabilities are covered by the team.

The qualification levels for Assessment Team members that are assigned by aforementioned appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training, TEiT for Technical Expert in Training, etc.).

The Sectoral Scopes / Technical Areas required knowledge linked to the applied methodology(ies) is covered by the Assessment Team as shown below:

[14] Assessment team had performed a remote audit initially on 24-November-2023. Later on, it was decided to perform onsite audit owing to the nature of project deviations which have an impact on the applicability of methodology and additionality.

Name	Role	SS/TA Coverage	Financial Aspect	Attendance to on-site visit
Dr. N. Premjit Singh	LA/TE	YES (1.2)	N/A	YES
Mr, Saurabh Gaikwad	A	YES (1.2)	N/A	NO
Ms. Nathalie Raharilaza	Local Support	NO	N/A	YES
Mr. Denny Xue	TR/TE	YES (1.2)	N/A	N/A

The complete list of CVs is included as Appendix 4 of this report.

Document review

The Monitoring report (version 1.5)/6/ submitted by the PP was reviewed against the approved methodology, registered and revised VCS PD-MR/4/, CDM PDD/4/, final validation report/4/ and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information.

Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in this report below in Appendix 2.

Onsite Audit

An onsite audit is conducted by LGAI Technological Center S.A. (Applus+ Certification) assessment team who performed an onsite inspection and interviews with project's stakeholders to confirm selected information and to resolve issues identified in the document review. The details are provided in this report in the below sections, Resolution of Clarification and Corrective Action Request.

Resolution of Clarification and Corrective Action Request

The objective of this phase of Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised, and responses given are summarized below in the Appendix 2 of this report.
The final MR Version 1.5/6/ submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Internal quality control

As final step of a verification of the final documentation including the verification report have to undergo an internal quality control by the technical review committee.

Details of the Technical Reviewer(s) are provided within the verification Report in Section 2.1 and Appendix 4 for further references of knowledge and capability to conduct the quality checking.

After the Technical Review process, the final documentation may undergo a final quality checking process called Administrative Review, done by the Applus+ Certification's Project Manager and/or Technical Support.

For final approval, the final set of documents are prepared by the VVB's Technical Manager or its deputy and signed by the authorized signatory of the VVB.

In case any of the persons performing this final internal quality-control and approval process has acted as a part of the Assessment Team or Technical Review team, the approval can only be given by VVB's personnel who are not part of those teams.

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

2.2 Document Review

The details of the documents observed during the verification process which included the followings:

- Compliance of the Monitoring Report with the current version of the template and its required contents;
- Monitored parameters and reporting requirements;
- Assessment of data and calculation of emission reductions or net removals (Conservativeness, use of calculation methods and assumptions, emission factors, reliability/reproducibility);
- Assessment on the differences from the estimated value of ERs in the registered PD and the achieved ERs in the Monitoring Period;
- Remaining forward action requests from validation or previous verifications;
- Ongoing communication method with stakeholders;
- Sustainable development contributions.

The VCS Monitoring Report (MR) version 1.5, dated on 24-January-2025/6/ and the Emission Reductions (ER)/7/ Calculations were assessed as part of the verification. In addition, the registered CDM PDD version 1.4, dated 05-July-2019/4/, registered Project Description-Monitoring Report (PD-MR) version 1.2, dated on 15-July-2020/4/, revised Project Description-Monitoring Report (PD-MR) version 2.2, dated on 24-January-2025/6/, in particular, the baseline estimations and the monitoring plan, and the VCS Validation-Verification Report and latest Verification Report, as well as relevant documents, were reviewed. A detailed list of the reviewed documents can be observed in the Appendix 2 of this Verification Report.

2.3 Interviews

In accordance with the paragraph 4.1.12 of VCS standard v.4.7 /10/, Site visit shall be conducted under the following circumstances:
1) The first verification of the project after validation;
2) Verification of project baseline reassessments; and,
3) Verifications that assess a project description deviation where the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

Since the current ongoing verification is third periodic verification for this project activity and there is no baseline reassessment involved, assessment team had performed a remote audit/19/ initially via video conferencing using ICT tool Microsoft Teams on dated 24-November-2023.

However, during the later documentary review and discussions with project proponent and their representatives during remote audit, it was noticed that the project description deviations that are sought during current verification period have an impact on the applicability of the methodology and additionality.

Hence, afterwards it was decided to perform an onsite audit owing to the nature of project description deviations which impact the applicability of methodology and additionality in line with para. 4.1.12.3) of VCS standard v.4.7 /10/

Based on the above, the VVB prepared a Verification Plan and applied an evidence-gathering plan designed to collect sufficient and appropriate evidence upon which to base the conclusion and to consider the inherent risk for the verification. The evidence-gathering plan is based on analytical procedures and tests and considers the thresholds for materiality as per the regulatory documents applied for this Verification (5% as per the applied VCS Standard version 4.7). /10/

This is 3rd periodic verification of the project activity and VVB checked the technical details and specifications/3/ of the equipment's mentioned in section 1.8 of registered and revised VCS PD-MR/4//6/ & section 3.1 of monitoring report of previous monitoring period/4/ and monitoring report of current monitoring period/4/ and the actual implementation status of the project activity during the current monitoring period. Detailed analysis of the same has been provided in section 1.4 and section 4 of this verification report. Further, there are some project description deviations from the registered project description occurred during this monitoring period. Furthermore, VVB

Team has conducted an onsite audit/19/ and interviews with PP representatives after independent risk assessment which is in line with the requirement of the paragraph 4.1.13 of VCS Standard v.4.7 /10/.

Technical details & metering/monitoring arrangement/3/ are verified through onsite visit, onsite photographs/name plates/18/ and calibration evidence /5/shared by PP. All the documents were cross checked to ensure conservative estimation of emission reduction.

During the onsite audit, the PP representatives were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of meters, the generation, recording, and monitoring of the data and the error accountability were discussed. To cross check the information provided by PP, various documents like technical specifications, commissioning dates supportive evidences/1/, Power Purchase Agreement (PPA)/9/, Monthly electricity generation records (monthly production statements)/11/, invoices/11/, etc. were also verified. The names of the persons interviewed during onsite audit are given below:

No.	Interviewee		Date	Subject	Team member
	Name	Role & Organization			
1.	Mr. Harold Goret	Carbon Analyst at AERA Group	26-July-2024	Project Implementation, Electricity generation records & invoicing procedure, Operational data, Monitoring equipment, monitoring plan, safeguarding measures, HSE programmes, training programmes, Management practices, data collection, recording-storage and archiving procedure, data transferring and results achievement	**Dr. N. Premjit Singh** (Lead Auditor/Technical Expert), **Ms. Nathalie Raharilaza** (Local Support)
2.	Ms. RASAMIMANANA Kezia	SST Officer, NEA Madagascar			
3.	Mr. RASOLOARIVELO Hery Tiana	HSSES Supervisor, NEA Madagascar			
4.	Ms. RAZAFIARISOA Haingo	HSSES COORDINATOR , AXIAN Energy			
5.	Mr. TATA Harison Jérémie	Operations Manager, NEA Madagascar			
6.	Mr. RANDRIARISON Jean Luc	ASSET Supervisor			

7.	Mr. RAKOTOSON Mamy Christian	Mayor, Rural Municipality Ambohipihaonana (Local Stakeholder)		and reproducibility, Organigram, operation and maintenance staff of the plant, QA/QC, calibration, Grievance mechanism. Grievances identified during current monitoring, waste management and environmental impacts, Project Description deviations, Issues related to local area development, Awareness about the project under GHGs reductions, ER calculations	
8.	Mr. RAINIKAMBANA Zandriny Laurent	Chief, Fokontany Lovainjafy (Local Stakeholder)			
9.	Ms. RASOANAMBININA Florette	Housekeeper (Local Stakeholder)			
10.	Ms. RASOANIAINA Robine	Housekeeper (Local Stakeholder)			
11.	Mr. RAHARISON Robain Edward	SECUR PRO Supervisor			
12.	Mr. RAKOTOSON Nasandratra Tinicaël	ATP, NEA Ambatolampy			
13.	Mr. ANDRINIAINA Jacky Mickael	Shift Agent, NEA Ambatolampy			
14.	Mr. RAKOTOMALALA Joronirina	Operations Officer, NEA Ambatolampy			

Interviews with local stakeholders:

The verification team has interviewed the local stakeholders (details mentioned in above table), and they were questioned for various topics as summarized below.

a) Effect of project on their livelihood and income
b) Any problem related to project installation in nearby areas
c) Are they happy with the benefits and development as CSR activity of the PP?
d) General feedback about the project
e) Do they know about the grievance and feedback back register/mechanism?
f) Any feedback; Concern (C) Positive (P) and Negative (N)

All the stakeholders expressed their satisfaction with the project activity and provided positive and satisfactory answers to the questions mentioned above.

2.4 Site Visits

In accordance with the paragraph 4.1.12 of VCS standard v.4.7/10/, Site visit shall be conducted under the following circumstances:
1) The first verification of the project after validation;
2) Verification of project baseline reassessments; and,
3) Verifications that assess a project description deviation where the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

Since the current ongoing verification is third periodic verification for this project activity and there is no baseline reassessment involved, assessment team had performed a remote audit/19/ initially via video conferencing using ICT tool Microsoft Teams on dated 24-November-2024.

However, during the later documentary review and discussions with project proponent and their representatives during remote audit, it was noticed that the project description deviations that are sought during current verification period have an impact on the applicability of the methodology and additionality.

Hence, afterwards it was decided to perform an onsite audit owing to the nature of project description deviations which impact the applicability of methodology and additionality in line with para. 4.1.12.3) of VCS standard v.4.7 /10/

To achieve a reasonable level of assurance, the assessment team has followed the alternative means to substantiate the verification criteria as described in the section 2.1 of this report.

Duration of Onsite audit: 26-July-2024			
Activity performed during Onsite audit	**Site location**	**Date**	**Team member**
A physical onsite visit was performed (Refer Section 2.3 and 2.4 of this report for details). Assessment team checked the description of project activity and its implementation, Compliance of the project implementation with the registered project design document, Compliance of the registered monitoring plan with applied methodology, calibration frequency requirements for measuring instruments, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring, project description deviations sought during current monitoring period. Assessment team also checked that whether the monitoring plan as described in the VCS PD-MR[4] is actually practised onsite. Also, assessment team checked any change in host country criteria which may affect the baseline of the project activity.	The PV plant is located in Ambatolampy, in the South-East of Vakinankaratra region, 90km South of Antananarivo, Madagascar	26-July-2024	**Dr. N. Premjit Singh** (Lead Auditor/Technical Expert), **Ms. Nathalie Raharilaza** (Local Support)

2.5 Resolution of Findings

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

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

a) Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project proponents, or if the evidence provided to prove conformity is insufficient;

b) Modifications to the implementation, operation and monitoring of the project activity has not been sufficiently documented by the project proponents;

c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;

d) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project proponents.

The assessment team shall raise a Clarification Request (CL) if information is insufficient or not clear enough to determine whether the applicable requirements have been met.

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

All CARs and CLs raised during verification shall be resolved prior to submitting a request for issuance.

Raised CARs and CLs for this project activity's verification process are listed in Appendix 3 of this Verification Report.

The total number of CARs for this Verification has been 09 and the total number of CLs for this Verification has been 08.

2.5.1 Forward Action Requests

This is 3rd periodic verification of the project activity and no FAR was raised from validation or previous verification as verified from the validation report and previous verification report.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification, as LGAI Technological Center, S.A. (Applus+ Certification) holds the necessary accreditation for the validation and verification for projects

under Scope 1 / Technical Area 1.2.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

PP has not sought any methodology deviations. Hence, this section is not applicable for present verification.

3.2 Project Description Deviations

Project proponent has sought several project description deviations during the current monitoring period. The description of those deviations and respective VVB assessment are provided in this section.

Deviation 1:

- As a consequence to its capacity change, all mentions to "20 MW", including in the former title of the project "Ambatolampy 20 MW solar PV" are removed or updated to display "40 MW" instead.
  - **Reason for the change**: As the original title comprised the original capacity of the plant, the title needs to be updated in order to match the capacity update.

VVB Assessment: The total capacity of the project activity is extended during current monitoring period from 20 MW to 40MW. This was confirmed by the assessment team during the onsite audit[/19/]. Hence, as a consequence of this capacity change, PP has revised registered VCS JPD-MR, version 1.2 dated 15-07-2020[/4/] to update all the references to old capacity of the project plant, i.e. 20MW and is now updated to 40MW, which is the total capacity of the project activity after capacity extension. Resultantly, the original project title of the project is also revised from "Ambatolampy 20 MW solar PV" to "Ambatolampy solar PV" in order to match the capacity update.

Therefore, the assessment team confirms that this deviation is appropriate as it represents the actual scenario of the project activity.

Deviation 2:

- On 09-January-2023, PPs Green Yellow Madagascar changed its company name to "New Energy Africa Ambatolampy (NEA Ambatolampy)", a subsidiary of the African company Axian. The same is reflected in the MR, section 1.4 'project proponent'.

VVB Assessment: As described in the deviation statement above, the former PP of the project activity, "Green Yellow Madagascar" has changed its company name to "New Energy Africa Ambatolampy (NEA Ambatolampy)" which is a subsidiary of the African company "Axian".

Assessment team has verified the meeting document "Minutes of extraordinary general meeting of January 9, 2023"/23/ which was conducted in presence of representatives of GREEN YELLOW Madagascar and GREEN YELLOW Ambatolampy. In that document, it was clearly mentioned that the resolution of company name change from "GREEN YELLOW Madagascar" to "New Energy Africa Ambatolampy (NEA Ambatolampy)" is being passed.
Moreover, Assessment team has checked the amended PPA document for the project activity signed on 17-February-2023/9/ between JIRAMA and NEA Ambatolampy, which confirms the company name change. The new company name is thus updated in section 1.4 of the MR/6/ and section 1.5 of revised PD-MR as a "Project Proponent"/6/.

Therefore, the assessment team confirms that this deviation is appropriate.

Deviation 3:

- The project deviates in section 1.1 and 1.11 of the registered VCS-JPD-MR regarding the total capacity of the project. The capacity of the project changed from 20 MWp to 40 MWp as new panels have been added as a phase II to the project in order to increase electricity production. The commercial agreement for this extension was executed on November 27th, 2020, and the commercial operation date of the added capacity occurred during this monitoring period, on August 17th, 2022.

  - **Reasons for the changes**: the phase II of the project enables a greater electricity production, within the same surface of land initially acquired.

VVB Assessment: The capacity of the project activity has been extended during current monitoring period from 20MW to 40MW, owing to installation of additional 37,050 units of solar modules of model JAM72S30-540/MR manufactured by JA solar/3/ and 77 new inverters of model SG250HX manufactured by SUNGROW/3/ along with a 5MW/5MWh Battery Energy Storage System (BESS) by SUNGROW/3/, on the section of land which was initially acquired during land acquisition prior to commissioning of phase I. The extended phase II of project thus enables greater electricity production, within the same boundary of land that was initially acquired. This was confirmed by the assessment team through the onsite visit.

Assessment team also cross-checked the commercial agreement/41/ dated 27-November-2020 which is executed between JIRAMA and NEA Ambatolampy, which ascertains the capacity extension of the project. The extension phase-II started its commercial operation (i.e. exporting electricity to the grid) from 17-August-2022, which was confirmed by checking the monthly production statement for the month of August 2022/11/ and meter reset document provided by the PP/1//5/.

Therefore, the assessment team confirms that this deviation is appropriate.

Deviation 4:

- The project deviates in section 1.11 of registered PD-MR regarding the equipment and technology description for the project activity. While the equipment of phase 1 remain unchanged, the description of the extension equipment, which involves solar PV modules of different models, is added.

- The project's phase 1 is composed of 14,832 modules JKM 270 PP-60 and 58,176 modules JKM 275 PP-60 that are connected in strings of 24 modules, split between 3 inverters/transformers packs located on 5 Ingeteam skids (PTR1 to PTR5).

- The project's phase 2, the extension, comprises 37,050 PV modules of type JAM72S30-540/MR that are connected in strings of 24 modules, split between 77 inverters of type SUNGROW SG250HX. These new panels were not in operation during previous monitoring periods. The project extension also features the installation of 5MW/5MWh storage system batteries associated with the RIA (Réseau Interconnecté d'Antananarivo - Antananarivo Interconnected Grid), which will provide sufficient smoothing of the new plant's daily PV output. The aim is to smooth out PV variations due to intermittency over the day.

- Detailed characteristics of the extension solar PV modules:

Manufacturer	JA solar
Model	JAM72S30-540/MR
Quantity	37,050
Peak Power (W)	540
Type of cells	Mono
Rated voltage (Vmpp) (V)	41.64
Rated current (Impp) (A)	12.97
Efficiency (%)	20.9
Dimensions (mm)	2279 x 1134 x 35 mm

- Updated single line diagram of the PV plant can be found in Annex of the monitoring report.

- **Reason for the change:** the extension equipment differs from the original equipment described, hence this description addition.

VVB Assessment: The capacity of the project activity has been extended during current monitoring period from 20MW to 40MW. For that purpose, 37,050 units of solar modules of model JAM72S30-540/MR manufactured by JA solar/3/ and 77 new inverters of model SG250HX manufactured by SUNGROW/3/ along with a 5MW/5MWh Battery Energy Storage System (BESS) by SUNGROW/3/ have been installed in phase II of the project on the initially acquired land.

The equipment installed in the phase I remained unchanged. Assessment team verified the technical specification documents/3/ of newly installed PV plant components (Solar Modules, Inverters, BESS, transformers, electricity meters, etc.), as well as cross-checked the same during onsite audit and confirmed that the technology description about phase-II updated in section 1.11 of revised PD-MR/6/ and section 3.1 of the MR are correct/6/.

Moreover, the updated single line diagram provided in Appendix-2 of the MR was confirmed to be correct through onsite visit.

Therefore, the assessment team confirms that this deviation is appropriate, and the revised technology description mentioned in the revised JPD-MR and the MR are correct/6/.

Deviation 5:

- The project updates the version of the applied methodology ACM0002, from v20.0 to v22.0, in section 1.2 of the JPD-MR.

  - **Reason for the change:** the project extension comprises a BESS battery system, that is not considered in the initial version of the methodology used. In version 22.0, which is the latest available version of the same methodology, such were included and account for project emissions. This update enables a more realistic view on the project current state.

VVB Assessment: As described in the deviation statement above, the version 22.0 of methodology ACM0002 represents the more realistic scenario of the project, as the Battery Energy Storage System (BESS) has been installed during the current monitoring period.

The older version (version 20) of the methodology ACM0002 did not take into consideration the BESS and project emissions associated with it. However, the ACM0002, version 22.0 which is the latest available version of the methodology, takes into account such BESS systems and related project emissions, which represents more conservative approach in emission reductions calculations.

Therefore, the version of the methodology is being updated during the current verification from v.20.0 to v.22.0. This was found to be accurate and more conservative. The applicability against the additional applicability conditions of the methodology ACM0002, version 22.0 is demonstrated in the revised PD-MR. /6/

Therefore, the assessment team confirms that this deviation is appropriate, and represents the more realistic scenario of the project.

Deviation 6:

- The project updates its description of monitoring equipment in section 1.11 of the JPD-MR :

  - **Reason for the change**: electricity meters have been replaced since initial validation, and some others were added in regard to the extension of the project. In relevant sections, meters description including model, accuracy class and serial numbers were revised.

VVB Assessment: During the onsite visit, assessment team checked the monitoring equipment i.e. electricity meters installed at the site and confirmed that there are total 7 meters in total, 3 for each phase (1 Main (Model: Landis+Gyr *E650*[15], class 0.2S)/3/, 1 Check (Model: ZTE

[15] https://www.landisgyr.eu/product/landisgyr-e650/

DTSD178-M[16], class 0.5S) /3/ and 1 Internal Control (Model: Phoenix contact EEM-MA600[17], class 0.2S)) /3/, measuring the net electrical energy delivered to RI-Tana grid and located before 20/63kV transformer/3/ at JIRAMA substation. They also measure the consumption of the plant, including BESS charging from the grid. The 7th meter (Model: ZTE DTSD178-M[18], class 0.5S) /3/, measuring office consumption, including lights, cameras, etc. (labelled as 'invoiced imports' on the ER sheet/7/), is located at the JIRAMA VIE base, next to the offices.

It was noted that few electricity meters have been replaced since initial validation, and some additional meters were added in regard to the extension of the project, which was confirmed through onsite visit.

Assessment team confirmed that the amended description of electricity meters (including model, accuracy class and serial numbers) in section 1.11 of revised JPD-MR/6/ is thus correct and more relevant.

Therefore, the assessment team confirms that this deviation is appropriate, and represents the actual monitoring system in place at the project site.

Deviation 7:

• The JPD-MR from VCS validation, dated 15-July-2020, is updated to include the above-mentioned deviations and is assessed by VVB. Such revised JPD-MR will be available on the project webpage of the VCS registry.

VVB Assessment: As described in the deviation statement above, assessment team confirms that PP has updated the registered JPD-MR, version 1.2 dated 15-July-2020/4/, to include the information pertaining to the extension of project capacity and changes that have occurred.

Assessment team has checked and verified the revised PD-MR/6/ and confirmed that project proponent has accurately included relevant additional information as a result of project capacity extension and project description deviations. Moreover, it is in line with the VCS Standard, v.4.7, para 3.21.2.1)/10/, which requires to have a revised PD for the deviations which impacts the applicability of the methodology and the additionality of the project. Hence, as the project deviations sought during current MP are having impact on applicability of methodology and additionality, the registered PD-MR/4/ has been updated. The project proponent ensured that this updated PD-MR will be made available on the project webpage of the VCS registry.

Therefore, the assessment team confirms that this deviation is appropriate.

Deviation 8:

Crediting period for the project activity is updated to 10 years with no option of renewal, in order to comply with conditions for First-of-its-kind project criteria in additionality tool 23.

[16] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

[17] https://www.phoenixcontact.com/fr-fr/produits/appareil-de-mesure-eem-ma600-2901366

[18] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

VVB Assessment: The project activity has updated it's additionality approach from positive list of technologies to first-of-its-kind during current monitoring period (more details provided in the next table). In order to qualify as first of it's kind project, the project activity needs to comply with the requirements of Tool 23: Additionality of first-of-its-kind project activities, Version 03.0/17/. One of the requirements as per para. 12. (c) of the tool is that project activity opts for a crediting period of "a maximum of 10 years with no option of renewal".

Hence, in order to comply with this requirement, project activity has updated its crediting period to the option of "a maximum of 10 years with no option of renewal". The section 1.9 of revised PD-MR/6/ has been updated to indicate the corresponding change. The respective estimated ex-ante emissions have been updated by taking into consideration the 10 years fixed crediting period and other changes like capacity extension and project emissions from BESS.

Therefore, the assessment team confirms that this deviation is appropriate.

