



OFF GRID SOLAR PV PROJECT AT IAMGOLD ESSAKANE SA GOLD MINE



Document Prepared By: 4K Earth Science Private Limited

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Client	Essakane Solar S.A.S.
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Summary:

4K Earth Science Private Limited (4KES) has been contracted by, “Essakane Solar S.A.S.” to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported from ‘Off grid Solar PV project at IAMGOLD Essakane SA Gold Mine’ for the monitoring period 01/07/2022 to 31/12/2023 in the initial monitoring report version 1.0, date 07/03/2024.

“Off-grid Solar PV project at IAMGOLD Essakane SA Gold Mine” (hereafter referred to as the “Project” or “Project Activity”) is a small-scale project activity, which involves the development, construction and operation by Essakane Solar S.A.S. of a greenfield solar PV plant with a total installed capacity of 14.928 MWp at the Essakane gold mine, which is in the Sahel region of Burkina Faso about 330 km North-East from Ouagadougou.

Implementation status of the project activity has been verified during the remote interview, supportive for commissioning /12/ and photos /20/.

Verification team has verified the capacity of the project activity by Microsoft Teams remote interview, technical specification /11/, photographs /20/ and Monthly reports from O&M Contractor /25/ etc.

¹ Standard used for the verification while the applicable standard for the project at the time of registration is version 4.1.

The net electricity generated from this project is supplied to the buyer (IAMGOLD ESSAKANE S.A.) and PPA is signed between PP and IAMGOLD ESSAKANE S.A. (buyer) /18/ which is still valid. Operation and Maintenance of the project plant is done by Wartsila Burkina Faso as verified from O&M Contract /19/.

The project was commissioned on 01/06/2018 as verified from commissioning certificate /12/. During current monitoring period i.e. from 01/07/2022 to 31/12/2023, the project activity has supplied 33,974 MWh net electricity to the buyer, there by resulted in emission reduction of 27,179 tCO₂e. The monitoring period subject to this monitoring report is inclusive of first and last day of period.

A risk based approach has been followed to perform the 4th periodic verification of the project activity. In the course of the verification, 02 Corrective Action Requests (CARs) and 00 Clarification (CL) were raised.

The management of the 'Essakane Solar S.A.S.' responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project final monitoring report Version 1.1 dated 02/05/2024. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the Essakane Solar S.A.S. The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report Version 1.1 dated 02/05/2024.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01/07/2022 to 31/12/2023 based on the reported emission reductions in the final monitoring report Version 1.1 dated 02/05/2024 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, 4KES planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

4KES confirms the following;

Reporting period: 01/07/2022 to 31/12/2023

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU (tCO ₂ e)	Removal VCU (tCO ₂ e)	Total VCUs (tCO ₂ e)
2022 (01-July-2022 to 31-December-2022)	9,132	0	0	9,132	0	9,132
2023 (01-January-2023 to 31-December-2023)	18,047	0	0	18,047	0	18,047
Total	27,179	0	0	27,179	0	27,179

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1 INTRODUCTION

1.1 Objective

4KES has been commissioned by 'Essakane Solar S.A.S.' to perform verification of its registered VCS project 'Off grid Solar PV project at IAMGOLD Essakane SA Gold Mine', for the reported GHG emission reductions for the given monitoring period 01/07/2022 to 31/12/2023 (both dates included). The VCS projects must undergo an independent third-party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD) and that all physical features (technology, project equipment and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Voluntary Emission Reductions (VERs/VCUs) without any double counting, and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

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, including but not limited to, VCS standard, applied methodology and other relevant rules and requirements established for VCS project activities.

The Verification is not meant to provide any consulting towards the project participants. However, stated requests for clarification and/or correction actions request may have provided inputs for improvement of the project design.

1.3 Level of Assurance

The verification team verified the complete monitoring data /13/ and /14/ for the monitoring parameter of the monitoring plan against the Monitoring report/1.2/ and ER Calculation sheet /2.2/ and confirms that the reported emission reductions are free from any type of material errors. Remote audit by TL was also conducted to verify the implementation and monitoring plan of the project activity. The implementation of the project activity (i.e. major equipment and the metering arrangement) was verified during the Microsoft Teams video conferencing and found in accordance with the monitoring report /1.2/ and registered Joint PD & MR /05/. Verification team has also verified the technical details of the project equipments and metering arrangement with the supportive documents /09/, /11/, /16/ and /20/ and found correct. Therefore, 4KES confirms that the verification is conducted with reasonable level of assurance.

1.4 Summary Description of the Project

“Off-grid Solar PV project at IAMGOLD Essakane SA Gold Mine” (hereafter referred to as the “Project” or “Project Activity”) is a small-scale project activity, which involves the development, construction and operation by Essakane Solar S.A.S. of a greenfield solar PV plant with a total installed capacity of 14.928 MWp at the Essakane gold mine, which is in the Sahel region of Burkina Faso about 330 km North-East from Ouagadougou.

The Project relies on solar power source through photovoltaic conversion technology to produce electricity, which is delivered to IAMGOLD Essakane S.A. (buyer). The PV array consists of 128,880 thin film (CdTe) photovoltaic modules, including 42,840 of 117.5 W (FS-4117-3 of First Solar Series 4™) and 86,040 of 115 W (FS-4115-3) for a total installed capacity of 14.928 MW.

The Project also includes 6 inverters and 3 transformers located in powerhouses wired to the modules through buried cables. Two medium voltage overhead MV lines (6.6 kV) then connect the project to the offtaker’s busbar.

Implementation status of the project activity has been verified during the remote interview, supportive for commissioning /12/ and photos /20/.

Verification team has verified the capacity of the project activity by Microsoft Teams remote interview, technical specification /11/, photographs /20/ and Monthly reports from O&M Contractor /25/ etc.

The net electricity generated from this project is supplied to the buyer (IAMGOLD ESSAKANE S.A.) and PPA is signed between PP and IAMGOLD ESSAKANE S.A. (buyer) /18/ which is