- **Overall impact of the sought deviations on Applicability of methodology, additionality and Baseline scenario and corresponding assessment:**

Dimension	Impact	VVB Assessment
Applicability of methodology ACM0002, Version 22.0/17/	Para 2.2.7 (b) of the methodology/17/ : In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that integrate a BESS. The project activity involved the integration of a BESS, together with implementing a capacity addition to an existing solar photovoltaic plant. This applies here as the BESS system has been developed in the context of the capacity addition of the Ambatolampy solar initial plant. Such applicability is confirmed by table 2. of combinations applicable for integration: BESS + capacity addition to existing plant is eligible under solar photovoltaic. Other applicability conditions include, section 2.2.8: (a) Solar power plant ; (b) Is only applicable for projects that are not wind, solar, wave or tidal power capacity addition projects (c) Is not applicable as the BESS is not implemented as part of a greenfield project but a capacity addition (d) The BESS is mainly charged with electricity generated from the associated renewable energy power plant. Grid	During the current verification, project proponent has sought a deviation for extension of project capacity from 20 MW to 40 MW, along with a 5MW/5MWh Battery Energy Storage System (BESS). Hence, as a result of this project proponent is now applying the version 22.0 of the methodology ACM0002: Grid-connected electricity generation from renewable sources/17/, which takes into consideration the BESS technology and associated project emissions, which were not accounted in the previous versions of the methodology. Version 22.0 of the methodology has some additional applicability conditions in its section 2.2.7 and 2.2.8 as compared to version 20.0 pertaining to the BESS. VVB team's assessment regarding compliance with those two sections is provided below: **Section 2.2.7:** The point (b) of section 2.2.7 of the methodology is most relevant paragraph applicable to the project scenario, which is integration of BESS with capacity addition to an

	imported energy is only used on a minority basis, and corresponding GHG emissions shall be accounted for as project emissions. Also, it should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. (e) In case the project activity involves PSP, the PSP shall utilize the electricity generated from the renewable energy power plant(s) that is operating in coordination with the PSP during pumping mode.	already existing grid connected solar power plant. Assessment team confirmed that the BESS has been installed at the project site during execution of the project capacity extension from 20MW to 40MW and hence complies with the table 2 of the methodology, which provides combinations of renewable energy technologies and mode of BESS applicable for integration. The same was also verified by the assessment team during the onsite visit. Hence, it is confirmed that project activity complies with the condition (b) of section 2.2.7 of ACM0002, Version 22.0./17/ **Section 2.2.8:** The project activity complies with the applicability conditions under section 2.2.8 of ACM0002, version 22.0 as follows: a) As the project activity involved installation of a solar power plant/unit in Ambatolampy of Madagascar, the condition (a) of section 2.2.8 of methodology is satisfied, which provides a list of project technologies. Hence, condition (a) is met. b) The condition (b) under section 2.2.8 is only applicable for the projects that are not wind, solar, wave or tidal power capacity addition projects. As the project activity is a solar power project, this condition is not applicable for the project activity. Thus, condition (b) of section 2.2.8 of methodology is not applicable. c) The condition (c) under section 2.2.8 is only applicable for the projects which have installed the BESS as part of greenfield project. As for the current project activity, BESS was installed as part of a capacity addition and not as a greenfield project, this condition is not applicable for the project. Thus, condition (c) of section 2.2.8 of methodology is not applicable. d) Assessment team confirmed during the onsite visit that, the BESS is mainly

		charged with electricity generated from the associated renewable energy power plant. Grid imported energy is only used on a minority basis during exigencies, and corresponding GHG emissions are accounted for as project emissions. Also, it should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. The registered PD-MR/4/ and ex-ante ER sheet/7/ are thus updated to take into account the project emissions due to BESS. Moreover, during the current monitoring period, it was confirmed that charging using the grid or using fossil fuel electricity generator have not amounted to more than 2 per cent of the electricity generated by the project renewable energy plant. PP has also ensured that, in case when the BESS consumes more than 2 per cent of the electricity for charging, the project proponent shall not be entitled to issuance of the Verified Carbon Units (VCUs) for the concerned periods of the monitoring period as per the methodology requirement. Therefore, it is confirmed that, the condition (d) of section 2.2.8 of methodology is satisfied. Hence, condition (d) of the methodology is complied. e) Assessment team confirmed during the onsite visit that, this project activity does not involve any PSP. Hence, the criterion related to PSP is not applicable. Therefore, Assessment team confirmed that the project activity complied with the additional applicability conditions of the methodology ACM0002, version 22.0./17/ and the relevant description has been updated in section 3.2 of the revised PD-MR./6/

Additionality	Registered CDM Project Design Document/4/ used the presence of solar photovoltaic technologies in the positive list[19] to confirm additionality. Since these technologies were excluded from the list in 2022, another approach is used to confirm additionality for this deviation: According to the methodology, para. 36 of section 5.3.2, the additionality of the project activity shall be demonstrated and assessed using the TOOL01. In the methodological TOOL01 version 07.0.0, the step 0 is the demonstration whether proposed project activity is the first-of-its-kind. Para 16 of section 4.1 says that if the project activity applies measures that are listed in the definitions section above, the latest version of the "Guidelines on additionality of first-of-its-kind project activities" shall be applied to demonstrate that the project activity is the first-of-its-kind. The latest active tool that enables the demonstration of 'first-of-its-kind status is tool23, version 03.0. "Ambatolampy Solar PV" is a first-of-its-kind project activity, as demonstrated below : In the applicable geographical area – the entire country of Madagascar – Ambatolampy Solar PV is the first solar PV project of this capacity. This fact was valid at the time of its CDM registration/34/ as a 20MW solar power plant on May 3rd, 2019, and remains unchanged now that its capacity amounts to 40MW in 2023. Although a few solar power stations projects emerged in Madagascar, several are still under development, and none of them is, or will be able to deliver the same electricity output[20]. Ambatolampy remains	The project activity is extending its capacity from 20MW to 40 MW during the current verification, which clearly impacts the additionality of the project, as the capacity is doubled. Therefore, the project needs to demonstrate that it is still additional in line with the CDM and VCS standard requirements./17//10/ During registration under CDM, the project activity had demonstrated its additionality with the use of presence of solar photovoltaic technologies in the positive list[21]. However, the solar photovoltaic technologies are excluded from the positive lists in year 2022. Hence, another approach is used by the PP to confirm additionality for this deviation: According to the methodology, para. 36 of section 5.3.2, the additionality of the project activity shall be demonstrated and assessed using the TOOL01. In the methodological TOOL01, Version 07.0.0, the step 0 is the demonstration whether proposed project activity is the first-of-its-kind. Para 16 of section 4.1 says that if the project activity applies measures that are listed in the definitions section above, the latest version of the "Guidelines on additionality of first-of-its-kind project activities" shall be applied to demonstrate that the project activity is the first-of-its-kind. The latest active tool that enables the demonstration of 'first-of-its-kind status is Tool23, version 03.0. Thus, assessment team confirms that the applicability of Tool 23 for additionality demonstration of first of its kind project activities is appropriate.

[19] See https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-32-v1.pdf/history_view

[20] The Electricity Regulatory Office of Madagascar was contacted in order to obtain an updated list of Malagasy plants. They responded in early 2024 and transmitted an updated version, which confirms the inexistence of any solar plant with a similar electricity output. The same list is transmitted to VVB. Same constant status can be seen on the International Energy Agency website, on the profile of Madagascar: https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Madagascar_Africa_RE_SP.pdf

[21] See https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-32-v1.pdf/history_view

	the only large-scale plant of this technology. The project is implementing one measure of the mentioned technology : solar PV as power generation based on renewable energy, as described in section 5.1.12.*b)* of the FOIK tool , and crediting period for the project activity is updated to 10 years with no option of renewal. Therefore, the proposed project is a first-of-its-kind project activity and according to section 5.2.13 of the methodological tool: Additionality of first-of-its-kind project activities v3/17/, the project activity is additional. As per the methodological tool, the carbon accountability period for this extension activity is limited to 10 years with no option of renewal.	Therefore, the project proponent has decided to demonstrate the additionality of project with another approach (first-of-its-kind) with the use of CDM "Tool 23: Additionality of first-of-its-kind project activities, Version 03.0."/17/ This tool put forth a methodological procedure in its section 5 for identification of a first-of-its-kind project activity. "Ambatolampy Solar PV" is a first-of-its-kind project activity, as demonstrated below: • **Demonstration against para. 12. (a) of the Tool 23, Version 03.0/17/:** ***The project is the first in the applicable geographical area that applies a technology that is different from technologies that are implemented by any other project, which are able to deliver the same output and have started commercial operation in the applicable geographical area before the project design document (CDM-PDD) is published for global stakeholder consultation or before the start date of the proposed project activity, whichever is earlier;*** The project activity started on 15-December-2017 (the date on which the lending agreement and building permit were signed, as the earliest date when the real action on the project begins). This date was confirmed from the registered CDM PDD, Version 1.4 dated 05-July-2019/4/. As of this date, no other solar power plants were commissioned in Madagascar, although several were under construction. In the applicable geographical area – the entire country of Madagascar – Ambatolampy Solar PV is the first solar PV project of this capacity. This fact was valid at the time of its registration as a 20MW solar power plant in CDM on 03-May-2019/34/, and remains unchanged now that its capacity amounts to 40MW in 2023. Although a few solar power stations projects emerged in Madagascar, several are still under

		development, and none of them is, or will be able to deliver the same electricity output. The Electricity Regulatory Office of Madagascar was contacted by project proponent in order to obtain an updated list of Malagasy plants. They responded in early 2024 and transmitted an updated version of electricity production parks in Madagascar/36/, which confirms the inexistence of any solar plant with a similar electricity output. The same list was transmitted by PP to VVB. VVB team checked the provided evidence of list of electricity production plants and confirmed that it supports the PP's claim of non-existence of any solar plant with a similar electricity output. Same constant status can be seen on the International Renewable Energy Agency website /42/, on the profile of Madagascar: https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Madagascar_Africa_RE_SP.pdf As per this link, from the International Renewable Energy Agency, solar installed capacity remained unchanged between 2018 and 2022. Moreover, assessment team check the International Energy Agency's website/43/ for the information regarding Madagascar, https://www.iea.org/countries/madagascar/energy-mix which states in 2021, solar PV accounted for 1.4% of the electricity generation in Madagascar. Hence, supporting PP's claim about no existence of large-scale Solar plants. In addition to the above details, several publicly available news articles and publications were verified by the VVB assessment team to cross check that Ambatolampy Solar PV is the first large scale solar power plant in Madagascar: 1) A publication article by "Africa Solar Industry Association (AFSIA)" dated 16-June-2021/44/ (https://www.afsiasolar.com/madagascar-the-axian-group-and-greenyellow-begin-

		the-expansion-works-of-the-largest-solar-power-plant-in-the-indian-ocean/) was checked by the assessment team, which provides information about *"Madagascar: The Axian Group and GreenYellow begin the expansion works of the largest solar power plant in the Indian Ocean"* This article title clearly mentions that Ambatolampy Solar PV is largest solar power plant in the Indian Ocean/Madagascar. Therefore, supporting PP's claim about project being the largest Solar power plant in the country. 2) A news article by "ESI Africa" dated 03-February-2023/45/ (https://www.esi-africa.com/east-africa/new-solar-pv-plant-gives-madagascar-energy-boost/) was checked by the assessment team, which provides information about launch of new solar power plant of capacity 1.8 MWc in the north of Madagascar by the same company which is operating Ambatolampy Solar PV project. The same article mentions that the Ambatolampy Solar PV project along with its 5MWh Battery Storage system is the largest power station in the Indian Ocean, hence further supporting PP's claim of largest solar power plant in country. 3) A news article by "African Guarantee Fund"/46/ (https://africanguaranteefund.com/african-guarantee-fund-and-guarantco-provide-greenyellow-with-a-mga-33-billion-c-eur-7-1-million-credit-guarantee-to-finance-a-20-mw-solar-plant-extension-with-a-5-mw-solar-battery-storage-system/) was checked by assessment team, which clearly mentions that Ambatolampy Solar PV project is the "*the first grid connected and largest solar plant in Madagascar*." hence further supporting PP's claim of first and largest solar power plant in country. 4) A news article by "Power Engineering International (PEI)" dated 18-June-2021/47/

		(https://www.powerengineeringint.com/solar/madagascar-expands-solar-plant-with-20mw-and-battery-storage/) was checked by the assessment team, which provides information about expansion of the project, clearly mentions that " *The first utility scale solar power plant in the country, the Ambatolampy power plant was built by Green Yellow Madagascar and commissioned in 2018 as a 20MWp plant.".* Hence, supports PP's claim about project being the first and largest solar power plant in the country. 5) An article from "PV Magazine" dated 06-February-2023/48/ (https://www.pv-magazine.com/2023/02/06/financial-close-for-20-mw-of-pv-5-mwh-of-storage-in-madagascar/) was checked by the assessment team which provides information about the project plant expansion, clearly mentions that "*The installation is the island state's largest solar park."* Moreover, in the same article it is mentioned that *"according to the International Renewable Energy Agency (IRENA) statistics, Madagascar has not installed any new solar capacity since 2018, standing at 33 MW."* Hence, the article supports PP's claim about largest solar power plant in the country and that no new solar capacity has been installed in Madagascar since 2018. 6) An article from "WikiPedia"/49/ about Ambatolampy Solar Power Station (https://en.wikipedia.org/wiki/Ambatolampy_Solar_Power_Station) was checked by the assessment team, which clearly mentions that "*As of April 2022, it was the first grid-connected, privately-funded solar power plant in the country*." and "*Ambatolampy Solar Power Station is the first and at that time was the largest grid-connected solar power plant in the country. It represents the initial efforts to diversify the country's generation mix.".* Hence, further supporting PP's claim about the project.

		Assessment team cross-checked all these publicly available news articles/publications and "JIRAMA's Location of Electricity Production Parks list"/36/ and confirms that the Ambatolampy Solar PV project is the first large scale grid connected solar power plant in the host country "Madagascar". Hence, project complies with condition of the para. 12 (a) of tool 23, version 03.0/17/ and therefore it is the first of its kind project in the applicable geographical area. Ambatolampy Solar PV remains the only large-scale plant of this technology. • **Demonstration against para. 12. (b) of the Tool 23, Version 03.0/17/:** ***The project implements one or more of the measures;*** The project activity implements one of the measures: (ii) Switch of technology with or without change of energy source including energy efficiency improvement as well as use of renewable energies (example: energy efficiency improvements, **power generation based on renewable energy**). The project activity is the power generation based on renewable energy (Solar Power Plant). Hence, it satisfies the condition of para. 12. (b) of the Tool 23, version 03.0,/17/ as it implements one of the measures. • **Demonstration against para. 12. (c) of the Tool 23, Version 03.0/17/:** ***The project participants selected a crediting period for the project activity that is "a maximum of 10 years with no option of renewal".*** The project activity has updated it's crediting period type to ***"a maximum of 10 years with no option of renewal"*** from 7 years-twice renewable, during current monitoring period through a project description deviation as assessed in earlier part of this section.

Assessment team found this approach to be correct and acceptable, as it complies with both the criteria of CDM tool 23, version 03.0/17/ and VCS Standard, version 4.7/10/ for the crediting period.

Therefore, the project activity satisfies the condition of para. 12 (c) of tool 23, version 03.0/17/ also.

The project activity complies with the requirements for FOIK demonstration as summed up in the table below (which is demonstrated already in above paragraphs):

Definitions as per Annex 7 of CDM-EB-69 (latest version is Annex 6 of CDM-EB-84, i.e. Tool 23, v03.0)	**Applicable area**	Entire host country of Madagascar
	Measure	Switch of technology with change of energy source (b) power generation based on renewable energy
	Output	Goods/services produced by the project activity: Electricity
	Different technologies	(c) Size of installation (power capacity): (iii) Large (>15 MW)
	Evidence	As of project's start date, no other large-scale solar power plant (>15 MW) was in commercial

		operation in Madagascar, as demonstrated in above paragraphs.

Therefore, the requirements of FOIK guidelines are fulfilled,As the project activity is in compliance with all the conditions of paragraph 12 of **Tool 23 "additionality of first of its kind project activities" version 03.0**[/17/], the project activity has been identified as a **first-of-its-kind project activity.**

Thus, the project activity is additional in line with para. 18 of the Tool 01, Version 07.0 and para. 13 of the Tool 23, version 03.0. [/17/]

Appropriateness of the baseline scenario	The extension is a deviation of the initial registered VCS project, as the second phase of the VCS-registered project, and not a separate new capacity addition project. Therefore, the original baseline context and emission factor still apply.	Assessment Team through the onsite audit confirmed that, the project capacity extension is a deviation of the initially the registered VCS project, as the second phase of the VCS-registered project, and not a separate new capacity addition project, as the phase II of the project plat is implemented on the land surface which was already acquired during the initial land acquisition process for the project which was carried out prior to start of construction activity of first phase. Therefore, the original baseline context and emission factor still remains the same and applicable. Thus, assessment team confirms that there is no impact on baseline scenario of the project activity due the project description deviations sought during the current verification.

<u>Overall Conclusion regarding the project description deviations sought during the current verification:</u>

Assessment Team confirms that all the project description deviations sought during current verification are appropriately described and justified in the monitoring report, version 1.5 dated 24-January-2025[/6/] and necessary amendments are made in the Revised PD-MR, version 2.2 dated 24-January-2025[/6/] and Revised Ex-ante ER sheet, dated 12-September--2024[/7/]. It is confirmed that the project remains in conformance with the VCS rules.

The VVB assessment confirms that the project descriptions are valid and appropriate.

3.3 New Project Activity Instances in Grouped Projects

The project is not a grouped project. Thus, this section is not applicable.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

4 VERIFICATION FINDINGS

4.1 Project Details

<table>
<tr><th>Item</th><th>Evidence gathering activities, evidence checked, and assessment conclusion:</th></tr>
<tr><td>Audit history</td><td>
<table>
<tr><th>Audit type</th><th>Period</th><th>Number of years</th><th>Validation/verification body name</th></tr>
<tr><td>CDM Validation</td><td>Validation date: 03-May-2019</td><td>-</td><td>TÜV NORD CERT GmbH</td></tr>
<tr><td>VCS Gap Validation</td><td>Validation date: 04-November-2020</td><td>-</td><td>ESPL</td></tr>
<tr><td>VCS Verification 1</td><td>10-July-2018 to 30-April-2020</td><td>22 months (1 year, 10 months)</td><td>ESPL</td></tr>
<tr><td>VCS Verification 2</td><td>01-May-2020 to 31-December-2021</td><td>20 months (1 year, 8 months)</td><td>Carbon Check (India) Private Limited</td></tr>
<tr><td>VCS Verification 3</td><td>01-January-2022 to 31-December-2023</td><td>24 months (2 years)</td><td>LGAI Technological Center S.A. (Applus+ Certification)</td></tr>
<tr><td>Total</td><td>10-July-2018 to 31-December-2023</td><td>68 months (5 years and 6 months)</td><td>-</td></tr>
</table>
</td></tr>
</table>

	The above audit history of the project has been verified and confirmed to be correct by the assessment team from the CDM project website[22], VERRA project portal[23], Validation-Verification report, registered VCS PD-MR, registered CDM PDD, the previous monitoring reports & respective verification reports of 1st & 2nd MP/4/.
Double counting and participation under other GHG programs	The current project activity is not receiving or seeking credits for reductions and removals from a project activity under another GHG program other than CDM and VCS. Verification team checked independently other registries such as UNFCCC CDM[24], Gold Standard for the Global Goals (GS4GG[25]), Global Carbon Council (GCC[26]), etc./28//29//30/ and confirmed that project is not participating in any other GHG programs other than CDM and VCS program. Also, International REC (I-REC) registry (https://www.irecstandard.org/) is cross-checked and found that this project is not under I-REC as well. The Project has been registered under UNFCCC CDM with project ID as 10481[27].The project proponent has ensured that for a same monitoring period, the project's GHG emission reductions will either be claimed under CDM programme or VCS programme, but never both. Thus, double counting for the current monitoring period is ruled out. Verification team further confirms that project activity not rejected by any other GHG program. The project proponent has submitted a declaration dated 28-May-2024/12/ to the verification team declaring that the project is not registered under any other carbon standard other than CDM and VCS and is not rejected or under the process of registration in any other GHG program.

[22] https://cdm.unfccc.int/Projects/DB/RWTUV1556909746.23/view

[23] https://registry.verra.org/app/projectDetail/VCS/2307

[24] https://cdm.unfccc.int

[25] https://www.goldstandard.org/

[26] https://projects.globalcarboncouncil.com/

[27] CDM: Ambatolampy 20 MW solar PV (unfccc.int)

No double claiming with emissions trading programs or binding emission limits	The project activity is not participating in other emission trading programs or binding emission limits as confirmed in declaration submitted by the project proponent/12/. VVB confirms that project activity not included in ET program and not used for compliance with an emission trading program or to meet binding limits on GHG emissions. Project Proponent has submitted a declaration dated: 28-May-2024/12/ for no double counting with any other GHG program. VVB confirms that project activity not included in ET program and not used for compliance with an emission trading program or to meet binding limits on GHG emissions. PP also declared that that the credit claimed under VCS for the current monitoring period is not claimed under any other GHG mechanism. This has also been confirmed by the assessment team by interview with the concerned person from the project proponent.
No double claiming with other forms of environmental credit	The project has not sought, received or planning to receive any other forms of environmental credit for reductions and removals from another GHG-related environmental credit system. The project proponent has submitted a declaration dated: 28-May-2024 /12/ to VVB team declaring that the project is not claiming any other form of GHG related environmental credit under any other emissions trading programs or binding emission limits. The assessment team has also cross-checked the issuance records available on the Verra/27/ and CDM/34/ website and thus confirmed & ensured that the emission reductions generated from the project activity are not & will not be double counted, hence accepted by the assessment team. The GHG credits from 01-January-2022 to 31-December-2023 (both days included) will be claimed under VCS only. At any point of time during the crediting period, the project proponent will abide by the declaration of “No Double Counting”./12/
Supply chain (scope 3) emissions double claiming	The project activity is solar energy-based project developed by project proponent New Energy Africa Ambatolampy (NEA Ambatolampy) and the carbon consultant AERA Group. The basic objective of the project is to generate electricity and supply to RI-TANA grid. The project proponent and project developer are not involved in any other business activity where they can act as a buyer or seller of a product whose emission footprint is changed by the project activity. The project activity is not a part of any supply chain. Hence, there is no possibility for double claim. This has been confirmed by the assessment team by interview with the concerned person from the project proponent.

Sustainable development contributions

The Project activity is claiming SDG 7, SDG 8 and SDG 13. The same is described in Section 1.12 of VCS MR/6/. VVB confirmed that the project implementation has led in contribution to SDG 7, SDG 8 and SDG 13. The project supplies clean, affordable and renewable energy without reliance on fossil fuels for generation of electricity to meet the growing demands in the region. The generated electricity avoided release of 58,394 tCO_2e into the atmosphere.

As declared by the project proponent in section 1.12 of the monitoring report/6/, the project contributes to below sustainable development goals:

SDG	SDG Target	SDG Indicator	VVB assessment
7	7.2	7.2.1 Renewable energy share in the total final energy consumption	The project contributes to this SDG by delivering 87,271 MWh electricity to the national grid during the current monitoring period. The verification team has verified the reported electricity export/import data through monthly generation records (monthly production statements)/11/ and the monthly invoices/11/ issued by Green Yellow Madagascar and/or NEA Ambatolampy to the utility company JIRO SY RANO MALAGASY (JIRAMA) National Grid company) which were shared by the PP and found it to be consistent. The project has provided 191,128 MWh of electricity to the grid till date i.e. from the date of commissioning of the project till end of this monitoring period. The project has provided 87,271 MWh electricity in the current monitoring period. This has been verified from the previous period verification

<table>
<tr><td></td><td></td><td></td><td>reports[4] and the current monitoring report[6].<table><tr><th>Verification Term</th><th>Net Electricity Generation Value (MWh)</th></tr><tr><td>1st Verification</td><td>56,465</td></tr><tr><td>2nd Verification</td><td>47,392</td></tr><tr><td>3rd Verification</td><td>87,271</td></tr><tr><td>Total till date</td><td>191,128</td></tr></table></td></tr>
<tr><td>8</td><td>8.5</td><td>8.5.2 Unemployment rate, by sex, age, and persons with disabilities</td><td>The project contributed to this SDG by providing employment to the people. The project has created 6 permanent positions for the operation, maintenance and cleaning of the plant (4 workers directly employed for maintenance and 2 workers indirectly employed in charge of cleaning). Some additional employees are also hired for the security of project site.

The project activity has provided employment to a total of 80 positions during its construction period. The Employment evidences[14] along with the declaration provided by the project proponent have been verified to confirm the same and it was further cross-checked during onsite audit with PP representatives.</td></tr>
<tr><td>13</td><td>13.0</td><td>Tonnes of greenhouse gas</td><td>The project contributes to this SDG by avoiding GHG emission due to reduction in</td></tr>
</table>

			emissions avoided or removed	consumption of fossil fuels in electricity production and using solar energy instead for electricity generation. The project has avoided 128,007 tCO_2e being emitted to the environment till date i.e. from the date of commissioning of the project till end of this monitoring period. The project has avoided 58,394 tCO_2e in the current monitoring period. This has been verified from the previous period verification reports[4] and the current monitoring report[6]. Verification Term / ER Value (tCO_2e) 1st Verification: 37,847 2nd Verification: 31,766 3rd Verification: 58,394 Total till date: 128,007
Additional information relevant to the project	No commercially sensitive information has been mentioned in the monitoring report to have been excluded from the public version of the project documents. This has also been confirmed during interview with the concern person from the project proponent.			

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	In the context of the project capacity extension, additional consultations took place locally in order to obtain the public's opinion and create a climate of transparency and integration.

The identification of such stakeholders was done in collaboration with the local authorities, especially the fokontany of Antevana and Menabe that are situated nearby the project site (a fokontany was originally a traditional Malagasy village. Today, according to the 2010 constitution, "fokontany officials participate in drawing up their commune's development program"). The local authorities were informed of the extension project from the start, and when contact was established; they expressed their willingness to work with GreenYellow Madagascar to develop the project. The local authorities facilitated the identification of vulnerable people and other local stakeholders interested in the project. The stakeholders were invited orally by the project developers, during visits to the fokontany and town, and also by the local authorities.

List of stakeholders included in meetings and discussions regarding the extension:

- Mayor
- Client (JIRAMA)
- District chief
- Local population
- Media and social networks
- Representatives of vulnerable people

As part of the public consultation process, the local stakeholder consultation meetings for extension phase took place through two missions, in Ambatolampy, with Mission no. 1 from December 3 to 7, 2019 held in offices of GreenYellow and Mission No. 2 from January 10 to mid-March 2020 held in the municipal premises of the fokontany Lovahinjafy. No negative comments were reported, as verified from the PREE report for extension/22/. The details of first phase remained unchanged/21//4/ and same, which was verified from the validation report. /4/

Since validation, the stakeholder make-up for first phase has not changed, thus this section is not applicable for first phase.

It was confirmed by the audit team during the interviews with PP representatives and the local stakeholders during initial remote as well as later onsite interviews, that the stakeholder composition for the first phase of project activity remains the same since the start of project activity and for second phase also it remains almost the same. Therefore, this section is not applicable.

Legal or customary tenure/access rights	Audit team confirms that there are no legal or customary tenure/access rights to territories and resources, including collective and conflicting rights held by stakeholders, indigenous people (IPs), Local communities (LCs), and customary rights holders with regards to the project and confirmed during the interview with PP. The project is solar energy generation, and it is established on the project proponent's land for which the land acquisition was made before validation of initial PD/4/. Hence, this section Not Applicable for the project activity.
Stakeholder diversity and changes over time	Verification team reviewed the ESIA report/21/ for the initial phase and PREE report for extension phase /22/ and confirmed that stakeholders identified for this project activity are diverse in nature – in terms of socio-economic status, age and gender wise and the diversity is unlikely to change over time. The prime local stakeholders of the project activity are the people from local communities nearby the project site. Two lists of stakeholders have been elaborated, first in the context of the initial phase, then in the extension phase. In both lists, most stakeholders were from the same categories (local/regional/national authorities, JIRAMA, locals etc.) although a few differences can be found for instances, a brick factory owner was engaged in initial phase and not in extension, while subcontractors and medias were engaged in extension and not during initial phase. Hence, overall, the stakeholder diversity remained same without major changes. This was further confirmed from the PP during the remote and onsite interviews conducted by the audit team.
Expected changes in well-being	As confirmed from the monitoring report/6/, it was identified that access to the social well-being is one of the expectations from vulnerable groups. During the interviews with local stakeholders and as checked from CSR reports/31/, it was noted that several CSR activities are being conducted by the PP, which result in social well-being of the stakeholders including the vulnerable groups. Moreover, the deterioration of local stakeholder's wellbeing was identified in the initial EIA as a potential impact, due to the physical presence of the project site and the change in landscape. However, it was confirmed that the limited built environment (the PV power plant site is only visible from the roads and areas in its immediate vicinity) made this impact identified as negligeable. No impact on wellbeing was identified in the extension EIA.

	Additionally, the representatives of Project proponent confirmed during the remote as well onsite audit interviews that the following expected changes occurred in well-being: 1. Social well-being: The project helped in generating employment opportunities during the construction and operation phases. The project activity leads development of infrastructure like roads, livelihood and promotes small scale business with improved power generation. Verification team confirmed the same through interview with PP representative. /19/ 2. Economic well-being – The project activity results in employment generation which helps economic well-being of the people as confirmed during the interviews. /19/ 3. Environmental well-being: Solar being a renewable source of energy, it reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emissions, the Project activity also helps in avoiding significant amount of GHG emissions as verified from the emission reduction calculation sheet/7/. During the current monitoring period, the project activity has reduced 58,394 tCO_2e.
Location of stakeholders	The majority of stakeholders included are living in the nearby communities of the project site i.e. in the vicinity of Ambatolampy. This was confirmed through the interviews with local stakeholders and PP representatives.
Location of resources	Local communities use of the PV power plant site is limited to pasture for their livestock and access road to the forest resources located north of the PV power plant site. Local communities land use of the PV power plant site is not based on formal or traditional rights and local communities are aware that their land use of the site is forbidden. The initial EIA mentioned the relevance to arrange alternative access road outside of the Project site to maintain communities' access to natural resources north of the PV power plant site.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	Project Proponent has submitted the copies of grievance register/15/ kept at site for the ongoing communication with local stakeholders. VVB confirmed that at the project site, there were two distinct grievance logbooks made available at the plant for any comments or grievance. One concerning the initial phase, and one for the extension phase. The grievance register is kept in plant site office for seeking

complaints/grievances from local community as a part of ongoing communication with stakeholders in line with clause 3.18.3 of VCS Standard, v.4.7./10/

As part of ongoing consultation process, the PP has maintained following four communication channels for the local stakeholders:

a) Submitting the grievances/comments in the Grievance register kept at plant site office.
b) Annual meetings with the community in order to consider the community expectations from the project
c) Phone number: *+ 261 34 00 308 69*
d) E-mail : *Mairamou.Hamanadji@axian-group.com*

This was further confirmed by the audit team from PP's representatives and the local stakeholders during the remote as well as onsite interviews. /19/

The assessment team concludes that the PP has effective communication channels for the local stakeholders.

Details about Stakeholder engagement activities undertaken for the initial phase and extension phase:

Stakeholder engagement activities undertaken for the initial phase include meetings held during the site visit between the 5th and the 8th of July 2016. Stakeholder engagement involved face to face meetings and consultations with local authorities, key informants and group meetings with local communities. Information regarding technical characteristics of the project, indicative location and indicative duration was disclosed. Stakeholders commented and gave their concerns and expectations, as related in the 2016 EIA./21/

GreenYellow, as part of the conception phase of the Project, has engaged extensively with various stakeholders at the national and regional level including JIRAMA, the government of Madagascar, etc.

In the context of the extension, field investigations were carried out in order to agree individual and public consultations with all project stakeholders, with two missions:

- Mission 1: meeting with internal stakeholders, the Fokontany chief and subcontractors (held in the offices of GreenYellow from 03 to 07 December 2019)

- Mission 2: meetings with the mayor, the client, the district chief, the local population and representatives of vulnerable groups. (held in the municipal premises of the fokontany Lovahinjafy from 10 January to mid-March 2020)

	In the first mission, the main objectives were identification of major environmental and social issues of PPs activities, the expectations and concerns of local population, PP's environmental commitment programme and explaining the project progress including the extension project. In the second mission, face-to-face interviews on the same themes that were mentioned during the first mission were caried out. A formal public hearing, chaired by local authorities, was organized to share general information with the local population and gather their opinions. These details were confirmed to be correct by the assessment team by checking the ESIA report/21/ for initial phase and PREE report for extension phase./22/ Moreover, regarding ongoing communication during monitoring period, there are annual meetings with the community in order to consider the community expectations from the project. Project proponent ensured that this would continue in the future and will be useful for the selection of projects for NEA Ambatolampy's environmental and social program. Assessment team through onsite audit and interviews with PP representatives & local stakeholders confirmed that, the ongoing communication process also includes the presence of grievance logbooks in the plant and also in the 2 fokontany and townhall, which are checked once per month (once per week since autumn 2024). Finally, contact information (mail and phone number) from two resource persons acting as relays from project developers and proponents NEA Ambatolampy are communicated with stakeholders: • Hery TIANA RASOLOARIVELO (QHSSES supervisor) • Jeremie Harison TATA (Operations Manager Ambatolampy)
Date(s) of stakeholder consultation	Initial phase: • Several face-to-face meetings and focus group meetings held between the 05-July-2016 and 08-July-2016 Extension phase: • Mission 1 from 03-December-2019 to 07-December-2019 • Mission 2 from 10-January-2020 to mid-March-2020 These dates were verified by checking the ESIA report/21/ for the initial phase and PREE report/22/ for extension phase and confirmed to be correct.

	Details about initially registered first phase was further cross-checked by the verification team from the registered CDM PDD, registered VCS PD-MR and the respective FVR of the project./4/
Communication of monitored results	Results of the initial project consultations can be read in the EIA where the key concerns and expectations are summarized. Also, minutes of these various consultations were compiled in annexes at the end of the report. Key concerns and feedback from the stakeholders include: • transparency, trust, be informed of environmental and social policies (from JIRAMA) • social peace and consideration of community's social concerns (from local, regional and national authorities) • Identification of priority sectors to support local development, and access to jobs (from public authorities) • Access to health, educational and social well-being (from vulnerable groups) As a response to these concerns, the participation of the local population in the extension project is achieved through local recruitment and social actions that the project will bring. A list of the fokontany's expectations has been drawn up, and a report has been produced to this effect, in order to substantiate the Environmental and Social Action Plan (ESAP)./21/ Expectations range from health and education actions from the vulnerable people representatives to social peace, formulated by the local authorities. A table of all the stakeholders, with entities and expectations identified can be seen on table 16 of the PREE/22/, provided to the VVB. Since the start of the extension phase, the CSR actions taken by GreenYellow and afterwards, NEA Ambatolampy, occurred in this regard. The choice of community projects supported by NEA Ambatolampy are directly decided with the local community, during public consultations, in order to take their concerns and priorities into consideration. Assessment team has cross-checked the above-mentioned details by reviewing the CSR Reports, ESIA report for initial phase and PREE report for extension phase and confirmed to be correct. /21//22//31/ Verification team has checked ESIA report for the initial phase and PREE report for extension phase /21//22/ and confirmed that the purpose of stakeholder engagement is to ensure Project's stakeholders are informed about the Project and that their views and opinions about the Project and its associated impacts are taken into

	consideration during the impact assessment process. The stakeholder consultation meetings were focused towards making aware local stakeholders including local community, local administration representatives, NGOs working for environmental cause etc., about the project activity that involves electricity generation using Solar energy produced by Solar plant with the primary objective of reducing emissions of GHGs in compared to pre-project or baseline scenario. The grievance logbook/15/ is always available on site for stakeholders to write in or ask for assistance to write any inquiry. The verification team confirmed from the grievance book maintained by the PP that few comments were received during the current monitoring period and successfully resolved by the PP.
Consultation records	The comments and concerns of the stakeholders that were raised during to the stakeholder consultation conducted prior to execution of initial and extension phase were answered and the details are available in the respective ESIA and PREE report/21//22/. Also, Environmental and Social Action Plan (ESAP) /21/ provides the action plan for several environmental and social indicators. These details were checked by the VVB team and found to be appropriate. The PP maintains grievance books for the records of all the comments/ grievances received for the project activity. The verification team confirmed from the grievance book maintained by the PP that few comments were received during the current monitoring period and successfully resolved by the project proponent.
Stakeholder input	It was confirmed that the comments received during initial stakeholder consultations were duly considered in the project's development and preparation of its Environmental and Social Action Plan (ESAP) /21/, whose objective is to set out the key actions that need to be undertaken by the Project in order to achieve compliance with the applicable environmental and social standards, and in particular those from the IFC[28]: • IFC Performance Standards 1 - Assessment and Management of Environmental and Social Risks and Impacts • IFC Performance Standard 2 - Labor and Working Conditions • IFC Performance Standard 3 - Resource Efficiency and Pollution Prevention

[28] https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standards-en.pdf

	• IFC Performance Standard 4 - Community Health, Safety, and Security • IFC Performance Standard 5 - Land Acquisition and Involuntary Resettlement • IFC Performance Standard 6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources • IFC Performance Standard 8- Cultural Heritage NEA Ambatolampy retains an overarching responsibility to ensure that all the actions recommended in the ESAP/21/ are implemented even though it is not its directly responsible for their implementation. If the responsibility of an action lies with a NEA Ambatolampy contractor, NEA Ambatolampy will monitor the implementation of the action and will assess the efficiency and effectiveness of the action and require corrective actions where necessary. As verified by the assessment team from the grievance records/15/, few comments were received during the monitoring period, which were successfully addressed by the PP representatives with appropriate solutions. Please refer to section 2.1.4 of MR/6/ and section 4.2.4 of this report for more details. Inputs received during consultation during registration, including public meeting comments and public comments, were mostly informative and did not impact the project design. The project proponent has considered suggestions and opinions of stakeholders. Verification team checked the ESIA and PREE report /21//22/ which provides information of stakeholder consultation during registration and execution, the feedback/comments received from stakeholders which are quite positive and no negative comments were received.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	Verification team has reviewed the ESIA and PREE report /21//22/, the registered CDM PDD/4/ and registered/4/ and revised VCS PD-MR/4/ and respective FVR/4/ and noted that, since 2016, GREENYELLOW MADAGASCAR (Now NEA Ambatolampy) has acquired 53 hectares of the "1000 ha" estate through a lease. Prior to the project implantation, the land belonged to the state. Although various activities were carried out by the local habitants on phase 2 site prior to the construction, agreements were concluded and no conflict emerged from the land use, in past or in current phase.

	Moreover, the approach adopted for the initiation of the EIA and associated PPP (Public Participation Process) was to identify and contact potential I&APs as possible through a number of activities which included: - Stakeholder engagement has been undertaken as part of the site visit between the 05-July-2016 and 08-July-2016 for phase 1. - Direct invitations by the local authority representative (Fokontany chief) through direct communication. - Comments were invited verbally during face-to-face meetings and focus groups as well as remotely. - In the context of the extension, field investigations were carried out in order to agree individual and public consultations with all project stakeholders, with two missions: - Mission 1: meeting with internal stakeholders, the Fokontany chief and subcontractors (held in the offices of GreenYellow from 03-December-2019 to 07-December-2019) - Mission 2: meetings with the mayor, the client, the district chief, the local population and representatives of vulnerable groups. (held in the municipal premises of the fokontany Lovahinjafy from 10-January-2020 to mid-March-2020) Hence, it is clear from the above-mentioned information that project developer has followed a thorough procedure for acquiring the consent of local stakeholders and provided them with the means to freely submit any inputs/feedback/comments they have about the project activity, prior to its inception. The project activity was accepted by all the stakeholders involved. It was further confirmed from the local stakeholders and the representatives of project proponent & project developers during the remote and onsite interviews that there are no outstanding issues and conflicts related to project activity. Also, during onsite and remote interviews, it was confirmed by project developers and local stakeholders that, there are no ongoing conflicts on the project site or with local inhabitants.
Outcome of FPIC discussion	The project activity is currently under 3rd verification. These aspects about FPIC have been covered under validation for first phase and for extension phase are covered under covered current verification. During the operational phase, which began in June 2018, agreements have been reached with local population for the use of land belonging to GYM (Now NEA Ambatolampy), in particular for grazing of livestock and cutting/collecting of grass inside the site. An agreement had been signed between the local population through the Fokontany and GREENYELLOW MADAGASCAR (Now NEA

	Ambatolampy) on the recognition of the land as belonging to the developer, and the provisional use of the land by the local communities pending construction work on the extension site. No conflict emerged following the start of construction of the extension site. No displacement of population occurred as part of the extension since the phase 2 site was already owned by GYM (now NEA Ambatolampy). As confirmed by Project Developers and local stakeholders during the onsite and remote interviews, no relocation or physical/economical displacement of people occurred related to the project site. The main reason is the signed agreements between the local population through the Fokontany and PP.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	During the current monitoring period. two distinct grievance logbooks/15/ were made available at the plant for any comments or grievance. One concerning the initial phase, and one for the extension phase. The presence of comments on grievance logbooks in the plant and also in the 2 fokontany and townhall are checked once per month (once per week since autumn 2024), in order to be quickly reviewed and addressed by NEA Ambatolampy. The other means of communication are also available to local stakeholders such as phone, mail and annual meetings conducted by the project proponent. The grievance logbook/15/ is always easily available on site for stakeholders to write in or ask for assistance to write any inquiry. The copies of the same were provided to the assessment team. Verification team checked the grievance register/15/ submitted by project proponent and found that total 8 grievance/feedback comments were received in grievance register during the current monitoring period: 01-January-2022 to 31-December-2023. Details of those comments are provided below: 1) **3 requests for community actions as social charity, assistance for the elderly and health center.** **Resolution and outcome:** As a response, PPs have carried out social charity, assistance and health actions in the Ambohipihaonana rural

community, as can be seen in NEA Ambolampy's 2022 and 2023 CSR reports:

- deployment of mobile clinics
- the provision of medical equipment

VVB Opinion: Assessment Team checked the NEA Ambolampy's 2022 and 2023 CSR reports/31/ and confirmed that as a form of social work, actions on nutrition and food safety have been carried out by NEA Ambatolampy: agricultural training, fertilizer subsidies, canal cleaning and dike maintenance for agriculture. And for healthcare related comments, mobile clinics were deployed, and medical equipment were provided. The same was also confirmed by assessment team during the remote and onsite interviews with the local stakeholders. Hence, assessment team confirms that these requests were appropriately resolved by the project proponent.

2) **3 requests for local electrification**

Resolution and outcome: Regarding rural electrification, as PPs explained during the audit, although discussions have taken place on the subject, no concrete plans have yet been drawn up.

VVB Opinion: Assessment team discussed about this issue with PPs during the audit. PPs explained that, although discussions have taken place on the subject, no concrete plans have yet been drawn up. The rural electrification matters are in the hands of electricity utility company (JIRAMA) and local government. PP has signed PPA/11/ with the JIRAMA and therefore exports generated electricity to the grid.

Therefore, assessment team confirms that the explanation provided by the PP is acceptable.

3) **2 requests for SECALINE, the national community nutrition programme**

Resolution and outcome: Even though not part of the SECALINE programme, actions on nutrition and food safety have been carried out by NEA Ambatolampy:

- agricultural training
- fertilizer subsidies, canal cleaning and dike maintenance for agriculture

VVB Opinion: Assessment Team checked the NEA Ambolampy's 2022 and 2023 CSR reports/31/ and confirmed that as a form of social work, actions on nutrition and food safety have been carried out by NEA Ambatolampy: agricultural training, fertilizer subsidies, canal cleaning and dike maintenance for agriculture. The same was also confirmed by assessment team during the remote and onsite interviews with the local stakeholders. Hence, assessment team confirms that these requests were appropriately resolved by the project proponent.

	Verification team concludes that the ongoing stakeholder mechanism is adequate and appropriate.
Grievance redress procedure	Grievance redressal mechanism is established as per registered and revised VCS PD-MR/4//6/ and local law. PP has placed grievance registers at project site for registering grievances if any related to the project activity by the stakeholders. The other means of communication are also available to local stakeholders such as phone, mail and annual meetings conducted by the project proponent. Assessment team checked the evidence of grievance register submitted to VVB. The same was also confirmed during interview with PP representatives and found appropriate. During remote and onsite audit, it was confirmed that Stakeholder's feedback is monitored continuously, and the stakeholders are well aware of the grievance redressal procedure. Thus, verification team concludes grievances redressal process is adequate and appropriate.

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No comments received during the public comment period[29]. However, comments were raised during the stakeholder consultations, and they are listed in the table below: **(Stakeholder engagement, phase 1)** Meeting minutes with stakeholders groups reported the following comments[30] :	**(Stakeholder engagement, phase 1)** Local employment opportunities have been created by the project No conflict was raised regarding land use. However, due to the potential resource on the acquired land, during the operational phase, which began in June 2018, agreements have been reached with local population for the use of land belonging to GYM, in	This is verification of the project. The expected comment is from the local stakeholder only. Verification team checked the feedback cum grievance register/15/ and confirmed that few grievance/feedback comments were received during the current monitoring period and successfully resolved as discussed in section 4.2.4 above. Thus, verification team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate. Moreover, comments were raised during the stakeholder consultations conducted prior to project

[29] As identified in section 2.1.5 of the VCS-MR and checked from the VCS project webpage, this project was open for public comments from rom 29-June-2020 to 29-July-2020; no submissions/comments were received.

[30] Complete meeting minutes are available in the annex A of the EIA

• Unawareness of the project by commune representatives prior to the meetings • The mayor expects no negative impacts and only benefits • The commune representatives expect no conflict over the PV site with any communal, regional or national projects • Interest from the local inhabitants regarding the employment opportunities • Absence of conflict regarding the land use, since the local inhabitants said they did not use it beforehand **(Stakeholder engagement, phase 2)** Mission 1 and mission 2 reported various expectations from the stakeholders, including: • From national, regional and local authorities: law enforcement and social peace, conflict resolution, prioritizing local employment • From vulnerable groups and population: access to health, education and social wellbeing, access to employment	particular for grazing of livestock and cutting/collecting of grass inside the site. **(Stakeholder engagement, phase 2)** • Project activities comply with all laws applicable to the project • No conflict emerged since the start of the project activity. • Local employment opportunities have been created by the project • Most of the Project developer's area of actions in terms of CSR activities concern improvement of health, education and social wellbeing, as it can be seen reported on the CSR activities report. Exemple of activities in the rural community of Ambohipihaonana, in 2022 / 2023: 1) provision of table-benches for school equipments 2) deployment of mobile clinics for health access, with 357 medical consultations including 340 women and children.	implementations which are mentioned in left columns along with their respective resolutions. **(Stakeholder engagement, phase 1)** Assessment team interviewed few local stakeholders during the remote and onsite audit. They confirmed that local employment opportunities/14/ have been created by the project in skilled and unskilled work tasks. Hence, this issue was considered to be appropriately resolved by the PP. Regarding the land use, although there have been no conflicts occurred till date, due to the potential resource on acquired land, during the operational phase, which began in June 2018, agreements have been reached with local population for the use of land belonging to GYM, in particular for grazing of livestock and cutting/collecting of grass inside the site. This was confirmed by the assessment team during the onsite and remote audit and hence issue was considered to be adequately resolved. **(Stakeholder engagement, phase 2)** • Assessment team confirmed that project activity complies with all laws applicable to the project. The Environmental Authorization letter provided by Ministry of Energy and Hydrocarbons dated 05-May-2021/25/ and CDM Letter of Approval by Secretariat General, BUREAU NATIONAL DE COORDINATION DES CHANGEMENTS CLIMATIQIES dated 21-January-2019/35/ were checked by the assessment team and confirmed that the project activity complies with all the applicable laws and regulations of the host country.

		• Assessment team confirmed that no conflict emerged since start of the project activity by discussing with PP representatives and local stakeholders. • Local employment opportunities have been created by the project, as confirmed during interviews with PP representatives, employees and local stakeholders. • Assessment team confirmed that most of the Project developer's area of actions in terms of CSR activities concern improvement of health, education and social wellbeing, as it can be seen reported on the CSR activities report/31/. For Example, activities in the rural community of Ambohipihaonana, in 2022 / 2023: 1) provision of table-benches for school equipments 2) deployment of mobile clinics for health access, with 357 medical consultations including 340 women and children. These details were also confirmed through interviews with the PP and local people. **Conclusion:** As per the above-mentioned course of actions to the comments raised by stakeholders, assessment team confirms that the project proponent has taken due account of all comments raised and appropriate measures are put in place for their resolution.

4.2.6 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	Stakeholder meetings were conducted during the validation stage of the project activity and again before start of execution of extension phase. There is no separate stakeholder consultation for the current verification other than ongoing communication with the stakeholders. Verification team has checked feedback register/15/ and found that there is no risk to stakeholders for registering their grievances. It was found that local stakeholders can anytime lodge their grievances if any, in the register over the operational lifetime of the project. Moreover, during current monitoring period few grievances were received and successfully resolved by the PP. Also, as per cross checked from the ESIA and PREE report/21//22/, no risks related to stakeholder participation were identified. However, as identified in EIA, the only social impact is job creation, which is being mitigated by project developers by providing employment to the local population in skilled as well as unskilled jobs. Thus, resulting in social well-being of the region. Thus, assessment team confirms that there are no risks identified pertaining to stakeholder participation.
Working conditions	As described by project proponents in the monitoring report, Risks on occupational health and safety were considered moderate at construction phase for workers, whereas during operational phase, it is considered to be negligeable. Mitigation & management measure taken such as provision of appropriate PPE to workforce and ensure their consistent use throughout the operational phase. Assessment team during the onsite audit confirmed that all the safety provisions/measures are in place as per the Health and Safety by laws of the country. The workforce is provided with appropriate safety equipment and PPE. Their consistent use at the project site is ensured by the HSE team and also safety trainings are provided to the workers. This was confirmed by assessment team by checking the training certificates and interviews with the employees at site. The risks about occupational health and safety were considered to be moderate for the construction phase and negligeable during the operation phase. Verification team checked the training certificates/14/ provided by project proponent and confirms that the necessary safety trainings are imparted

	by the competent training providers and the same was confirmed during interviews with project staff. Moreover, no accidents occurred during the current monitoring period as verified by assessment team during the interviews. Thus, it can be concluded that, the project proponent has undertaken necessary mitigation measures to reduce the identified risks about working conditions.
Safety of women and girls	No risks related to safety of women and girls were identified at the validation, nor during this verification period with employees. Regarding the safety of women and girls, the management team has experience with discrimination and sexual harassment management. The protection against sexual harassment is part of Axian Group's HR policy/40/, same is cross checked by the VVB team. Upto now none has been observed on the project. Also, it was confirmed through remote and onsite audit and cross checked through Organigramme/32/, that several women are employed by the PP NEA Ambatolampy and its parent company Axian Group. During the interviews, PPs mentioned that there have been no cases of discrimination and sexual harassment observed and the management team has experience with handling such issues. Therefore, the implementation of the project does not pose any threat to safety of women and girls, thus they are safe.
Safety of minority and marginalized groups, including children	As per EIA report/21//22/, no risk related to safety of minority and marginalized groups identified. Children work is forbidden, and no children are employed on the platform. However, the major risk identified related to safety of marginalized groups is the increased traffic in the Project Area with associated risk of accident. Such accident between Project's vehicles and other road users and pedestrians was a risk identified with a major impact significance for construction phase, but negligeable for operational phase. For avoidance/reduction of such accidents, following solutions/mitigation measures were considered: • Development and implementation of specific road traffic management procedures and plan • Strictly implement speed limitations including within settlements. • Limit Project's vehicles speed on unpaved road to ensure safe operations.

	These mitigation measures were considered to be appropriate by the assessment team in order to reduce the road accidents. This risk was identified with a major impact significance for construction phase, but negligeable for operational phase During the audit, it was confirmed with PP and local stakeholders that, there are no children employed in the project and the child labour is strictly forbidden. Moreover, no other risks related to minority and marginalized group were noticed. The verification team concludes that there is no impact of project implementation in Ambatolampy on the safety of minority and marginalized groups, including children.
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	As described in the monitoring report/6/, few risks were identified along with mitigation measures as mentioned below: a) Non-hazardous waste generated during construction activities have the potential to generate pollutions. The risk is identified at all phases of the project, at minor impact. With mitigation and management measures, the risk becomes negligeable for all phases. **Mitigation or preventative measure taken:** - Waste Management Plan (WMP) following the principles of waste minimisation at source, segregation for reuse, recycling, and disposal of waste. - Making suitable facilities available for the collection, segregation and safe disposal of waste. - Creating waste collection area with clearly marked facilities such as colour coded bins and equipment for handling the waste. - Ensure all wastes are managed by a licensed contractor. The proposed mitigation measures were found to be appropriate to the assessment team and already implemented at the site, as confirmed during onsite audit. b) Project construction phase carbon emissions have been estimated by GreenYellow at 36 tonnes of CO_2. Overall air quality risk has been assessed as 'negligible' during construction phase, as well as operational phase. **Mitigation or preventative measure taken:** Assessment team confirmed that the during construction phase, carbon emissions have been estimated by GreenYellow at 36 tonnes of CO_2. However, it is to

be noted that these emissions are only relevant during the construction phase and during operational phase, those are considered as 'negligible'. This is supported by the fact that, solar power generation technology is considered to be one of the green technologies, with almost zero emissions. Therefore, overall air quality will be good.

c) Noise and vibrations have been assessed as a minor impact significance during construction, and negligeable with mitigation measures (such as grievance process for noise complaint). It is also negligible for operational phase.

Mitigation or preventative measure taken: During construction phase, due to the use of machinery, noise and vibrations can occur. These are considered to be impactful only during the construction and negligible with the application of mitigation measures such as noise reducing devices/noise barriers, frequent maintenance of machinery, etc. For operation phase, this is considered to be negligible.

d) Hydrology and water consumption is estimated of minor impact during construction, becoming negligible with appropriate mitigation measure. This implies careful management of water consumption, and good design of on-site well.

Mitigation or preventative measure taken: The impact is considered to be negligible for the hydrology and the water consumption.

No other risk related to pollutants other than negligeable are identified during the operational phase.

Verification team noted that, the above risks i.e. construction phase carbon emissions, Non-hazardous waste generated during construction activities and Noise and vibrations are considered to have occurred during the construction period only. Owing to the fact that construction period being a short-term activity, the impact is considered to be low.

Verification Team confirmed that, the other risk related to household and other non-hazardous waste is taken care of, with proper waste management system, as confirmed during the onsite audit.

The project proponent confirmed during the onsite audit that the risks that occurred during construction period are for a short period and hence

	considered to be negligible and mitigation measures are in place for the other applicable risk related to household waste.

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	During the remote and onsite audit, representative of PP confirmed that the national laws prohibiting the discrimination and sexual harassment are being followed strictly. Further, verification team did not find any complaint regarding the same registered in grievance logbook/15/ and through independent search. PP representative confirmed during the audit that there have been no reports of discrimination or sexual harassment for this monitoring period. The project staff including women also provided assurance that there have been no incidents of any discrimination or sexual harassment in the workplace. Further, VVB team verified through grievance mechanism as well as the HSSE KPIs Data /39/ that no case of discrimination or sexual harassment was reported during the current monitoring period.
Management experience	The HR team of project proponent and project developer is responsible for managing human rights and labour aspects, ensuring alignment with the company's discrimination and sexual harassment related policy. The management has experience with discrimination and sexual harassment management. Upto now none has been observed on the project. Moreover, during remote and onsite audit, the assessment team has interviewed PP representatives and have confirmed that the management team is with the PP for a long time i.e. from the commissioning of the project and having a vast experience of implementing such projects in multiple countries. Operation and maintenance team has years of experience on the solar electricity sector. Thus, assessment team noted that the team has all the expertise or experience needed to support the current project activity. Other than PP's company name changes from Green Yellow Madagascar to NEA Ambatolampy, No new entity is involved in project design or implementation.
Gender equity in labor and work	PP provides equal opportunities in the context of gender equity and pay for labour and work as confirmed during the onsite and remote audit/19/ by the PP representatives. Moreover, the project is located in Madagascar, which is an ILO member state since 01/11/1960, and which ratified the following conventions:

	C100 - Equal Remuneration Convention, 1951 (No. 100)[31], since since 10 August 1962 C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111)[32], 11 August 1961 Thus, as per legislation, there is an equal opportunity for men and women to obtain a job. As per organization chart, several women are employed by NEA Ambatolampy and Axian Group. Therefore, through the review of public resources, organization chart of PP company/32/ it can be concluded that the Gender equity in labor and work is followed by the PP.
Human trafficking, forced labor, and child labor	The PP strictly follows the national laws prohibiting human trafficking, forced labour and child labor. There have been no reports of human trafficking, forced labour and child labour during this monitoring period as observed during the onsite audit and confirmed through interview with project staff. The project aligns with the labour convention and labour rights of Madagascar, which is a member of the International Labour Organisation (ILO). No human traffic, no forced labour (all employees declared) and no children are employed by the project.

4.2.7.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	Project Proponent is following the International human rights law[33], and ILO Convention 169[34]. The project is operated in Madagascar, which is an ILO member state since 01/11/1960, and which ratified the following conventions[35]:

31 https://normlex.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312245:NO

32 https://normlex.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312256:NO

33 https://www.ohchr.org/sites/default/files/Documents/Publications/fs9Rev.2.pdf

34 https://normlex.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C169

35 https://normlex.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:102955

	• C029 - Forced Labour Convention, 1930 (No. 29) P029 - Protocol of 2014 to the Forced Labour Convention, 1930 ratified on 06 Nov 2017 (In Force) since 01 Nov 1960 • C087 - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) since 01 Nov 1960 • C098 - Right to Organise and Collective Bargaining Convention, 1949 (No. 98) since 03 Jun 1998 • C100 - Equal Remuneration Convention, 1951 (No. 100) since 10 Aug 1962 • C105 - Abolition of Forced Labour Convention, 1957 (No. 105), since 06 Jun 2007 • C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111), since 11 Aug 1961 • C138 - Minimum Age Convention, 1973 (No. 138) Minimum age specified: 14 years, since since 31 May 2000 • C182 - Worst Forms of Child Labour Convention, 1999 (No. 182), since 04 Oct 2001 There are no human rights violation of any kind to any of the stakeholders during construction and operation of the project activity. The project complies with all regulation and laws on human rights. The land on which the project was developed was previously owned by the state and later on leased/acquired by the PP. Thus, the main social impact is only job creation by the project, which is being mitigated by PPs by creating employment. The project is a solar project activity which is implemented without cultural or social biases, safeguarding the rights of IPs, LCs, and customary rights holders to be free from discrimination. The same was confirmed through remote and onsite audit with the PPs, project staff and local stakeholders and also checked by declaration by the PP in the monitoring report/6/ and verifying the company HR policies/40/.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	The project activity is implemented on the land which belonged to the state and use was forbidden. As per ESIA/21//22/, no indigenous people were identified Also, no impact on cultural heritage was identified during the operational phase. Hence, no tangible or intangible cultural heritage in the project implementation area has been hampered for the project activity, as confirmed by the assessment team from the local stakeholders interviewed

	during the remote and onsite audit. There is no indigenous and cultural heritage near the project. Verification team further cross checked the same by checking ESIA report/21//22/ and verified through on-site photographs and plant videos/18//19/ shared by the PP and concludes that there are no indigenous people identified as living on the land and the cultural heritage on the project site is also nil.

4.2.7.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Disputes over rights to territories and resources	As verified by the assessment team from the ESIA report/21//22/ and from the local stakeholders during the remote and onsite interviews/19/, there are no agreement signed on property rights, as prior to the project implementation, the land belonged to the state and use was forbidden. No conflict emerged during this monitoring period. Thus, not applicable.
Respect for property rights	Prior to project implementation, the land belonged to the state and use was forbidden. No agreement has been signed on property rights. There were no pending property rights conflicts and disputes as confirmed by the local stakeholders in the interviews during the current monitoring period.

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	Since the benefits of the carbon credit lies with the project proponent and there is no benefit sharing plan. Hence, this section not applicable.
Benefit sharing during the monitoring period	Since PP is the sole owner of the revenue generated from the project activity and no agreement was affected during the monitoring period, there is no benefit sharing plan. Hence, this section not applicable.

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	According to the Environmental and Social Impact Assessment (ESIA)/21//22/, the habitats on the project site are of little interest in terms of biodiversity. As a consequence, biodiversity loss is identified as a negligible risk, whether for construction phase (increased human activity, noise, etc.) or operational phase (physical barrier). Hence, as there were no risks identified, mitigation measures are not applicable or necessary. It is worth noting that, during the onsite audit it was confirmed with PP representatives and project staff that, there are no risks to the biodiversity and the ecosystem around the project site.
Soil degradation and soil erosion	A risk related to soil degradation regarding geology and soils during the decommissioning phase is mentioned by PP in the monitoring report/6/, i.e. possible impact of potential land contamination in case of waste storage not managed properly or accidental events. However, no such risk was identified for the operational phase. During the onsite audit, PP representatives ensured that they would take due care to minimize such impact by ensuring proper waste storage and avoiding accidental events. Verification Team concludes that the risk identified for de-commissioning phase is considered to be low, as it is a short-term activity and there are no such risks noticed for operational phase. The same was confirmed through onsite interviews with PP representatives and local stakeholders./19/
Water consumption and stress	Few risks and their respective mitigation measures have been identified by the PP in the monitoring report/6/: • Impact of minor significance identified regarding the potential decreased amount of groundwater during construction phase. - The construction phase being a short-term activity, this impact is considered as negligible and of minor significance. Hence, no mitigation measures required. • Water is consumed during monitoring periods as part of the periodical cleaning of the solar panels. Water is sourced from a well which is on site (inside the premises of the project site, next to the offices as seen during

	the OSV) which is then loaded on a truck and used for cleaning. The high-pressure device for water cleaning is powered by a small petrol generator unit. - During the onsite visit, assessment team confirmed that for the periodical solar panels cleaning, water is consumed during operational phase. The source of water is the water well located within the project site premises, which is then loaded on a truck which used diesel as fuel and used for cleaning. The high-pressure device for water cleaning is powered by a small petrol generator unit. The quantity of water used for cleaning the panels is considered as very low by ESIA./21//22/ Assessment team noted that, the project emissions due to the fuel usage for auxiliary purposes are negligible as per the methodology requirements. Moreover, the Project proponent is collecting data as KPI/39/ since 2023 for good practices and limitation of volumes consumed (including water, waste and fuel consumption). Verification Team confirmed that the mitigation measures proposed for the risks identified during operational phase were found to be appropriate. During onsite audit, PP representatives were asked about the above-mentioned risks and respective mitigation measures for minimization, and they confirmed that the proposed measures have been implemented. Water consumption will be of moderate level and hence stress is not likely to be caused.
Usage of fertilizers	No risk identified, as No fertilizers are used. The assessment team cross-checked from the EIA report/21//22/ that no risks related to use of fertilizers have been identified, since it is a non-AFOLU project. The same was confirmed during onsite interviews with PP representatives too.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	As per ESIA, the Project area is composed of modified habitats with no particular interest for biodiversity. The PV power plant site has been heavily modified for large scale farming by previous operators and there is no flora or fauna in the Project area known to have a specific conservation status.

	There are no negative impacts on rare, threatened, or endangered species found. This was confirmed during onsite visit by the assessment team.

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
Not applicable, as no species introduced.	This section is not applicable since no new species have been introduced in the project implementation area as verified by the assessment team during the onsite interviews with PP representatives.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
Not Applicable, as no invasive species exists.	This section is not applicable since there are no existing invasive species in the project implementation area as verified by the assessment team during the onsite interviews with PP representatives.

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	The project activity is not ARR, ALM, WRC or ACoGS project. Hence it is not applicable.

4.3 Accuracy of Reduction and Removal Calculations

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the revised VCS PD-MR/6/. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the revised VCS PD-MR/6/.
Findings	CL01, CL06, CL07, CL08, CAR02, CAR03, CAR 04, CAR 05, CAR06, CAR08 and CAR09 were raised during the verification process and closed successfully. Please refer Appendix 3 of this report for the detailed closure of the findings.
Conclusion	**Baseline Emissions:** The baseline emissions include only CO_2 emissions from electricity generation in fossil fuel power plants that are displaced due to the project activity.

The baseline emissions for a given year are calculated by multiplying the Net Electricity Generation value with the grid emission factor. The grid in this case would be the 'RI-TANA Grid'

Formula Used: -

$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ **.....(Equation 1)**

Where;

BE_y= Baseline Emissions in year y (tCO_2e/year)

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

$EF_{grid,,CM,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the Tool-7 "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh)/17/

Ex-ante parameters:

As per the registered and revised VCS PD-MR/4//6/ & CDM PDD/4/ and requirement of the applied methodology/17/, the following parameters are fixed Ex-ante:

Ex-Ante Parameter	Value	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/50/	The baseline emission factors are taken ex-ante in line with the registered and revised VCS PD-MR/4//6/as well as cross checked with section 4.1 of the validation-verification report/4/ and found correct. Combined margin CO_2 emission factor ($EF_{grid,CM,y}$) is equal to 0.6703 tCO_2/MWh. The emission factor is fixed for the whole crediting period (10 years, fixed). The value is consistent with registered CDM PDD and VCS PD-MR/4/ and fixed ex-ante for the project activity.
$EF_{grid,OM,y}$	0.668 tCO_2/MWh	JIRAMA 2015-	The parameter is used for the ex-ante calculation of the emission factor for the

	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 electricity system"		2017 data/50/	project activity. The emission factor is fixed for the whole crediting period (10 years, fixed). The Operating margin CO_2 emission factor ($EF_{grid,OM,y}$) is equal to 0.668 tCO_2/MWh. The value is consistent with registered CDM PDD and VCS PD-MR/4/ and fixed ex-ante for the project activity.
	$EF_{grid,BM,y}$ 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/50/	The parameter is used for the ex-ante calculation of the emission factor for the project activity. The emission factor is fixed for the whole crediting period (10 years, fixed). The Build margin CO_2 emission factor ($EF_{grid,OM,y}$) is equal to 0.677 tCO_2/MWh. The value is consistent with registered CDM PDD and VCS PD-MR/4/ and fixed ex-ante for the project activity.
	The percentage share of total installed capacity of solar PV	0.1 %	https://www.africa-eu-renewables.org/marketinformation/madagascar/energy-sector/	The parameter was used for additionality demonstration at ex- ante stage. The value is consistent with registered CDM PDD and VCS PD-MR/4/ and fixed ex-ante for the project activity.
	The total installed	0.53 MW	Electricity Regulation Office	The parameter was used for Additionality demonstration at ex-ante

capacity of solar PV		statistics (ORE, 2016)	stage. The value is consistent with registered CDM PDD and VCS PD-MR[4] and fixed ex-ante for the project activity.

The values are consistent with the registered CDM PDD[4] and defined ex-ante for fixed crediting period of the project activity. The fixed ex-ante data and parameter have been listed in the monitoring report and confirmed by the verification team as correct and consistent with that stated in the registered CDM PDD[4]. The verification team confirms that the MR and the ER calculation[6][7] spreadsheet have considered the parameters fixed ex-ante correctly.

Ex-post parameter:

As per the registered monitoring plan and requirement of the registered methodology, the following parameter needs to be monitored:

$EG_{facility,y}$ - Quantity of net electricity supplied by the project plant/unit to the grid in year y in MWh.

The value of the net electricity generation supplied to the grid is directly sourced from the monthly electricity generation records (monthly production statements)[11]. Electricity outputs are recorded, stored and invoiced monthly to JIRAMA by NEA Ambatolampy, based on main meter (or check meter in case of main meter unavailability or default). The electricity generation supplied by the project activity is measured by the dedicated Bi-directional electronic electricity meters (a pair of main, check and Internal Control each for both the phase I and phase II) installed at the JIRAMA substation (metering point). These details were confirmed by the verification team during the onsite audit and by checking the plant layout[26].

<u>The details of electricity meters are follows:</u>

3 meters are installed for each phase (1 main, 1 check and 1 Internal Control), measuring the net electrical energy delivered to RI-Tana grid and located before 20/63kV transformer at JIRAMA substation. They also measure the consumption of the plant, including BESS charging from the grid. The 7th meter, measuring office consumption, including lights, cameras, etc. (labelled as 'invoiced imports' on the ER sheet), is located at the JIRAMA VIE base, next to the offices. They feature the following specifications:

For Initial Phase (Phase I):

Meter Type	**Main Meter**	**Check Meter**	**Internal Control**[36]
Meter ownership:	NEA Ambatolampy	JIRAMA	NEA Ambatolampy
Make	Landis+Gyr	ZTE	Phoenix contact
Model	E650[37]	DTSD178-M[38]	EEM-MA600[39]
Serial No	3507387521272	012000005221	17512310044_T
Accuracy class	0.2S	0.5S	0.2S
Date of Calibration	n/a[40]	02-August-2021	n/a[41]

For Extension Phase (Phase II):

Meter Type	**Main Meter**	**Check Meter**	**Internal Control**[42]
Meter ownership:	NEA Ambatolampy	JIRAMA	NEA Ambatolampy
Make	Landis+Gyr	ZTE	Phoenix contact
Model	E650[43]	DTSD178-M[44]	EEM-MA600[45]

[36] These 'internal control' meters are not part of the PPA, they are for indicative purpose : they serve as internal control meters for NEA Ambatolampy.

[37] https://www.landisgyr.eu/product/landisgyr-e650/

[38] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

[39] https://www.phoenixcontact.com/fr-fr/produits/appareil-de-mesure-eem-ma600-2901366

[40] "As per manufacturer's manual, meters are calibrated at the factory and do not require any further calibration during their entire service life." Ambatolampy 20MW solar PV, PDD section B.7.1

[41] Since these meters are for indicative purpose, and are not included in the PPA nor involved in any facturing/ER calculation purpose, no specific calibration requirements are needed.

[42] These 'internal control' meters are not part of the PPA, they are for indicative purpose : they serve as internal control meters for NEA Ambatolampy.

[43] https://www.landisgyr.eu/product/landisgyr-e650/

[44] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

[45] https://www.phoenixcontact.com/fr-fr/produits/appareil-de-mesure-eem-ma600-2901366

Serial No	3507576049226	012000005522	1127052
Accuracy class	0.2S	0.5S	0.2S
Date of Calibration	n/a[46]	17-August-2022	n/a[47]

JIRAMA VIE base meter

JIRAMA VIE base meter:	
Meter Type	Main
Meter ownership:	JIRAMA
Make:	ZTE
Model:	DTSD178-M[48]
Accuracy class:	0.5S
Serial Number:	170164261685
Calibration date:	n/a

The export and import data are measured continuously by the electricity meters/3/, recorded monthly in monthly production statements and the invoices/11/ are generated monthly. Monthly meter readings are taken from the electricity meters installed at metering point. The net electricity supplied to grid is calculated as the difference of the measured values of export and import of electricity.

The net electricity supplied to the grid by the project activity during the monitoring period (01-Janaury-2022 to 31-December-2023) is 87,271 MWh (47,140 MWh through initial phase and 40,132 MWh through extension phase).

It is to be noted that, the calibration evidence could not be provided for the check and internal control meter. PP confirmed that the calibration certificates of internal control and check meters are not available. Hence, as a conservative approach, in line with para. 366(a) of the CDM VVS for PAs, version 3.0/16/, PP has applied a conservative error factor (±0.5%) to the net electricity generation value corresponding to the accuracy class of meters (0.5S). This was appropriate and acceptable to the VVB team.

Thus, the electricity generation values after the application of conservative error factor have been used for the calculation of emission reductions/7/

[46] "As per manufacturer's manual, meters are calibrated at the factory and do not require any further calibration during their entire service life." Ambatolampy 20MW solar PV, PDD section B.7.1

[47] Since these meters are for indicative purpose, and are not included in the PPA nor involved in any facturing/ER calculation purpose, no specific calibration requirements are needed.

[48] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

	during the current verification. These values are slightly higher for consumption and slightly lower for production, thus results in a conservative approach for Emission Reductions Calculation. Regarding Main Meter, the Verification Team has checked the manufacturer's manual, registered CDM PDD and VCS PD-MR/4/ and confirmed that the meters are calibrated at the factory and do not require any further calibration during their entire service life. Hence, no calibrations are required for main meter. The manufacturer's specifications on the calibration requirements are not available for the check meter (previously called as backup meter as mentioned in project deviations). The state electricity regulator, JIRAMA is responsible for the calibration of the meters, but has not provided information on the frequency of the calibration. This was also confirmed during the onsite visit. PP has justified that the calibration of check 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. The same reasoning is applicable to the JIRAMA VIE base meter which monitors the office consumption. The 'Internal Control' meters are not part of the PPA, they are for indicative purpose only: they serve as internal control meters for NEA Ambatolampy. Since these meters are for indicative purpose and are not included in the PPA nor involved in any facturing/ER calculation purpose, no specific calibration requirements are needed. The verification team has checked the net electricity generation supplied to the grid from the monthly "electricity generation records (monthly production statements)/11/" and cross verified with the invoices/11/ raised by the Project Proponent (NEA Ambatolampy) to the Grid Company (JIRAMA) and found consistent. PP has used the conservative values i.e., minimum of net energy as after the application of error factor (±0.5%). All relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement/determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. Baseline emission factor ($EF_{grid,CM,y}$) for this project activity is fixed for the crediting period and calculated using JIRAMA 2015-2017/50/ data and the CDM TOOL 07. /17/ **BE_y baseline emissions, tCO_2e :** $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ = 87,271 MWh x 0.6703 tCO_2e/MWh = **58,497** tCO_2e (rounded down figure)

The vintage wise calculation of emission reductions is provided in the below table:

	$EG_{PJ,y}$	$EF_{grid,y}$	BE_y
	MWh	(tCO_2/MWh)	(tCO_2e/yr)
From 01-January-2022 to 31-December-2022	34,531	0.6703	23,145
From 01-January-2023 to 31-December-2023	52,741	0.6703	35,352
Total	87,271	0.6703	**58,497**

Project Emissions:

There are project emissions from the extension phase and its associated Battery Energy Storage System (BESS). The emissions resulting from the use of electricity grid to charge it outside of daylight is considered thanks to the 'Consumption' data collection. This data includes, but is not limited to, electricity from the grid used during the night to charge the battery system. Using this data for PE_{BESS} calculations is therefore conservative.

During this monitoring period 01-January-2022 to 31-December-2023, **103 tCO_2e** have been emitted as project emissions from that source and are therefore subtracted from the baseline emissions for final VCUs calculation. Detailed calculations are available on the Ex-post ER calculation spreadsheet[7].

Moreover, in line with para. 46 of ACM0002, version 22.0[17], assessment by checking the ER sheet, confirmed that the charging using the grid has not amounted to more than 2 per cent of the electricity generated by the project renewable energy plant during the monitoring period.

Therefore,

$PE_y = PE_{BESS} =$ **103 tCO_2e.** (rounded up figure)

Leakage:

As per applied methodology ACM0002, Version 22.0[17] , CDM PDD and VCS PD-MR[4] Leakage emissions are not considered for the project activity.

Hence, $ER_y = BE_y - PE_y$

$ER_y = 58,497\ tCO_2e - 103\ tCO_2e$

= **58,394 tCO_2e.** (rounded down figure)

	According to the applied methodology, the conservativeness of the achieved emission reduction was checked, and the detailed emission reduction calculation has been transparently provided in the ER sheet/7/. All the formulae and the calculation procedure were checked by the verification team. In the opinion of verification team, the assumptions, emission factors and default values that were applied in the calculations have been justified. Also, the verification team confirms that there were no manual transposition errors between the data sets in the ER Sheet /7/ during the current monitoring period. It is confirmed that the data has been measured directly from meters and it was cross checked from the monthly electricity generation records and the invoices/11/ raised and was able to verify the same. Verification team confirms that the monitoring has been carried out in accordance with the monitoring plan, trainings and QA/QC procedure and emergency preparedness contained in the CDM PDD, registered and revised VCS PD-MR/4//6/. Assessment team confirmed that the GHG emission reductions and removals have been quantified correctly in line with the registered and revised VCS PD-MR/4//6/.

4.4 Quality of Evidence to Determine Reductions and Removals

Means of verification	The verification team checked the Calibration details of the monitoring meters with the calibration evidence/5/ and whether the monitoring has been carried out in accordance with the applicable regulatory documents, inter alia, the applied methodology and registered monitoring plan./4//17/
Findings	CL01, CL06, CL07, CAR02, CAR03, CAR 04, CAR 05, CAR06, CAR08 and CAR09 were raised during the verification process and closed successfully. Please refer Appendix 3 of this report for the detailed closure of the findings.
Conclusion	The metering arrangement is dedicated bi-directional electronic energy meters of accuracy class 0.2s (main and Internal control) and 0.5s (check meter) at the JIRAMA substation. These meters record several parameters including electricity exported & imported. These electricity meters are being used by PP and national grid company for monthly generation reports/11/. The details of meters are as follow:

For Initial Phase (Phase I):

Meter Type	**Main Meter**	**Check Meter**	**Internal Control**[49]
Meter ownership:	NEA Ambatolampy	JIRAMA	NEA Ambatolampy
Make	Landis+Gyr	ZTE	Phoenix contact
Model	E650[50]	DTSD178-M[51]	EEM-MA600[52]
Serial No	3507387521272	012000005221	17512310044_T
Accuracy class	0.2S	0.5S	0.2S
Date of Calibration	n/a[53]	02-August-2021	n/a[54]

For Extension Phase (Phase II):

Meter Type	**Main Meter**	**Check Meter**	**Internal Control**[55]
Meter ownership:	NEA Ambatolampy	JIRAMA	NEA Ambatolampy
Make	Landis+Gyr	ZTE	Phoenix contact
Model	E650[56]	DTSD178-M[57]	EEM-MA600[58]

[49] These 'internal control' meters are not part of the PPA, they are for indicative purpose : they serve as internal control meters for NEA Ambatolampy.

[50] https://www.landisgyr.eu/product/landisgyr-e650/

[51] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

[52] https://www.phoenixcontact.com/fr-fr/produits/appareil-de-mesure-eem-ma600-2901366

[53] "As per manufacturer's manual, meters are calibrated at the factory and do not require any further calibration during their entire service life." Ambatolampy 20MW solar PV, PDD section B.7.1

[54] Since these meters are for indicative purpose, and are not included in the PPA nor involved in any facturing/ER calculation purpose, no specific calibration requirements are needed.

[55] These 'internal control' meters are not part of the PPA, they are for indicative purpose : they serve as internal control meters for NEA Ambatolampy.

[56] https://www.landisgyr.eu/product/landisgyr-e650/

[57] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

[58] https://www.phoenixcontact.com/fr-fr/produits/appareil-de-mesure-eem-ma600-2901366

Serial No	350757604922 6	012000005 522	1127052
Accuracy class	0.2S	0.5S	0.2S
Date of Calibration	n/ a[59]	17-August-2022	n/a[60]

JIRAMA VIE base meter

JIRAMA VIE base meter:	
Meter Type	Main
Meter ownership:	JIRAMA
Make:	ZTE
Model:	DTSD178-M[61]
Accuracy class:	0.5S
Serial Number:	170164261685
Calibration date:	n/a

The main and internal control meters are of same accuracy class i.e., 0.2s and check meters are of accuracy class 0.5s as per the requirement of the registered PD-MR /4/. The same was checked during the onsite audit and with photographs submitted by the PP /18/and were found to be correct.

It is to be noted that, the calibration evidences /5/ could not be provided for the check and internal control meters. PP confirmed that the calibration certificates of check and internal control meters are not available.

Regarding the Main Meters, the Verification Team has checked the manufacturer's manual, registered CDM PDD and VCS PD-MR and confirmed that the meters are calibrated at the factory and do not require any further calibration during their entire service life. Hence, no calibrations are required for main meter.

The manufacturer's specifications on the calibration requirements are not available for the check meter (previously called as backup meter as mentioned in project deviations). The state electricity regulator, JIRAMA is responsible for the calibration of the meters, but has not provided information on the frequency of the calibration. This was also confirmed during the onsite visit. PP has justified that the calibration of check 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

[59] "As per manufacturer's manual, meters are calibrated at the factory and do not require any further calibration during their entire service life." Ambatolampy 20MW solar PV, PDD section B.7.1

[60] Since these meters are for indicative purpose, and are not included in the PPA nor involved in any facturing/ER calculation purpose, no specific calibration requirements are needed.

[61] https://en.dongfang-wisdom.com/html/ProductDetail_302-0-nul.html#3

	the VVS for the project activities, version 3. The same reasoning is applicable to the JIRAMA VIE base meter which measures the imports of office consumption. The 'Internal Control' meters are not part of the PPA, they are for indicative purpose only: they serve as internal control meters for NEA Ambatolampy. Since these meters are for indicative purpose and are not included in the PPA nor involved in any facturing/ER calculation purpose, no specific calibration requirements are needed. Hence, as a result of unavailability of the calibration certificates for check and backup meters, as a conservative approach, in line with para. 366(a) of the CDM VVS for PAs, version 3.0/16/, PP has applied a conservative error factor (±0.5%) to the net electricity generation value corresponding to the accuracy class of meters (0.5S). Although the accuracy class of main and internal control meters is 0.2s, ±0.5% error factor has been applied which is more conservative. This was found to be appropriate and acceptable to the VVB team. Thus, the electricity generation values after the application of conservative error factor have been used for the calculation of emission reductions/7/ during the current verification. These values are slightly higher for consumption and slightly lower for production, thus results in a conservative approach for Emission Reductions Calculation. The verification team has checked the net electricity generation supplied to the grid from the monthly "electricity generation records (monthly production statements)/11/" and cross verified with the invoices/11/ raised by the Project Proponent (NEA Ambatolampy) to the Grid Company (JIRAMA) and found consistent. PP has used the conservative values i.e., minimum of net energy as after the application of error factor (±0.5%). All relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement/determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. Project activity is in continuous operation. No major breakdowns except a few minor incidents were found to have occurred/13/ during the current monitoring period (please refer to Appendix-6 of this report for more details). Project proponent clarified that the breakdown incidents occurred during current MP did not affect the monitoring and measurement, so no conservative measure shall be applied to the ER calculations. Assessment team cross-checked the plant breakdowns sheet/13/ to confirm about this and noted that the breakdown incidents that occurred during the current MP did not have any effect on the monitoring and measurement. Overall, the plant was operating satisfactorily during the current MP. Hence, PP's clarification was found to be appropriate and acceptable. No unforced errors were observed. No sampling procedure applied for monitoring of the data parameter and entire documents were checked by the assessment team to arrive at positive verification conclusions. The monitoring plan is followed at the project site.

	Emergency procedure preparedness is ensured at site thanks to the check and internal control meters. The immediate response capability is achieved through the implementation of a system of supervision and control that will transfer real-time all information about the state of the equipment (SCADA) connected to each transformer's measuring unit as a back-up energy metering in case of feed-in points meters failure. All relevant documents were checked to assess the correctness and quality of data submitted by the project proponent, which are used to determine emission reductions. All the records needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant lack of evidence and missing data were detected during onsite audit discussion except the lack of calibration evidence for the check and backup meters. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures. The monitoring parameters have been measured / determined without material misstatements and is in line with all applicable standards and relevant requirements. The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included in section 4 under each parameter and confirms to the requirement of the PD-MR/4/. The export and import data are measured by the electricity meters, recorded continuously through electronic means and the invoices are generated monthly. The data is then reported annually on the VCS Monitoring Report as verified by the verification team through onsite assessment. It was also verified through onsite inspection/19/ that the plant's team involved in the monitoring of project activity is well experienced. Hence, the verification team concludes that competent staff is employed by the project proponent to carry out the relevant tasks with sufficient accuracy. Furthermore, it was confirmed during onsite audit discussion that internal training program for the monitoring staff is conducted on regular basis. The VVB confirms that the monitoring has been carried out in accordance with the applicable regulatory documents, *inter alia*, the applied methodology and that there are no material discrepancies between the project implementation and the project description, the implementation of the monitoring plan, its completeness and adequacy to the methodology. If any discrepancies have been found, these are reported, assessed and closed accordingly in the form of CLs or CARs (see Appendix 3), as well as if any project/methodology deviation is sought for this monitoring period, can be found in Section 3 of this Verification Report. As a result of verification of the Emission Reductions calculation process, the VVB confirms that all the parameters required for their determination have been included in the Monitoring Report/6/ and ER Calculation sheet/7/ for which this verification applies.

	After verifying the data sources, data collection and aggregation processes and final calculations and reported figures, it is confirmed that the values of the parameters from the data sources are consistent with those finally reported in the Monitoring Report and ER Calculation sheet. /6//7/ The verification process for the same and the quality of used evidence have been clearly described above in Section 4 of this Verification Report. 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 onsite audit and in the document review.

4.5 Non-Permanence Risk Analysis

Not applicable as this is a renewable project type.

5 VERIFICATION OPINION

5.1 Verification Summary

LGAI Technological Center S.A. (Applus+ Certification) has been contracted/2/ by AERA Group on behalf of New Energy Africa, Ambatolampy (NEA Ambatolampy) to perform the third periodic verification of GHG Emission Reductions for the project activity "Ambatolampy Solar PV" (VCS project ID #2307)/27/.

The monitoring period included in the Monitoring Report/6/ for which this verification applies is: 01-January-2022 to 31-December-2023 (both days included).

The management *of* NEA Ambatolampy is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project's Monitoring Plan in the registered VCS PD-MR version 1.2, dated on 15-July-2020/4/, revised VCS PD-MR, version 2.2 dated 24-January-2025/6/, registered CDM PDD, Version 1.4 dated 05-July-2019/4/ and the approved methodology, ACM00002 Version 22.0./17/

VVB confirms that, GHG statement is the responsibility of the project proponent. The project activity fulfills the criteria for the verification as established in section 4 of the VCS standard version 4.7/10/. Verification team has reviewed the monitoring report including registered and revised VCS PD-MR and subsequently carried out the onsite audit/ follow-up interviews with PP representatives and confirm the fulfilment of stated criteria. Verification team has the unmodified opinion regarding the project activity, VVB team has checked all the details and found it consistent and free of material errors or misstatements.

The current verification process also included validation of project description deviations. VVB confirms that the project conforms with the validation criteria for projects set out in VCS Version 4. Verification team has reviewed the monitoring report including registered and revised VCS PD-MR/4//6/ and subsequently carried out the onsite audit/ follow-up interviews with PP representatives and confirm the fulfilment of stated criteria. Verification team has the unmodified opinion regarding the project activity, VVB team has checked all the details and found it consistent and free of material errors or misstatements.

Applus+ Certification's verification approach has been based on the requirements of the applicable regulatory documents (defined within this Verification Report and listed in the Appendix 2). Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these.

The verification can confirm that:

- The project is implemented and operated as per the registered CDM PDD and registered & revised PD-MR/4//6/;
- The monitoring plan in registered CDM PDD and VCS PD-MR is as per the applied methodology/17/;

- The monitoring complies with the monitoring plan in the registered CDM PDD and VCS PD-MR/4//6/;
- The monitoring report and other supportive documents provided are complete and verifiable and in accordance with the applicable VCS requirements and any other applied regulatory document;
- The installed equipment being essential for generating emission reductions runs reliably and is calibrated appropriately (where applicable);
- The monitoring system is in place and generates GHG emission reductions data;
- The GHG emission reductions are calculated without material misstatements.

A Reasonable Level of assurance was achieved as planned, during verification process.

As per VCS Standard version 4.7 Para 4.1.10, VVB team verified that, the criteria for verification of the project activity are in line with the relevant VCS Version 4 criteria. The objective of this verification activity is to have an independent third party for the assessment of the Monitoring report, emission reduction sheet and to ensure a thorough assessment of the project activity against the applicable regulatory requirements.

VVB concluded the assessment, as per para 4.1.18 of the VCS standard version 4.7 /10/, with a positive verification opinion regarding the project activity. The VVB team has raised 08 Clarification (CLs), 09 Corrective action requests (CARs), and no FAR (forward action request). All the issues identified as CARs and/or CLs have been successfully closed and mentioned in Appendix 3 of this verification report. The VVB team clearly state that there is no material misstatement at the level of the GHG statement and GHG declarations made by the Project Proponent. VVB declared that the validation and/or verification of the GHG statement was conducted in accordance with ISO 14064-3:2019.

5.2 Verification Conclusion

Our verification approach was based on the requirements as defined under the applicable VCS regulatory requirements/10/. The verification has been conducted in accordance with the VCS standard version 4.7/10/, other valid and applicable VCS regulatory documents and templates /10/(see under appendix 2 of this report), UNFCCC rules and requirements/17/ (where applicable) and associated decisions of the VCS secretariat and the UNFCCC Executive Board (where applicable) and VCS requirement. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Further, the verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of paragraph 4.1.10(1) of the VCS standard V4.7/10/. No sampling procedure applied for document verifications. The entire documents checked/Power plant verification conducted to arrive at positive verification conclusions.

The verification team can confirm that:

- the project is implemented and operated as planned and described in the project document and sought deviations;

- the project description deviations sought during the current verification are valid and appropriate;
- the monitoring plan is as per the applied methodology/17/;
- the monitoring process in Monitoring Report is as per the CDM PDD and VCS PD-MR;/4//6/
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably and but could not produce the calibration evidence. Therefore, conservative error factor is applied in line with para. 366(a) of the CDM VVS for PAs, version 3.0/16/;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.
- A Reasonable Level of assurance was achieved as planned, during verification process.

Verification period: From [**01-January-2022**] to [**31-December-2023**]

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

Vintage period	Baseline emissions (tCO_2e)	Project emissions (tCO_2e)	Leakage emissions (tCO_2e)	Reduction VCUs (tCO_2e)	Removal VCUs (tCO_2e)	Total VCUs (tCO_2e)
01-Jan-2022 to 31-Dec-2022	23,145	19	0	23,126	0	23,126
01-Jan-2023 to 31-Dec-2023	35,352	84	0	35,268	0	35,268
Total	**58,497**	**103**	**0**	**58,394**	**0**	**58,394**

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/ removals[62]	Achieved reductions/ removals	Percent difference[63]	Explanation for the difference
01-Jan-2022 to 31-Dec-2022	31,864	23,126	-27.4%	The actual emission reduction achieved during this vintage is 27.4% lower than the estimated emission reductions in revised VCS PD-MR/6/ for corresponding

[62] Calculations are based on registered VCS-PD estimated values. Details of the calculations can be found on the ex-post ER sheet.

[63] Percent difference is calculated as followed : (ex-ante estimated reductions – achieved reductions) / (ex-ante estimated reductions.

				vintage period. This is because, mainly due to the inverter repair of the initial phase, which had an impact on production. This unavailability is detailed in section 3.1 of the monitoring report/6/ and Appendix-6 of this verification report.
01-Jan-2023 to 31-Dec-2023	45,720	35,268	-22.9%	The actual emission reduction achieved during this vintage is 22.9% lower than the estimated emission reductions in revised VCS PD-MR/6/ for corresponding vintage period. This is because, mainly due to the inverter repair of the initial phase, which had an impact on production. This unavailability is detailed in section 3.1 of the monitoring report/6/ and Appendix-6 of this verification report.
Total	**77,584**	**58,394**	**-24.7%**	The actual emission reduction achieved during this vintage is 24.7% lower than the estimated emission reductions in revised VCS PD-MR/6/for corresponding vintage period. This is because, mainly due to the inverter repair of the initial phase, which had an impact on production. This unavailability is detailed in section 3.1 of the monitoring report/6/ and Appendix-6 of this verification report.

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

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Section	*Information*	*Justification*	*Assessment method and conclusion*
N/A	N/A	N/A	Not applicable as there is no commercial sensitive information available

APPENDIX 2: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

No.	Author	Title	References to the document	Provider
/1/	JIRAMA	Commissioning date supportive documents (Commercial Operation date issued by JIRAMA meters installation certificate dated 10-July-2018 for the initial phase (Phase I) and For extension phase (Phase II), proof of commissioning of meters reset document issued by JIRAMA, dated 17-August-2022)	10-July-2018, 17-August-2022	Project Proponent
/2/	VVB	Contract of the project Proponent with the VVB	Contract document signed between PP and VVB, Version 1.0, dated 06-July2023 Revised contract version 06.0, dated 18-June-2024	Project Proponent
/3/	Various Manufacturers	Technical Specifications for the PV plant components (Solar Modules, Inverters, Transformers, BESS, etc) as well as metering equipment	Manufacturer technical specifications	Project Proponent
/4/	Project Proponent & VVBs	Registered VCS Joint PD-MR (VCS-Joint-Project-Description-Monitoring-Report-AMBATOLAMPY_011020.pdf) VCS Joint Validation-Verification Report (DVR_20.21.pdf) Registered CDM PDD (project design document) CDM Validation Report (Validation report)	Version 1.2, dated 15-July-2020 Version 01, dated 30-September-2020 Version 1.4, dated 05-July-2019 Version 1.4, dated 05-July-2019	Others

No.	Author	Title	References to the document	Provider
		VCS Monitoring Report for 2nd Verification (2210 - MR - VCS - AMBATO-v15-clean.pdf) VCS Verification Report for 2nd Verification (CCIPL1194 VR 260822. clean.pdf) VCS Verification Report for 3rd Verification	Version 1.5, dated 24-August-2022 Version 03, dated 26-August-2022 Version 1.4, dated 27-January-2024	
/5/	JIRAMA	Meter installation and meter reset documents	-	Project Proponent
/6/	Project Proponent	Monitoring Report version 1.0 (Initial) Monitoring Report version 1.5 (Final) Revised VCS Joint PD-MR, Version 2.2	31-October-2023 24-January-2025 24-January-2025	Project Proponent
/7/	Project Proponent	Ex-Post Emission Reduction sheet version 01 Ex-Post Emission Reduction Sheet version 05 Ex-ante Emission Reduction Sheet, Version 3	30-October-2023 12-September-2024 12-September-2024	Project Proponent
/8/	Project Proponent	Organization structure of the NEA Ambatolampy	-	Project Proponent
/9/	Project Proponent/ JIRAMA	Initial Power Purchase Agreement (PPA) Between GreenYellow Madagascar and JIRAMA PPA Amendment No. 1 between GreenYellow Madagascar and JIRAMA PPA Amendment No. 2 between GreenYellow Madagascar and JIRAMA PPA Amendment No. 3 between NEA Ambatolampy and JIRAMA	Signed on 30-November -2016 Signed on 24-May-2017 Signed on 17-July-2020 Signed on 17-February-2023	Project Proponent
/10/	VERRA	Standard documents used in the project activity • VCS Standard, v4.7 • VCS Program Guide, v4.4 • VCS Program Definitions, v4.5	VCS web site (https://verra.org/programs/verified-carbon-standard/vcs-program-details/)	VERRA

No.	Author	Title	References to the document	Provider
		• Registration and Issuance Process, v4.5 • Validation and Verification Manual, v3.2 • VCS Monitoring Report Template, v4.3 • VCS Verification Report Template, v4.3		
/11/	Project Proponent/ JIRAMA	1) Monthly Generation Records (Monthly Production Statements) & respective invoices for the monitoring period 01-January-2022 to 31-December-2023 sent by PP to JIRAMA 2) Consumption/Import invoices sent by JIRAMA to PP for the monitoring period from 01-January-2022 to 31-December-2023	For the monitoring period 01-January-2022 to 31-December-2023	Project Proponent
/12/	Project Proponent	Self-Declaration regarding no double counting or participation in other GHG program or emissions trading program or any other mechanism that includes GHG allowance trading for the concerned monitoring period	28-May-2024	Project Proponent
/13/	Project Proponent	Breakdown details for the monitoring period	relevés des défauts à jour (list of events impacting production)	Project Proponent
/14/	Project Proponent	Employment evidence for plant persons and Training Certificates for the trainings conducted PP Declaration regarding employment dated 07-May-2024	For the monitoring period from 01-January-2022 to 31-December-2023	Project Proponent
/15/	Project Proponent	Grievance Registers maintained at site	For the monitoring period 01-January-2022 to 31-December-2023	Project Proponent
/16/	UNFCCC	CDM validation and verification standard for project activities, Version 03.0	https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210921115831128/reg_stan06_v03.0.pdf	Others

No.	Author	Title	References to the document	Provider
/17/	UNFCCC	Applied Methodology, ACM0002 Grid-connected electricity generation from renewable sources --- Version 22 TOOL23: Additionality of first-of-its-kind project activities, Version 03.0 Tool 07: Tool to calculate the emission factor for an electricity system (Version 07.0)	Version 22.0 (https://cdm.unfccc.int/UserManagement/FileStorage/R0IJ1X9LQ7W2GOYHSMBFCPE3VKZ685) Version 03.0 (https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-23-v1.pdf) Version 07.0 (https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf)	Others
/18/	NA	Onsite photographs of PV plant components /Videos /Meters photographs, etc	-	Project Proponent
/19/	VVB	Remote audit records Onsite audit records	Dated 24-November-2023 Dated 26-July-2024	VVB
/20/	UNFCCC	Guidelines for Application of materiality in verifications (version 02.0)	Version 02.0	UNFCCC
/21/	ERM	Simplified Environmental and Social Impact Assessment (ESIA) for a Solar Power Plant - Madagascar	September 2016	Project Proponent
/22/	Biotope Madagasikara	Programme d'engagement environnemental (PREE) GREENYELLOW MADAGASCAR (Environmental Commitment Program GREENYELLOW MADAGASCAR)	27-May-2021	Project Proponent
/23/	Project Proponent	Company Name Change document "Minutes of extraordinary general meeting of January 9, 2023"	09-January-2023	Project Proponent

No.	Author	Title	References to the document	Provider
/24/	Project Proponent	Execution File – Extension of 20MWc-5MW/5MWh of Ambatolampy Madagascar Photovoltaic Power Plant	-	Project Proponent
/25/	Ministry of Energy and Hydrocarbons	Environmental Authorization Letter for phase II	Dated:05-May-2021	Project Proponent
/26/	Project Proponent	Plant Single Line Diagrams	-	Project Proponent
/27/	VERRA	VCS webpage for the project, VCS ID 2307 https://registry.verra.org/app/projectDetail/VCS/2307	-	Others
/28/	UNFCCC	Official registry website of Clean Development Mechanism https://cdm.unfccc.int/Projects/projsearch.html	Last retrieved data on 02-August -2024	Others
/29/	GS	Official registry website of Gold Standard https://www.goldstandard.org/	Last retrieved data on 02-August -2024	Others
/30/	GCC	Official registry website of Global Carbon Council https://www.globalcarboncouncil.com/	Last retrieved data on 02-August -2024	Others
/31/	Project Proponent	Report on CSR activities in rural commune of Ambohipihaonana for year 2022 Report on CSR activities in rural commune of Ambohipihaonana for year 2023	January 2023 November 2023	Project Proponent
/32/	Project Proponent	Organization Chart for Ambatolampy Solar PV Plant	-	Project Proponent
/33/	IAF	IAF MD4:2023 Document	Version 04, dated 14-June-2023	Others
/34/	UNFCCC	CDM webpage for the project, CDM ID 10481 CDM: Ambatolampy 20 MW solar PV (unfccc.int)	-	Others
/35/	SECRETARIAT GENERAL, BUREAU	Letter of Approval for the CDM Project "Ambatolampy 20 MW solar PV"	21-January-2019	Others

No.	Author	Title	References to the document	Provider
	NATIONAL DE COORDINATION DES CHANGEMENTS CLIMATIQIES			
/36/	Office de Regulation de l'electricite (ORE), Madagascar (Electricity Regulatory Office, Madagascar)	Excel sheet of ELECTRICITY PRODUCTION PARK Situation December 2022	December 2022	Project Proponent
/37/	Securpro	Security Staff Payments confirmation letter	07-June-2024	Project Proponent
/38/	Project Proponent	PVSyst Report for phase I (Initial phase) PVSyst Report for phase II (Extension phase)	07-November-2017 27-January-2021	Project Proponent
/39/	Axian Energy	HSSES KPI'S-2024 AE Centrale AMBATOLAMPY NEA	18-January-2023	Project Proponent
/40/	Axian Group	Axian Group HR Policies	-	Project Proponent
/41/	Project Proponent	The commercial agreement for the extension	27- November-2020	Project Proponent
/42/	International Renewable Energy Agency	International Renewable Energy Agency website, on the profile of Madagascar: https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Madagascar_Africa_RE_SP.pdf	-	Others
/43/	International Energy Agency	International Energy Agency's website for the information regarding Madagascar, https://www.iea.org/countries/madagascar/energy-mix	-	Others

No.	Author	Title	References to the document	Provider
/44/	Africa Solar Industry Association (AFSIA)	A publication article by "Africa Solar Industry Association (AFSIA)" (https://www.afsiasolar.com/madagascar-the-axian-group-and-greenyellow-begin-the-expansion-works-of-the-largest-solar-power-plant-in-the-indian-ocean/)	dated 16-June-2021	Others
/45/	ESI Africa	Article by "ESI Africa" dated 03-February-2023 (https://www.esi-africa.com/east-africa/new-solar-pv-plant-gives-madagascar-energy-boost/)	dated 03-February-2023	Others
/46/	African Guarantee Fund	Article by "African Guarantee Fund" (https://africanguaranteefund.com/african-guarantee-fund-and-guarantco-provide-greenyellow-with-a-mga-33-billion-c-eur-7-1-million-credit-guarantee-to-finance-a-20-mw-solar-plant-extension-with-a-5-mw-solar-battery-storage-system/)	-	Others
/47/	Power Engineering International (PEI)	Article by "Power Engineering International (PEI)" dated 18-June-2021 (https://www.powerengineeringint.com/solar/madagascar-expands-solar-plant-with-20mw-and-battery-storage/)	dated 18-June-2021	Others
/48/	PV Magazine	An article from "PV Magazine" dated 06-February-2023 (https://www.pv-magazine.com/2023/02/06/financial-close-for-20-mw-of-pv-5-mwh-of-storage-in-madagascar/)	dated 06-February-2023	Others
/49/	N/A	An article from "WikiPedia" about Ambatolampy Solar Power Station (https://en.wikipedia.org/wiki/Ambatolampy_Solar_Power_Station)	-	Others
/50/	JIRAMA	JIRAMA 2015-2017 data	-	Others

APPENDIX 3: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)

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

FAR ID	xx	**Section no.**	xx	**Date :** DD-Month-YYYY
Description of FAR				
NA.				
Project Proponent response				**Date :** DD-Month-YYYY
NA.				
Documentation provided by project Proponent				
NA.				
VVB assessment				**Date:** DD-Month-YYYY
NA.				

Table 2. CL from this verification

CL ID	01	**Section no.**	N.A.	**Date:** 04-Dec-2023
Description of CL				
Kindly submit the following documents for the verification purpose: 1) Electricity generation records (for total hours and any downtimes) 2) Electricity Sales/ Purchase Invoices for the proposed verification period 3) Clear photographs of electricity meters and the nameplates of PV plant components 4) Electricity meter specifications (Main Meters and backup meters) 5) Electricity meters calibration certificates/ records 6) Project Proponent name change document (from Green Yellow Madagascar to NEA ambatolampy) 7) Host Country Letter of approval, dated 19/01/2021 related to Sustainable Development, mentioned in section 1.11 of MR. 8) Technical specifications from the manufacturer for: a) Solar panels (PV modules) b) Inverters c) Transformer d) Electricity meters e) batteries 9) Commissioning certificates issued by the respective authority (for both initial phase and second phase) 10) Line diagram for metering location 11) Production License/ Power Purchase Agreement 12) Plant layout				

13) Letter of declaration dated from PP confirming that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions and has not created or sought any other form of environmental credit for the same period.
14) Environmental Impact Assessment report
15) Stakeholder consultation process evidence
16) Grievance logbook placed at respective site office.
17) Supportive evidence of Employment generation and organisation structure
18) Commercial agreement for the extension, mentioned in section 3.2.2 of MR.
19) Plant Operations logbook, providing details of any breakdowns/shutdown of plant.
20) Training records of trainings provided to company staff.

Project Proponent's response	**Date:** 25-Jan-2024

Most documents listed are provided to VVB in a supporting package. Remaining documents such as PPA, production invoices, letter of declaration etc. have been requested to PPs.

Documentation provided by project proponent

Supporting package

VVB assessment	**Date:** 08-Mar-2024

1) Electricity generation records evidences (i.e. JMRs/credit notes, etc.) are not yet provided by the PP. Hence, **Comment#1 is Open.**
2) The Electricity Sales/ Purchase Invoices for the monitoring period under consideration for this verification are not yet provided by the PP. Hence, **Comment#2 is Open.**
3) Clear photographs of electricity meters and the nameplates of PV plant components are provided by the PP in the supporting evidence pack, which was found to be correct and details in MR were found to be consistent with the photographs. Hence, **Comment#3 is Closed.**
4) PP provided the weblinks in the MR for technical specifications of the electricity meters. Assessment team checked the same and those were found to be appropriate. Hence, **Comment#4 is closed.**
5) Electricity meters calibration certificate/meter commissioning certificate for the backup meter no. 012000005221 was provided by the PP. However, for the meter no. 012000005522 this certificate was not provided. Hence, **Comment#5 is Open.**
6) Project Proponent name change document (from Green Yellow Madagascar to NEA ambatolampy) is now provided by the PP. Assessment team checked the document dated 09/01/2023 and found to be appropriate. Hence, **Comment#6 is closed.**
7) Host Country Letter of approval, dated 19/01/2021 related to Sustainable Development, mentioned in section 1.11 of MR is now provided to the assessment team. The same was checked and found to be acceptable. Hence, **Comment#7 is closed.**
8) Technical specifications from the manufacturer for Solar panels (PV modules), Inverters and Electricity meters are now provided by the PP and found to be acceptable. However, the supportive evidence for technical specifications of Transformers and Batteries are not provided by the PP. Hence, **Comment#8 is Open.**
9) Commissioning certificates issued by the respective authority (for both initial phase and second phase) are not yet provided to the assessment team. Hence, **Comment#9 is Open.**
10) The requested line diagram is now included in the Appendix of the MR, which was found to be acceptable. Hence, **Comment#10 is closed.**

11) The requested Production License/ Power Purchase Agreement document is not provided yet by the PP. Hence, **Comment#11 is Open.** 12) The Plant layout diagram is now included in the Appendix of the MR, which was found to be acceptable. Hence, **Comment#12 is Closed.** 13) The requested Letter of declaration is not yet provided by the PP. Hence, **Comment#13 is Open.** 14) The Environmental Impact Assessment report and the authorization document are now provided to the assessment team, which were found to be appropriate and acceptable. Hence, **Comment#14 is Closed.** 15) The evidence of Stakeholders consultation conducted during initial phase is not provided to the assessment team. Hence, **Comment#15 is Open.** 16) The copies of Grievance logbook are now provided to the assessment team. Hence, **Comment#16 is Closed.** 17) Supportive evidence of Employment generation and organisation structure is not yet provided to the assessment team. Hence, **Comment#17 is Open.** 18) The requested Commercial agreement for the extension, mentioned in section 3.2.2 of MR is not yet provided to the assessment team. Hence, **Commen#18 is Open.** 19) The Plant Operations logbook, providing details of any breakdowns/shutdown of plant is not yet provided to the assessment team. Hence, **Comment#19 is Open.** 20) The supportive evidence of Training records of trainings provided to company staff is not provided to the assessment team. Hence, **Comment#20 is Open.** Thus, **CL#01 is still Open.**
Project Proponent's response **Date:** 24-Apr-2024
1) Electricity generation records 2) Invoices for the monitoring period are provided to VVB 5) Calibration is still pending on PPs side 8) Technical specifications of battery and transformers are provided to VVB in the supporting package 9) Commissionning certificates are still pending on PPs side 11) PPA and amendments are provided to the VVB 13) Letter of declaration is provided to VVB 15) Evidence of Stakeholder consultation conducted during initial phase is provided (ESIA section 6 + minutes In annex) 17) Organization structure ppt is provided to VVB, employment proof is pending on PPs side 18) See PPA and amendments 19) Plant operations logbook is pending on PPs side 20) Training records are provided to VVB in the supporting package
Documentation provided by project proponent
Supporting package
VVB assessment **Date:** 15-May-2024
1) The electricity generation records evidences (monthly production statements) are now provided by PP to the assessment team, which were found to be appropriate and acceptable. Hence, **Comment#1 is Closed.**

2) The electricity export and import invoices for the monitoring period under consideration are now provided by the PP to assessment team, which were found to be appropriate and acceptable. Hence, **Comment#2 is Closed.**

5) The requested calibration certificate is still pending on PP's side. Hence, **Comment#5 is Open.**

8) The supportive evidence for technical specifications of Transformers and Batteries is now provided by the PP, which was found to be acceptable. Hence, **Comment#8 is Closed.**

9) The requested Commissioning certificates issued by the respective authority (for both initial phase and second phase) are not yet provided to the assessment team. Hence, **Comment#9 is Open.**

11) The requested Power Purchase Agreement (PPA) and it's amendments signed between JIRO SY RANO MALAGASY(JIRAMA) and GreenYellow Madagascar/NEA Ambatolampy are now provided by the PP to assessment team, which were found to be appropriate and acceptable. Hence, **Comment#11 is Closed.**

13) The requested Letter of declaration of no double counting is still not provided to the assessment team and not available in the evidence package provided. Hence, **Comment#13 is Open.**

15) The requested evidence of Local Stakeholder's consultations conducted in initial phase is now provided to the assessment team, which was found to be appropriate and acceptable. Hence, **Comment#15 is closed.**

17) The evidence of organization structure is now provided to the assessment team; however, the proofs of employment are still pending on PP's side. Hence, **Comment#17 is Open.**

18) The MR section 3.2.2 mentions the commercial agreement to be dated as 11/11/2020. But none of the PPA and its amendments are dated 11/11/2020. Hence, PP is requested to clarify to which agreement the MR is referring to and provide the same for assessment team's verification. Hence, **Comment#18 is Open.**

19) The Plant Operations logbook, providing details of any breakdowns/shutdown of plant is not yet provided to the assessment team. Hence, **Comment#19 is Open.**

20) The supportive evidence of Training records of trainings provided to company staff is now provided to the assessment team which were found to be appropriate and acceptable. Hence, **comment#20 is Closed.**

Thus, **CL#01 is still Open.**

Project Proponent's response	**Date:** 27-Jun-2024

5) Since no information regarding the back-up meters calibration requirements was available, a conservative factor was applied to the net electricity generation value, corresponding to the accuracy class of the meters : 0.2S (±0.2%) and 0.5S (±0.5%) for phase 2

9) For phase 1 : 10/07/2018 is justified from the document 'JIRAMA meters install 20180710', this was used for verif 1 as it can be seen in FVR of this valid+verif1.
For phase 2 : 17/08/2022 is justified from the document 'PV remise à 0 compteur phase 2 JIRAMA 17 08 22' which is the meters reset document.
For both phase, are provided : Conformity control PV from the Madagascar Electricity regulation Office, + the certificates of conformity from the madagascar ministry of energy and hydrocarbons For both phases, these documents were issued a several days beforehand of the meters installation/reset

13) Letter anti-double counting signed is provided to VVB in the package

17) A declaration regarding employment has been signed by the representative of GY Madagascar. The document is named "20240510_Construction phase attestation GreenYellow Madagascar"

18) Indeed, the amendment n°2 which stipulates the extension on the PPA does not include specific date. However, I found the date in the environmental autorisation from the ministry of hydrocarbures

and energy (phase 2), it is written before «1. OBJET» that the 2nd amendment from PPA is dating from 27th november 2020. 19) The mentioned list is provided to VVB : "relevés des défauts à jour" (list of events impacting production)"
Documentation provided by project proponent
Supporting package Updated ER ex-post
VVB assessment | **Date:** 12-Jul-2024
5) PP confirmed that the calibration certificates of backup and meters are not available. Hence, as a conservative approach, in line with para. 366(a) of the CDM VVS for PAs, version 3.0, PP has decided to apply a conservative error factor to the net electricity generation value corresponding to the accuracy class of meters. This was acceptable to the VVB team. However, it was noted that the accuracy class mentioned above in response and in MR & PD-MR by PP for initial phase is incorrect. The correct accuracy class for the backup meter of initial phase is also 0.5s as confirmed from meter photographs. So, the error factor applied in ER sheet for initial phase is incorrect. PP is requested to correct the accuracy class in project documentation and apply the correct error factor in ER sheet as commented. Hence, **Comment#5 is Open.** 9) The supportive evidence confirming the commissioning dates of initial and extension phase of the project are now provided by the PP and were found to be acceptable to the assessment team. Hence, **Comment#9 is Closed.** 13) The requested Letter of declaration of no double counting is now provided by the PP to the assessment team, which was found to be appropriate and acceptable. Hence, **Comment#13 is Closed.** 17) The requested evidence of employment, i.e. declaration regarding employment signed by the representative of GY Madagascar (now NEA Ambatolampy) is now provided by PP to the assessment team, which was found to be appropriate and acceptable. Hence, **Comment#17 is Closed.** 18) The clarification response provided by the PP regarding the commercial agreement was found to be correct and acceptable; also the date mentioned in section 3.2.2 of MR is now corrected. Hence, **Comment#18 is Closed.** 19) The requested evidence of breakdowns/shutdown records of plant is now provided by PP to the assessment team. Hence, **Comment#19 is Closed.** Thus, **CL#01 is still Open.**
Project Proponent's response | **Date:** 12-Aug-2024
5) VVB is right, the accuracy class for the backup meter of initial phase is also 0.5S. As a result, the error factor applied in the ER sheet for initial phase has been corrected accordingly, and the claimed ER volume decreased.
Documentation provided by project proponent

- *Updated ex-post ER sheet* - *Updated MR*
VVB assessment **Date:** 05/09/2024
5) PP has now corrected the accuracy class of meter for initial phase in the project documents as commented above and accordingly the correct conservative error factor of 0.5s has been applied in the ER sheet. This was found to be appropriate and acceptable to the assessment team. Hence, **Comment#5 is Closed.** **Thus, CL#01 Closed.**

CL ID	02	**Section no.**	N.A.	**Date:** 04-Dec-2023
Description of CL				
The project title is inconsistent with the project webpage and registered documents (PD-MR, etc). Please clarify.				
Project Proponent's response				**Date:** 16-Jan-2024
Please note that following the extension, the project name is being updated to "Ambatolampy Solar PV" as revised in the MR. Verra will be notified by email when verification is requested.				
Documentation provided by project proponent				
Updated MR				
VVB assessment				**Date:** 08-Mar-2024
Assessment team noted that due to the extension of existing plant capacity to a total of 40 MWp, the previous project title i.e. "Ambatolampy 20 MW solar PV" is no longer applicable, as it indicated the phase I capacity. Hence, in order to bring coherence, PP is updating the Project title to "Ambatolampy Solar PV" during the current verification. PP has sought a project deviation for the same and the registered PD-MR is being updated to reflect these changes. Also, PP has ensured that VERRA will be notified about this Project Title change through email at the time of submitting the documents of current verification to VERRA. Hence, based on the clarification provided by the PP and the documents supporting capacity extension, Assessment team confirms that the new project title is appropriate. Thus, **CL#02 is Closed.**				

CL ID	03	Section no.	1.10	Date: 04-Dec-2023
Description of CL				
In section 1.10 of the MR, it is specified that, "Carbon accreditation of Ambatolampy has been announced by GreenYellow on their website, as well as an ex-ante estimation of the avoided emissions" as a public statement for aiding the avoidance of Scope 3 emissions double claiming. PP to clarify whether this public statement has been provided/announced by the new company NEA Ambatolampy also.				
Project Proponent's response				**Date:** 16-Jan-2024
Not to our knowledge, however we do not think it is necessary in the end. Indeed, the project does not involve a supply chain as project scope is limited to the reduction of fossil fuel consumption thanks to renewable energy generation. Such reason has been added to section 1.10 of the MR.				
Documentation provided by project proponent				
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VVB assessment				**Date:** 08-Mar-2024
Assessment team will determine the opinion on this matter based on the revised MR template version 4.3. Hence, **CL#03 is Open.**				
Project Proponent's response				**Date:** 26-Apr-2024
Assessment team to check relevant sections in the revised Monitoring Report				
Documentation provided by project proponent				
Updated monitoring report				
VVB assessment				**Date:** 15-May-2024
The project proponent clarified that the project activity does not affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain and project scope is limited to the reduction of fossil fuel consumption as a result of renewable energy generation. This justification was found to be acceptable to the assessment team. Hence, **CL#03 is Closed.**				

CL ID	04	Section no.	2.1 & 2.2	Date: 04-Dec-2023
Description of CL				
1) In reference to section 2.1 of MR, PP to clarify whether any additional EIA assessment was done for the extension phase of project activity. If yes, the details of the same are missing in section 2.1 of MR. Please clarify. 2) In reference to section 2.2 of MR, PP to clarify whether any additional Local Stakeholder Consultation was done for the extension phase of project activity. If yes, the details of the same are missing in section 2.2 of MR. Please clarify. 3) In section 2.2 of MR, there are some concerns/comments mentioned which were raised by the stakeholders during the LSC and the ongoing communication.				

Kindly clarify how those concerns were resolved by the PP.
Project Proponent's response **Date:** 29Jan-2024
1) There has been an assessment report on the environmental commitment programme for the extension project. Also, an environmental approval from the Ministry of Energy and Hydrocarbons was issued for the second phase (extension) on 05/05/2021. Both documents (named 'PREE_Projet d'extension_Ambatolampy phase II_SFI_VF' and 'Autorisation environnementale_phase II') are provided, and this information was added to section 2.1 of the MR. 2) In the context of the extension, field investigations were carried out in order to agree individual and public consultations with all project stakeholders, with two missions : - Mission 1 from 03 to 07 December 2019: meeting with internal stakeholders, the Fokontany chief and subcontractors - Mission 2 from 10 January to mid-March 2020: meetings with the mayor, the client, the district chief, the local population and representatives of vulnerable groups. In the first mission, the main objectives were the identification of the major environmental and social issues of PPs activities, the expectations and concerns of the local population, PPs environmental commitment programme and explaining the project progress including the extension project. In the second mission, face-to-face interviews on the same themes that were mentioned during the first mission were caried out. A formal public hearing, chaired by local authorities, was organized to share general information with the local population and gather their opinions. Although these actions were not part of a formal additional LSC, they were documented and enabled the stakeholders involvement in the extension of the project. These missions were added to section 2.2 of the MR. More information on these two missions are available in the PREE 'Programme d'engagement environnemental'. 3) As detailed in section 2.2 of the MR, the comments received were duly considered in the project's development and preparation of its Environmental and Social Action Plan (ESAP). Its objective is to set out the key actions that need to be undertaken by the Project in order to achieve compliance with the applicable environmental and social standards, with performance standards listed in the section.
Documentation provided by project proponent
- *PREE_Projet d'extension_Ambatolampy phase II_SFI_VF* - *Autorisation Environnementale _Phase II* - *Updated MR*
VVB assessment **Date:** 08-Mar-2024
1) PP has submitted the report on environmental commitment programme for the extension phase ('PREE_Projet d'extension_Ambatolampy phase II_SFI_VF/ PREE 'Programme d'engagement environnemental, dated 27/05/2021) and the environmental approval from Ministry of Energy and Hydrocarbons for second phase ('Autorisation environnementale_phase II', dated 05/05/2021)) as an evidence for additional EIA assessment for phase II, which were found to be acceptable. The information about these reports in also included in the section 2.1 of the MR, which was found to be appropriate. Hence, **comment#1 is Closed.**

2) PP clarified that, although a separate formal LSC process was not conducted for extension phase, field investigations were carried out in order to agree individual and public consultations with all project stakeholders, with two missions during December 2019 and January to March 2020. PP has submitted the supporting document, i.e. report on environmental commitment programme for the extension phase ('Programme d'engagement environnemental, dated 27/05/2021) which confirms these details. Also, information about these missions is now included in the section 2.2 of the MR. This was found to be acceptable to the assessment team. Hence, **comment#2 is Closed.**

3) PP has included the information about how the comments raised during LSC process were taken into consideration during the project development and implementation in the section 2.2 of the MR and same was checked through "Simplified Environmental and Social Impact Assessment (ESIA) for a Solar Power Plant – Madagascar", dated September 2016 and CSR Reports submitted by the PP. Hence, this was found to be acceptable.

However, regarding the ongoing communications process through grievance register, assessment team noted that there are some additional comments in the registers, other than the comments currently mentioned in the MR, such as, "salaries not received", "lack of social work", "failure to build a health center by Green Yellow;", etc. PP is requested to clarify, how these comments were taken into consideration and what measures were undertaken to resolve these. Hence, **comment#3 is Open.**

Thus, CL#04 is still Open.

Project Proponent's response	**Date:** 25-Apr-2024

3) VVB to note that the salaries-related grievances were written outside the MP, in 2021. However, PPs have been asked about this and we'll revert to VVB regarding these.

Social work actions have been carried out as related in the table.

A health center was not constructed, but a mobile clinic was deployed, as well as medical equipment provided, as related in section 2.1.4 of the MR as well as the CSR activity report by PPs

Documentation provided by project proponent

CSR activity report NEA Ambatolampy

VVB assessment	**Date:** 15-May-2024

3) Project Proponent clarified that the comments raised during the ongoing communications have been taken into consideration and relevant measures are undertaken to resolve those, such as:

As a form of social work, actions on nutrition and food safety have been carried out by NEA Ambatolampy: agricultural training, fertilizer subsidies, canal cleaning and dike maintenance for agriculture. And for healthcare related comments, mobile clinics were deployed, and medical equipment were provided. Assessment Team confirmed this by checking the CSR reports provided by the PP.

However, regarding salary-related grievances, response from PP is still pending. Hence **comment#3 is Open.**

Thus, CL#04 is still open.

Project Proponent's response	Date: 07-Jun-2024
PPs were interviewed on the 07/05/2024 regarding the salaries-related issues for security employees. They confirmed that these cases have been settled : due salaries were paid by the Security company and the security guards have continued to operate on site afterwards. A proof letter is provided to VVB under the name 'CONFIRMATION DE PAIEMENT security payment proof'	
Documentation provided by project proponent	
Security payment proof letter	
VVB assessment	**Date:** 12-Jul-2024
PP has provided the proof letter confirming the settlements of pending salary payments duly signed by the Manager of security company, "Securpro". Assessment team checked the same and it was found to be appropriate and acceptable. Moreover, PPs were interviewed on 07/05/2024 regarding the salaries-related issues for security employees. They confirmed that those cases have been settled. Hence, based on the valid proof letter and justification from PP, **comment#3 is Closed.** Hence, **CL#04 is Closed.**	

CL ID	05	Section no.	3.2.2	Date: 04-Dec-2023
Description of CL				
1) As per the deviation 1 mentioned in the section 3.3.2 of MR, there is a change in the project capacity from 20MW to 40MW. As per VCS Standard, v.4.5, para 3.21.2.1), since there is a change in the additionality from the registered PD, it is required to have a revised PD for the deviation. The same is not submitted to the VVB assessment team. Please clarify. 2) As per section 3.2.2 of MR, the project title and the Project Proponent's name is being changed. So, in this regard, please clarify whether the given change is communicated to VERRA or any approvals are taken from them. 3) For the Justification of First of its kind approach for the additionality, the source of Wikipedia is not sufficient. PP shall provide additional viable resources supporting the first of its kind claim. 4) The details of PP name change as a part of project description deviation are missing in the section 3.2.2 of MR. Kindly clarify. 5) In the deviation 1 of section 3.2.2 of MR, it is specified that there will be no impact related to the applicability of the methodology. However, since the project is not a greenfield project anymore and during the phase extension, the BESS system is also installed at the project site. Hence, it shall comply with methodology applicability conditions related to the capacity addition and BESS. Kindly clarify. 6) In the deviation 1, PP is using the first of its kind approach for the demonstration of additionality. However, as per para. 12.(c). of the Tool 23, Additionality of first-of-its-kind project activities , v3.0, *"A proposed project activity is the first of its kind in the applicable geographical area if: The project participants selected a crediting period for the project activity that is "a maximum of 10 years with no option of renewal"."*				

This project opted for renewable crediting period (which can be renewed twice) during registration. Hence, PP to clarify how the project suffices the condition of the tool.

7) In reference to the deviation 1, for Baseline scenario it is mentioned that there is no impact. However, since capacity addition is being done during this MP (with BESS) and project is not a greenfield project activity anymore, it shall comply with baseline scenario conditions for capacity addition projects in line with section 5.2.2 of the methodology ACM0002, v.22.0.
Kindly clarify.

Project Proponent's response	**Date:** 25-Jan-2024

1) Revised PD is shared to VVB assessment team.
2) Please note that following the extension, the project name is being updated to "Ambatolampy Solar PV" as revised in the MR. Verra will be notified by email when verification is requested.
3) The ORE (Madagascar Electricity Regulatory Office) was contacted in early December 2023 in order to obtain an updated list of plants in the country. The Office responded and provided us an updated Excel document, with data from December 2022. This document, called 'ORE - SynoptiqueParcProduction2022 déf corr-090124' is shared to VVB and added as a source in the MR and revised PD.
4) Section 3.2.2 of the MR is updated to include the change of name of PPs
5) Applicability section has been updated in the revised PD (JPD-MR) and in the MR :
Methodology is applicable as per 2.2.3 (b) of the applied methodology.
Applicability conditions for capacity additions are fulfilled as the most plausible scenario is the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity (as per para 2.2.8 of the methodology)
6) Regarding additionality : the first phase remains unchanged, while the extension phase only uses FOIK method (see section 3.5 of the JPD-MR). Therefore, the crediting period of the initial phase remains unchanged (7 years renewable twice) while the extension phase of the project has a carbon accountability of 10 years fixed, from 17 august 2022 to 16 August 2032.
7) The version of the applied methodology, as per registered PD (JPD-MR) is version 20.0. Para 23 of the applied methodology is fulfilled as explained in section 3.2.2 of the MR as well as section 3.5 of the updated JPD-MR.

Documentation provided by project proponent

Updated MR

Revised PD

Excel document of list of existing plants provided by the ORE

VVB assessment	**Date:** 08-Mar-2024

1) As per the requirement of VCS Standard, v.4.5, para 3.21.2.1), PP has now submitted the revised Joint PD-MR for the deviation. Hence, **comment#1 is closed.**
2) Project proponent clarified that following the extension of the project capacity to a total of 40MWp, the project name is being updated to "Ambatolampy Solar PV" and the Project Proponent's name is also being changed during this verification from GreenYellow Madagascar to NEA Ambatolampy. PP has ensured that VERRA will be notified through email about these changes, at the time of submitting the documents of current verification to VERRA. This was found to be acceptable to the assessment team. Hence, **comment#2 is closed.**

3) PP submitted the 'ORE - SynoptiqueParcProduction2022 déf corr-090124' excel document provided by the ORE (Madagascar Electricity Regulatory Office), which was checked by the assessment team and found to be acceptable. However, In addition to this database, PP is kindly requested to provide the references of publicly available resources/news articles, etc. also. Hence, **Comment#3 is Open.** 4) PP has now updated the section 3.2.2 of the MR to include the details of PP name change as part of the project description deviation during current verification. Hence, **comment#4 is closed.** 5) Assessment team will re-check this point based on the revised MR. **Hence, Comment#5 is Open.** 6) Assessment team will re-check this point based on the revised MR. **Hence, Comment#6 is Open.** 7) Assessment team will re-check this point based on the revised MR. **Hence, Comment#7 is Open.** **Thus, CL#05 is Open.**
Project Proponent's response **Date:** 26-Apr-2024
3) Same constant status can be seen on the International Energy Agency website, on the profile of Madagascar: https://www.irena.org/-/media/Files/IRENA/Agency/Statistics/Statistical_Profiles/Africa/Madagascar_Africa_RE_SP.pdf Such publicly available reference was added in the footnote of the relevant section. VVB to also note that as per the International Energy Agency, in 2021, solar PV accounted for 1.4% of the electricity generation in Madagascar : https://www.iea.org/countries/madagascar/energy-mix 5) Please refer to CL08 below 6) The project is being updated regarding additionality, and now deviates to a crediting period of 10 years fixed for both phases of the project. Updated ex-ante ER calculation is provided to VVB. 7) Version of the applied methodology is v20.0. Please refer to CAR03 on this
Documentation provided by project proponent
Updated MR *Updated ex-ante ER sheet*
VVB assessment **Date:** 15-May-2024
3) PP has now included the references of publicly available resources as requested, in the section 3.2.2 of MR, which were found to be acceptable to the assessment team. Hence, **Comment#3 is Closed.** 5) Assessment team will re-check this point based on the clarification asked for CL08. **Hence, Comment#5 is Open.** 6) The crediting period of the project is now adapted to a total of 10 years fixed with no option for renewal, which a requirement of TOOL23. Hence, acceptable to the assessment team as per the requirement**. Hence, comment#06 is closed.** 7) The assessment team accepts that the version 20.0 is the applicable version for the project. However, this comment#7 is related to the baseline scenario conditions for capacity addition. Therefore, PP is requested to confirm about this point. Hence, **comment#7 is Open.**

Thus, CL#05 is Open.
Project Proponent's response **Date:** 04-Jun-2024
5) Please refer to CL08 7) The project activity is a greenfield activtity as per PDD. The extension is a deviation for the project. Therefore, this baseline scenario conditions for capacity addition, para 23 of the methodology v20, is not applicable. Also, regarding the context of the project extension (inclusion of BESS), it was decided to update the methodology version to v.21 as it is more realistic to the project.
Documentation provided by project proponent
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VVB assessment **Date:** 12-Jul-2024
5) The response provided by the PP in CL08 regarding the baseline scenario and capacity addition was found to be acceptable to the assessment team. It was noted that the project is extension of the initial phase and not a separate capacity addition. However, it was noted that the version of methodology ACM0002 is being updated from v.20 to v.22 in this revision, acknowledging the inclusion of BESS in the extension of the project. Therefore, project must demonstrate the compliance against all the applicability conditions of the latest version of methodology ACM0002, v.22.0. in the revised JPD-MR and provide respective assessment in the section 3.2.2 of MR. Hence, **Comment#5 is Open.** 7) The response provided by the PP regarding the baseline scenario and capacity addition was found to be acceptable to the assessment team. It was noted that the project extension is the deviation of the initial phase capacity and not a separate capacity addition. Therefore, the baseline scenario conditions for capacity addition, para 25 of the methodology v21 are not applicable and the baseline scenario is not affected. This justification was found to be appropriate and acceptable to the assessment team. However, it was noted that the version of methodology ACM0002 is being updated from v.20 to v.22 in this round, acknowledging the inclusion of BESS in the extension of the project. Therefore, project must demonstrate the compliance against all the applicability conditions of the latest version of methodology ACM0002, v.22.0. in the revised JPD-MR and provide respective assessment in the section 3.2.2 of MR. Hence, **Comment#7 is Open.** **Thus, CL#05 is Open.**
Project Proponent's response **Date:** 12-Aug-2024
5) Section 3.2.2 of the MR, as well as JPD-MR, are updated regarding applicability conditions of the project activity. These conditions now consider the BESS in the context of the extension, as per v21.0 of the applied methodology. 7) Same as above.
Documentation provided by project proponent

- *Updated JPD-MR* - *Updated MR*
VVB assessment | **Date:** 05-Sep-2024
5) In the revised project documents, PP has now correctly demonstrated the project's compliance against all the applicability conditions of methodology ACM0002, version 22.0 in the section 3.2 of JPD-MR and respective assessment in section 3.2.2 of MR. This was found to be appropriate and acceptable to the assessment team. Hence, **Comment#5 is Closed.** 7) In the revised project documents, PP has now correctly demonstrated the project's compliance against all the applicability conditions of methodology ACM0002, version 22.0 in the section 3.2 of JPD-MR and respective assessment in section 3.2.2 of MR. This was found to be appropriate and acceptable to the assessment team. Hence, **Comment#7 is Closed.** Thus, **CL#05 is Closed.**

CL ID	06	**Section no.**	4.1 & 4.2	**Date:** 04-Dec-2023
Description of CL				
1) In section 4.1 of MR, the tables of some parameters are missing ("The percentage share of total installed capacity of solar PV" and "The total installed capacity of solar PV"), when checked with MR of last MP and CDM PDD. Kindly clarify. 2) In section 4.2 of MR, for parameter "$EG_{facility,y}$", some error factor was applied due to lack of calibration information about backup meters in the previous MP. Please clarify whether that error factor is applicable during current MP also.				
Project Proponent's response | **Date:** 15-Feb-2024				
1) Indeed ; these parameters were added in section 4.1 of the MR. 2) The error factor is not applied yet, Project Proponents have been requested to provide recent calibration documents. If similarly to previous MP, there is a lack of calibration proof document, we will apply the error factor for the affected monitoring period as well.				
Documentation provided by project proponent				
Updated MR				
VVB assessment | **Date:** 08-Mar-2024				

1) PP has now updated the section 4.1 of MR to correctly include the tables of missing parameters. This was found to be appropriate and acceptable to the assessment team. Hence, **comment#1 is Closed.** 2) The requested information/calibration evidence is currently unavailable to the PP. Therefore, PP is requested to re-check and provide the requested evidence, otherwise the error factor needs to be applied for the current monitoring period. Hence, **comment#2 is Open.** Thus, **CL#06 is Open.**
Project Proponent's response **Date:** 24-Apr-2024
2) Calibration document is still pending on PP side.
Documentation provided by project proponent
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VVB assessment **Date:** 15-May-2024
2) The requested information/calibration evidence is currently unavailable to the PP. Therefore, PP is requested to re-check and provide the requested evidence, otherwise the error factor needs to be applied for the current monitoring period. Hence, **comment#2 is Open.** Thus, **CL#06 is Open.**
Project Proponent's response **Date:** 27-Jun-2024
2) Calibration evidence was not provided by PPs. As a response, as suggested by the VVB, an error factor is applied on the monitoring period values. The conservative factor was applied to the net electricity generation value, corresponding to the accuracy class of the meters : 0.2S (±0.2%) for phase 1 and 0.5S (±0.5%) for phase 2
Documentation provided by project proponent
Updated ER ex-post sheet *Updated MR*
VVB assessment **Date:** 12-Jul-2024
2) PP confirmed that the calibration certificates of backup meters are not available. Hence, as a conservative approach, in line with para. 366(a) of the CDM VVS for PAs, version 3.0, PP has decided to apply a conservative error factor to the net electricity generation value corresponding to the accuracy class of meters. This was acceptable to the VVB team. However, it was noted that the accuracy class mentioned above in response and in MR & PD-MR by PP for initial phase is incorrect. The correct accuracy class for the backup meter of initial phase is also 0.5s as confirmed from meter photographs. So, the error factor applied in ER sheet for initial phase is incorrect. PP is requested to correct the accuracy class in project documentation and apply the correct error factor in ER sheet as commented. Hence, **Comment#2 is Open.** Thus, **CL#06 is Open.**
Project Proponent's response **Date:** 12-Aug-2024

2) As discussed above in CL01, the accuracy class for the backup meter of initial phase is indeed also 0.5S. As a result, the error factor applied in the ER sheet for initial phase has been corrected accordingly, and the claimed ER volume decreased.
Documentation provided by project proponent
- *Updated ex-post ER sheet* - *Updated MR*
VVB assessment | **Date:** 05-Sep-2024
2) PP has now corrected the accuracy class of meter for initial phase in the project documents as commented above and accordingly the correct conservative error factor of 0.5s has been applied in the ER sheet. This was found to be appropriate and acceptable to the assessment team. Hence, **Comment#2 is Closed.** **Thus, CL#06 Closed.**

CL ID	07	**Section no.**	N.A.	**Date:** 04-Dec-2023
Description of CL				
During the remote audit, assessment team noticed that the Battery Energy Storage System (BESS) was installed at the project site during phase extension. However, there are no details included about this in the MR. Please clarify.				
Project Proponent's response | **Date:** 15-Feb-2024				
Correct, the following information has been added in section 1.11 of the revised JPD-MR, and 3.2.2 of the updated MR : The project extension also features the installation of 5MW/5MWh storage system batteries associated with the RIA (Réseau Interconnecté d'Antananarivo - Antananarivo Interconnected Grid), which will provide sufficient smoothing of the new plant's daily PV output. The aim is to smooth out PV variations due to intermittency over the day.				
Documentation provided by project proponent				
Updated MR Revised JPD-MR				
VVB assessment | **Date:** 08-Mar-2024				
Assessment team checked and noted that the information about the Battery Energy Storage System (BESS) is still not included section 1.11 of Joint PD-MR and section 3.1 of MR for current verification. Moreover, the technical specifications evidence of BESS is not provided to the assessment team and details are missing in the JPD-MR and MR. Hence, **CL#07 is Open.**				
Project Proponent's response | **Date:** 25-Apr-2024				

Information about the Battery Energy Storage System (BESS) is now included in section 1.11 of the JPD-MR and section 3.1 of the MR.
Documentation provided by project proponent
Updated JPD-MR Updated MR
VVB assessment | **Date:** 15-May-2024
The section 3.1 of MR and section 1.11 of the Joint PD-MR are now updated with the details of technical specifications of Battery Energy Storage System (BESS). These were cross-checked with the technical specification documents provided by the PP and found to be correct and acceptable. Thus, **CL#07 is Closed.**

CL ID	08	**Section no.**	N.A.	**Date:** 08-Mar-2024
Description of CL				
PP is requested to clarify, whether the combined margin emission factor is still applicable for the newly implemented extension phase, as it was determined at the time of registration of first phase in CDM. Kindly clarify, if the old emission factor is valid for the extension phase too.				
Project Proponent's response | **Date:** 02-Apr-2024				
VVB to note that the extension is an integral part of the initial project : as the second phase of the VCS-registered project, and not a separate new capacity addition project. Therefore, the original baseline context and emission factor still apply.				
Documentation provided by project proponent				
-				
VVB assessment | **Date:** 15-May-2024				
PP is requested to clarify the statement "Integral part of initial project". To substantiate that it was integral part of initial project at the time of registration with CDM, please provide supportive evidence. Also, in the registered PD-MR, it was not stated that the project activity is going to increase it's capacity in the future. So, clarification is requested whether the newly added capacity is a capacity addition or an extension of a greenfield project. Thus, **CL08 is Open.**				
Project Proponent's response | **Date:** 04-Jun-2024				
As PP was unable to substantiate the fact that extension was part of initial project, other than the fact that enough land was acquired for the two phases, the extension is considered as a project deviation as per VCS Standard v4.7 paragraph 3.21.2 1):				

the project deviated from its initial description in PD, as the deviation impacts the additionality the deviation shall be described and justified in a revised version of the project description. Furthermore, project developer applies the latest version of methodology, changing from ACM0002 v20 to v22.0 to acknowledge the BESS on the extension of the project. The newly added capacity is an extension of a greenfield project, but the baseline scenario is not affected, thus the emission factor does not need to be changed from and is still valid for the extension.
Documentation provided by project proponent
Updated MR *Updated ER ex-post sheet*

VVB assessment	**Date:** 30-Jul-2024
Based on the onsite visit assessment and interviews with PP representatives, it was evident that the additional capacity of 20MW along with BESS system are found well within the premises of previously acquired land. Further, the VVB team also noted that all the metering details were placed within the premises. The project is not a separate capacity addition but a deviation from the initially installed capacity from PD. The newly added capacity is an extension of greenfield plant and hence the baseline scenario and emission factor are not affected. Hence, based on the PP's response and VVB team's onsite visit assessment, it is concluded that the extension capacity is not a separate capacity addition and hence not affecting the baseline scenario and the emission factor determined during project registration is still valid and appropriate for the project activity. Thus, **CL#08 is closed.**	

Table 3. CAR from this verification

CAR ID	01	**Section no.**	1.1 & 1.8	**Date:** 04-Dec-2023
Description of CAR				
Kindly look into the following findings in the MR: 1) The dates are not in the format DD-Month-YYYY in line with MR template guidelines. 2) In the Audit History table under section 1.1 of MR, the date mentioned for "Verification No.1" and "TOTAL" row is inconsistent with the registered PD-MR. 3) In section 1.1, the value of electricity generation achieved during the current monitoring period is not provided. Please clarify. 4) In section 1.8, the details of the applicable tools are not provided as per template guidelines. Please clarify.				
Project Proponent's response				**Date:** 15-Feb-2024

1) This is now corrected throughout the updated MR 2) Correct, this has been revised in the section 3) Electricity generation achieved has been added to section 1.1. 4) Tools are now provided in section 1.8.
Documentation provided by project proponent
Updated MR
VVB assessment | **Date:** 08-Mar-2024
1) The dates are now corrected in the updated MR as per the format required by MR template guidelines. Hence, **Comment#1 is Closed.** 2) the date mentioned for "Verification No.1" and "TOTAL" row of the audit history table are now correctly revised in the updated MR by PP. Hence, **comment#2 is Closed.** 3) The value of electricity generation achieved during the current monitoring period is now included in the section 1.1 of the MR. Hence, **comment#3 is closed.** 4) The details of the tools applied during the registration are now correctly included in section 1.8 of the MR as per template guidelines. Hence, **comment#4 is closed.** **Thus, CAR#01 is closed.**

CAR ID	02	**Section no.**	1.11 & ER sheet	**Date:** 04-Dec-2023
Description of CAR				
Under table no. 2, Sustainable Development Contributions: 1) In column no. 4 (Net Impact on SDG Indicator), the net impact statement (i.e., whether Implemented activities to decrease or increase) as per MR template guidelines is not provided. 2) For SDG indicator 7.2, the TOTAL cumulative value is missing in "Contributions Over Project Lifetime" column. Kindly review. 3) For SDG indicator 13.0, the ER value of MP2 mentioned in Contributions Over Project Lifetime column is inconsistent with the MR of MP2 available on project webpage. Also, the total cumulative value is incorrect. Kindly review. 4) The SDG contributions results are not included in ER sheet.				
Project Proponent's response				**Date:** 15-Feb-2024
1) In the cited section, net impact statement has been added for each SDG. 2) Total cumulative value has been added for SDG 7 3) VVB is right, the value is now corrected 4) The same SDG contributions are now included in the updated ex-post ER sheet				
Documentation provided by project proponent				

Updated MR Updated ex-post ER sheet
VVB assessment **Date:** 08-Mar-2024
1) The net impact statement (i.e., whether Implemented activities to decrease or increase) as per MR template guidelines is now included in the column no. 4 (Net Impact on SDG Indicator) of the Sustainable Development Contributions table. This was found to be correct and acceptable to the assessment team. Hence, **Comment#1 is closed.** 2) The correct TOTAL cumulative value is now included in "Contributions Over Project Lifetime" column for SDG indicator 7.2. This was found to be correct and acceptable to the assessment team. Hence, **Comment#2 is closed.** 3) PP has done the necessary corrections for the SDG indicator 13.0, for ER value of MP2 and TOTAL cumulative value. Assessment team verified these values and which were found to be correct. Hence, **Comment#3 is closed.** 4) PP has now included the SDG contribution results in the ER sheet as requested. Hence, **comment#4 is closed.** Thus, **CAR#02 is closed.**

CAR ID	03	**Section no.**	3.1 & 3.2.2	**Date:** 04-Dec-2023
Description of CAR				
Kindly look into the following findings in the MR: 1) In section 3.1 of monitoring report, the technical specifications details of PV components (solar panels, Inverters, transformers, batteries, etc.) are not provided. Please review. 2) In section 3.1, it is specified that there are no changes on the project entity. But in actual, there are some changes in the PP name. Hence, CAR is sought. 3) In section 3.2.2 of MR, the version no. of methodology ACM0002 is inconsistent with version mentioned in section 1.8 of MR and inconsistent with the registered PD-MR.				
Project Proponent's response				**Date:** 15-Feb-2024
1) Technical specifications details of PV components are now provided in section 3.1 of the MR. 2) Correct, the section has been updated to reflect the change of PPs name. 3) The version of the methodology used is v20.0. This has been corrected throughout the MR				
Documentation provided by project proponent				
Updated MR				
VVB assessment				**Date:** 08-Mar-2024

1) The technical specifications details of solar panels, inverters and transformers are now included by the PP in the section 3.1 of MR. However, details about Battey Energy Storage Systems (BESS) are missing in the MR. Also, the supportive evidence of these batteries and transformers in not provided. Hence, **Comment#1 is Open.** 2) The section 3.1 of MR is now revised by the PP to include the details about PP name change. Assessment team verified the same by referring to updated MR and PP name change document. Hence, **Comment#2 is closed.** 3) There is some ambiguity about the version of methodology. The CDM PDD and MR of previous MP indicates the version to be v.19.0, while registered VCS PD-MR mentions version 20.0. PP is requested to clarify about this inconsistency between documents and confirm about the correct applicable version. Hence, **Comment#3 is Open.** **Thus, CAR#03 is Open.**
Project Proponent's response **Date:** 25-Apr-2024
1) Specifications of the Battery Energy Storage System (BESS) is now included in the relevant sections of the joint PD-MR and MR. Supportive documents of BESS and transformers are provided to the VVB. 2) N/A 3) Indeed, v19.0 of the methodology was applied to the CDM-PDD at the time of CDM validation. V20.0 is the correct version of the methodology since it was used for project update in the context of VCS gap validation. V19.0 was erroneously mentioned in the MR of the second monitoring period.
Documentation provided by project proponent
Revised Joint PD-MR *Revised MR*
VVB assessment **Date:** 15-May-2024
1) The section 3.1 of the MR is now revised with the technical specifications details of Battey Energy Storage Systems (BESS). The same are included in the section 1.11 of the Joint PD-MR also. PP has submitted the supportive evidence of the technical specifications of the BESS and transformers. These were found to be appropriate and acceptable to the assessment team. Hence, **Comment#1 is closed.** 3) Project proponent clarified that, v19.0 of the methodology was applied to the CDM-PDD at the time of CDM validation and v20.0 was used for project update in the context of VCS gap validation. So, v.20.0 is the correct version of the methodology. Moreover, it was noted V19.0 was erroneously mentioned in the MR of the second monitoring period. Assessment team found this justification to be correct and acceptable. Hence, **Comment#3 is closed.** Thus, **CAR#03 is closed.**

CAR ID	04	Section no.	4.3, 5.1	Date: 04-Dec-2023

Description of CAR

Please look into the following findings:

1) In section 4.3, the information on the procedures used for handling any internal auditing performed and any non-conformities identified is missing. Please clarify.

2) In section 5.1 of MR, in the table of "Calculation of Baseline Emissions" the value of "Invoices prod phase 2 (kWh)" is mentioned 0 for June 2022 and July 2022, when the phase 2 was commissioned in June 2022 itself. Kindly clarify.

3) In section 5.1 of MR, in the table of "Calculation of Baseline Emissions" the TOTAL row for the table is not provided.

Project Proponent's response	Date: 15-Feb-2024

1) This information has been asked to PPs. It will be provided to VVB.

2) This has been revised in the ER sheet and in section 5.1 of the MR ; actual start date of the extension is 17/08/2022

3) The TOTAL row of the table has now been added

Documentation provided by project proponent

Updated MR

Updated ER sheet

VVB assessment	Date: 08-Mar-2024

1) The requested information about the procedures used for handling any internal auditing performed and any non-conformities identified is currently not available to the consultant company. Therefore, they are requested to confirm about this information and include in the section 4.3 of MR in line with MR template guidelines. Hence, **comment#1 is Open.**

2) PP had mistakenly mentioned an incorrect date as project start date for extension phase. The correct start date of the extension phase is 17/08/2022. Assessment team verified this date from the meter commissioning report dated 17/08/2022*("PV remise à 0 compteur phase 2 JIRAMA 17 08 22").* This was found to be acceptable. PP also revised the ER sheet and section 5.1 of the MR to include the correct start date of extension phase. Hence, **comment#2 is closed.**

3) The TOTAL row is now included in the table of "Calculation of Baseline Emissions" of section 5.1 of MR by the PP. Hence, **comment#3 is closed.**

Thus, **CAR#04 is Open.**

Project Proponent's response	Date: 24-Apr-2024

1) Procedures used for handling any internal auditing performed have been asked to PPs. We will revert on this
Documentation provided by project proponent
-

VVB assessment	**Date:** 16-May-2024
1) The requested information about the procedures used for handling any internal auditing performed and any non-conformities identified is currently not available to the consultant company. Therefore, they are requested to confirm about this information and include in the section 4.3 of MR in line with MR template guidelines. Hence, **comment#1 is still Open.** Thus, **CAR#04 is Open.**	

Project Proponent's response	**Date:** 04-Jun-2024
1) No internal audit was carried out by the project developers during the years 2022 and 2023. However, internal audit process is currently being formalized and implemented, for a first occurrence during the year 2024. This will be reflected in the following monitoring periods. This information was added in the updated Monitoring Report, section 4.3.	

Documentation provided by project proponent
Updated MR

VVB assessment	**Date:** 12-Jul-2024
1) The requested information about the procedures used for handling any internal auditing performed and any non-conformities is now included in the section 4.3 of the MR. PP confirmed that no internal audit was carried out during the years 2022 and 2023. However, internal audit process is currently being formalized and implemented, for a first occurrence during the year 2024. This will be reflected in the following monitoring periods. The justification provided by the PP was found to be appropriate and acceptable to assessment team. Hence, **Comment#1 is closed.** Thus, **CAR#04 is Closed.**	

CAR ID	05	Section no.	ER sheet	Date: 04-Dec-2023
Description of CAR				
1) The ER sheet has not provided a comparison between Ex-ante calculations for the current MP under consideration and Ex-Post ER calculations. Kindly revise and provide the same. 2) In the Consumption value column of the tab "Phase ini" of ER sheet, the appropriate formula is not applied for the months Jan-23, Feb-23 and Mar-23 in the cells E17, E18 and E19. Kindly review.				
Project Proponent's response				**Date:** 15-Feb-2024
1) The ex-post ER sheet has been updated to provide the calculations of ex-ante ER sheet and the percent difference. 2) This has been revised in the ex-post ER sheet, tab 'phase ini'				
Documentation provided by project proponent				
Updated ex-post ER sheet				
VVB assessment				**Date:** 08-Mar-2024
1) PP has now revised the ER sheet, to include a comparison between Ex-ante ER calculations for the current MP and Ex-Post ER calculations. However, assessment team identified that the expected ex-ante ER values taken for phase extension are inconsistent with the updated Ex-ante Extension excel sheet and updated JPD-MR submitted in the evidence pack. Therefore, the comparison provided in the ER sheet is incorrect. Thus, PP is requested to review these comparison calculations. Hence, **comment#01 is Open.** 2) PP has revised the ex-post ER sheet to apply the appropriate formula in consumption values column for the months of Jan-23, Feb-23 and Mar-23 in the cells E17, E18 and E19 of "Phase ini" of ER sheet, which was found to be correct and acceptable to the assessment team. Hence, **comment#02 is Closed.** Thus, **CAR#05 is Open.**				
Project Proponent's response				**Date:** 22-Apr-2024
1) The ex-ante calculations in the MR have been revised to match with the ex-ante ER sheet. These were also updated following the switch to a 10-year fixed crediting period. The comparison section was updated also.				
Documentation provided by project proponent				
Ex-ante ER sheet *Updated MR*				
VVB assessment				**Date:** 15-May-2024

1) Assessment team checked the revised ex-ante excel sheet and found that the calculations are now corrected appropriately and adapted to the 10-year crediting period cycle. However, there is inconsistency in the approach followed/formulae used for the estimation of $EG_{PJ,y}$ for initial phase and extension phase(columns C and F respectively). Therefore, PP is kindly requested to homogenize the approach followed for both the phases and confirm whether there is any impact on estimated emission reductions due to change in the calculation approach for $EG_{PJ,y}$ Hence, **Comment#01 is Open.** Thus, **CAR#05 is Open.**
Project Proponent's response **Date:** 04-Jun-2024
1) Now the formulas used to calculate the estimation of $EG_{PJ,y}$ are homogeneous for initial phase and extension phase. It indeed had an impact on ex ante ER, which have been updated in JPD-MR
Documentation provided by project proponent
Updated ex-ante ER sheet
VVB assessment **Date:** 12-Jul-2024
1) The ex-ante ER sheet is now updated by the PP to homogenise the formulae applied for the estimation of $EG_{PJ,y}$ for initial phase and extension phase(columns C and F respectively). The calculations in the revised ER sheet were found to be correct and hence acceptable to the assessment team. Hence, **Comment#01 is Closed.** Thus, **CAR#05 is Closed.**

CAR ID	06	**Section no.**	N.A.	**Date:** 04-Dec-2023
Description of CAR				
Please refer to the additional comments in the MR and ER sheet and resolve the same.				
Project Proponent's response				**Date:** 15-Feb-2024
The additional comments in the MR and ER sheet have been responded. The majority has been resolved, and a few remaining (i.e. waiting for PPs additional documents) are still open.				
Documentation provided by project proponent				
Updated MR and ER sheet				
VVB assessment				**Date:** 08-Mar-2024
The comments in the MR, ER sheet and the newly submitted JPD-MR are not closed yet. The open comments require PP's attention. Hence, **CAR#06 is Open.**				
Project Proponent's response				**Date:** 25-Apr-2024

VVB to assess the updated documents, although some comments are still pending.
Documentation provided by project proponent
Updated MR, Joint PD-MR and ER sheet
VVB assessment **Date:** 15-May-2024
The comments in the MR, ER sheets and the revised JPD-MR are not closed yet. The open comments require PP's attention. Hence, **CAR#06 is Open.**
Project Proponent's response **Date:** 27-Jun-2024
Comments in the updated JPD-MR as well as MR of MP3 have been answered. Only a few are remaining, and will be assessed during on site audit in late July.
Documentation provided by project proponent
Updated JPD-MR *Updated MR*
VVB assessment **Date:** 12-Jul-2024
The comments in the MR, ER sheets and the revised JPD-MR are not closed yet. The open comments require PP's attention. Hence, **CAR#06 is Open.**
Project Proponent's response **Date:** 12-Aug-2024
Comments in MR, ER sheets and updated JPD-MR have been responded for VVB assessment
Documentation provided by project proponent
Updated MR *Updated JPD-MR* *Updated ex ante ER sheet* *Updated ex post ER sheet*
VVB assessment **Date:** 05-Sep-2024
The comments in the MR, revised JPD-MR and ER sheet are now resolved by the PP. Assessment team checked the revised JPD-MR, MR and ER sheet and found that appropriate corrections and clarifications are now provided by the PP at the relevant places. Thus, **CAR#06 is closed.**

CAR ID	07	Section no.	N.A.	Date: 08-Mar-2024
Description of CAR				
1. The VCS MR template version 4.2 is now obsolete and no longer applicable. Therefore, PP is kindly requested to transition the MR to the latest applicable template version, i.e. v.4.3, taking into consideration all the template guidelines to complete the report. 2. The revised VCS joint PD-MR provided in the evidence pack as a result of project description deviations sought, is submitted in the template version 4.0, which is now obsolete. PP is therefore requested to clarify whether this version is still applicable or should be revised.				
Project Proponent's response				**Date:** 25-Apr-2024
1. MR is now updated to version 4.3 2. The revised joint PD-MR provided is applying the relevant template at the time of the gap validation.				
Documentation provided by project proponent				
Updated MR *Revised Joint PD-MR*				
VVB assessment				**Date:** 15-May-2024
1) PP has now updated the MR to the latest applicable VCS MR template version, i.e. v.4.3. which was found to be acceptable to the assessment team. Hence, **Comment#01 is Closed.** 2) PP is requested to update with the latest version of VCS PD form with respect to these deviations. Hence, **Comment#02 is Open.** **Thus, CAR07 is Open.**				
Project Proponent's response				**Date:** 06-Jun-2024
2) As per VCS Standard v 4.7 in the case of a project deviation, such as an extension, a project description revision is needed (paragraph 3.21.2 1)) but at no point is it suggested to change the template of PD as the original PD is still valid.				
Documentation provided by project proponent				
-				
VVB assessment				**Date:** 12-Jul-2024

2) The response provided by the PP regarding update of PD template was found to be acceptable. It was noted that in the case of a project deviation, a project description revision is needed (as per paragraph 3.21.2 1 of VCS Standard v 4.7), it is not suggested to change the template of PD in the standard. Hence, this was found be acceptable. Hence, **Comment#02 is Closed.** **Thus, CAR07 is Closed.**

CAR ID	08	**Section no.**	4.2 of MR	**Date:** 20-May-2024
Description of CAR				
Kindly look into the following findings in the MR: 1) Assessment team checked the photographs of backup meters (JIRAMA) for both the initial phase and extension phase submitted in the evidence pack and found the accuracy class on meters to be 0.5S; however, it is stated as 0.2S in the section 4.2 of MR. PP is requested clarify about this inconsistency. 2) Assessment team checked the meter photographs of extension phase submitted in the evidence pack and noted the meter numbers to be 3507576049226 (main meter) and 012000005522 (backup meter). However, the meter numbers mentioned in the section 4.2 of MR do not match with this information. PP is requested clarify about this inconsistency.				
Project Proponent's response				**Date:** 27-Jun-2024
1) VVB is right, accuracy class of back-up meters for both initial and extension phases is updated to 0.5S *2)* Photographs of meters were checked, VVB is right as well. Table is updated with correct ID numbers of meters.				
Documentation provided by project proponent				
Updated MR				
VVB assessment				**Date:** 12-Jul-2024
1) PP has corrected the accuracy class of backup meters in line with actual meter photographs. This was found to be correct and acceptable to the assessment team. Hence, **Comment#01 is Closed.** 2) The table in section 4.2 of MR providing information about electricity meters is now revised with the correct meter numbers. These were cross checked with the meter photographs and were found to be correct. Hence, **Comment#02 is Closed.** **Thus, CAR08 is Closed.**				

CAR ID	09	Section no.	N.A.	Date: 30-Jul-2024

Description of CAR

Findings based on the onsite audit observations:

1) During the onsite inspection conducted by VVB team, it was observed that there are total 7 meters installed at the project plant (4 Main meters, 2 check meters and 1 import meter), whereas in the MR and JPD-MR only 4 meters are indicated (2 main and 2 backup). PP is requested to clarify about this inconsistency and why the details of rest of the meters are not described in the MR and JPD-MR? The monitoring plan needs to be revised to represent the actual monitoring system in place and the description shall be included in the project description deviations. Kindly review and provide the supportive evidences too about meter details (which were not indicated in MR and JPD-MR) and respective calibration information.

2) During onsite inspection conducted by the VVB team, it was observed that for the cleaning of solar modules, water from a well located within plant boundary is used. The supply of cleaning water is from that well. With the use of water tanker truck which uses diesel as fuel, the solar PV panels were cleaned everyday accordingly. Further, it was observed that there was another petrol electric generator which was supplying electricity to the water jet pump at the site while spraying the water for cleaning of the panels.

   PP is requested to clarify why the project emissions from above mentioned process are not considered (i.e. project emissions due to diesel used as fuel for water tanker truck and petrol used in electricity generator for water jet pressure).

   The calculations shall be revised to consider the project emission from fossil fuels and resultantly the monitoring plan for monitoring of the petrol and diesel consumption and trips of water tanker truck. The relevant description shall be included in project description deviations too. Kindly review and provide the respective evidence also supporting calculations data.

Project Proponent's response	Date: 29-Aug-2024

1) After On-site visit and further discussions with PPs, there are 7 meters indeed: 3 for each phase (1 main, 1 check and 1 internal control), measuring the net electrical energy delivered to RI-Tana grid and located before 20/63kV transformer at JIRAMA substation. They also measure the consumption of the plant, including BESS charging from the grid. The 7th meter, measuring office consumption, including lights, cameras, etc. (labelled as 'invoiced imports' on the ER sheet), is located at the JIRAMA VIE base, next to the offices. The specifications of these meters are given in the monitoring equipment row of the EG(facility) parameter. Since no information regarding the check and internal control meters calibration requirements was available, a conservative factor was applied to the net electricity generation value, corresponding to the accuracy class of the check meters : 0.5S (±0.5%) for both phases

2) The practice on site regarding cleaning of solar modules, including the source of the water, the equipments used for the cleaning and the fuel used by those equipments, are now described in the 2.4 section 'ecosystem health' of the safeguards part of the MR. Data on fuel consumption on site related to the cleaning of the panels is only compiled for information purpose since early 2024 onwards (excel sheet provided to VVB in the package)

Regarding the consideration of the associated emissions, VVB to note that such auxiliary operations have never been expected to be included in monitoring plan by standard/methodologies in any renewable energy project; in fact:

Section 5.4.1 'Emissions from fossil fuel combustion' of the applied methodology, version 21.0, states :

36. For geothermal or solar thermal projects, which also use fossil fuels for electricity generation, CO2 emissions from the combustion of fossil fuels shall be accounted for as project emissions (PEFF,y).

37. For all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected.

38. PEFF,y shall be calculated as per TOOL03.

Regarding the Ambatolampy project, tank truck and generator do not generate electricity for the grid, and the project is a Solar PV instead of the technologies cited. Also, according to paragraph 37. Emissions from back up generator can be neglected, therefore the ones related to solar panel cleaning, even less significant, are all the more negligible as well. Finally, in version 03.0 of the tool03 cited in paragraph 37, no requirement about vehicles or cleaning emissions is mentioned.

Therefore, emissions from the cleaning process and associated equipment is not considered as project emissions.

Documentation provided by project proponent

- *Updated MR*
- *Updated JPD-MR*
- *Excel sheet of 2024 KPIs with fuel consumption*

VVB assessment	**Date:** 05-Sep-2024

1) In accordance with the onsite visit observations, PP has now amended the monitoring equipment information in the MR and revised JPD-MR. Assessment Team cross-checked the provided information by checking the onsite meter photographs and manufacturer's technical specifications and found to be correct. Thus, the justification provided by the PP and corrections made in project documentation were found to be appropriate and acceptable to the assessment team. Hence, **Comment#1 is Closed.**

2) The justification provided by the PP regarding fuel consumption in auxiliary operations in reference to methodology requirements is found to be appropriate. The emissions from such consumption are negligible and not necessarily to be monitored as per the applied methodology.

   Therefore, the explanation provided by the PP is appropriate and acceptable to the assessment team. Hence, **Comment#2 is Closed.**

Thus, **CAR#09 is Closed.**

Table 4. FARs from this Project Verification

FAR ID	xx	Section no.		Date: DD-Month-YYYY
Description of FAR				
NA				
Project participant response				Date: DD-Month-YYYY
NA				
Documentation provided by project participant				
NA				
VVB assessment				Date: DD-Month-YYYY
NA				

APPENDIX 4: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the LGAI Technological Center S.A. (Applus+ Certification) procedures and policies, that are in accordance with the ISO 14065:2020 regulatory provisions.

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center S.A. (Applus+ Certification) has composed an assessment team in accordance to compliance with the contract review and Assessment Team appointment rules in the internal Quality Management System of LGAI Technological Center S.A. (Applus+ Certification) as well as in compliance with the applicable requirements in the Accreditation Standard.

The composition of audit team (Applus+ Certification's verification team) has been approved by the LGAI Technological Center S.A. (Applus+ Certification) Central site during its Contract Review process, ensuring that the required skills and capabilities are covered by the team.

The qualification levels for Assessment Team members that are assigned by aforementioned appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training, TEiT for Technical Expert in Training, etc.).

The Sectoral Scopes / Technical Areas required knowledge linked to the applied methodology(ies) is covered by the Assessment Team as shown below:

No.	Role	Type of resource	Last name	First name	**Affiliation** (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings

1.	Lead Auditor (LA), Technical Expert (TE)	IR	Singh	N. Premjit	LGAI Technological Center S.A. (Applus+ Certification)	Yes	Yes	Yes	Yes
2.	Auditor (A)	IR	Gaikwad	Saurabh	LGAI Technological Center S.A. (Applus+ Certification)	Yes	No[64]	Yes	Yes
3.	Local Support	EI	Raharilaza	Nathalie	LGAI Technological Center S.A. (Applus+ Certification)	No	Yes	Yes	No

Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer (TR), Technical Expert (TE)	EI	Xue	Denny	LGAI Technological Center S.A. (Applus+ Certification)
2.	Approver	IR	Calle de Miguel	Agustin	LGAI Technological Center S.A. (Applus+ Certification)

Short CVs of the Team:

Dr. N. Premjit Singh	Dr. N Premjit Singh has a PhD in Mechanical Engineering from the Indian Institute of Technology (IIT) Madras, Chennai, India. M.Tech in Energy Technology, Tezpur University, Napaam, India, and B.Tech in Mechanical Engineering, NERIST, Nirjuli, India. He has extensive experience of about 8 years with DOEs, including UNFCCC CDM and other carbon related schemes (e.g., VCS, GS, GCC), and 5 years+ in research projects, renewable energy, and energy audits. In Applus+ as an internal staff member since March 2023, he has been the Product Assurance Manager for CDM/VCS/GS4GG/GCC Department to ensure the quality of the performance of different assessments, coordinate the global team for technical reviews, and

[64] Participated in the remote audit conducted on 24-November-2024.

	identify the training needs for the auditors and technical reviewers to improve the quality of reports. He holds experience as a Lead Auditor, Validator and Verifier for GHG mitigation projects and programmes of activities in Sectoral Scope 1.2 (Renewables) and 3.1. (Energy Demand) and is qualified as per Applus+ procedures as Lead Auditor, Validator, Verifier, Technical Expert for SS/TA 1.2. and Technical Reviewer. Dr. N Premjit Singh is based in Gurugram, India. Dr. N Premjit Singh participated as part of the Audit Team as Lead Auditor and Technical Expert.
Mr. Saurabh Gaikwad	Mr. Saurabh Gaikwad holds a Bachelor of Technology (B. Tech) degree in Environmental Engineering from KIT's College of Engineering in Kolhapur, Maharashtra, India. With more than 2.5 years of experience, he has worked extensively in the field of Carbon Markets and Climate Change, specifically focusing on UNFCCC CDM and other carbon-related schemes such as VCS, GS, GCC, etc. During this time, he has been involved in audit teams for various projects under CDM/VCS/GS/GCC, assuming the roles of Trainee Validator, Verifier, and Auditor in Training. Since June 2022, Mr. Saurabh Gaikwad has been working at Applus+ Certification as Technical Support for the CDM Department. In this role, he actively participates in different stages of the VVC processes and conducts administrative reviews of final submission documents and post submission registry findings reviews to ensure the quality of reports, project documents and compliance with standard requirements. Additionally, he serves as Auditor and Technical Expert for the Validation and Verification of Project Activities, encompassing both renewable and non-renewable projects, under the CDM/VCS/GS4GG/GCC, etc. programs. Mr. Saurabh Gaikwad is based in Pune, India. Mr. Saurabh Gaikwad participated as part of the Audit Team as Auditor (A).
Ms. Nathalie Raharilaza	Ms. Nathalie Raharilaza is a local/regional support contracted by the VVB in order to provide support with local context of Madagascar and if necessary to mitigate the risks from some stakeholders not being able to express adequately in English but in French or local language when conducting the Validation and/or Verification interviews. She provided support to perform the interviews to the project's stakeholders, in coordination with the VVB's Audit team.

Mr. Denny Xue	Mr. Denny Xue (Master's Degree in Environmental Engineering, Bachelor's Degree in Thermal Engineering) is an Auditor appointed by Applus+ Certification (LGAI Technological Center, S.A) for the GHG project assessment, auditing and technical review. He has more than 10 years of work experience in CDM/GS4GG/VCS project assessment and technical review with Applus+. Before he joined Applus+ Certification (LGAI Technological Center, S.A), he has been working for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development. Mr. Denny Xue is based in Shanghai, China. Mr. Denny Xue participates as part of the Technical Review experts' panel.

APPENDIX 5: 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
GY Madagascar	Green Yellow Madagscar
JIRAMA	Jiro Sy Rano Malagasy
NEA Ambatolampy	New Energy Africa Ambatolampy
PD	Project Description
JPD-MR	Joint Project Description and Monitoring Report
PP	Project Proponent
QA/QC	Quality Assurance and Quality Control
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 6: BREAKDOWN RECORDS

Period	Description
10-December-2021 until 05-May-2023	Unavailability of an inverter which lasted from 10-December-2021 until 05-May-2023 on the initial tranche of the plant. The faulty inverter was sent in Europe for repair and was sent back on 22-February-2023; its return to service was effective on 05-May-2023. This unavailability therefore lasted during most of the monitoring period and impacted the plant's production on its initial phase.
June 2023	- Default of a fan during the second half of the month. - Annual preventive maintenance was carried out, affecting electricity production (initial phase)
July 2023	Failure of a fan during the first 17 days (initial phase)
October 2023	Failure of a fan (initial phase)
November 2023	Failure of a protection cell during the whole month (initial phase)
December 2023	Failure of a protection cell during the whole month (initial phase)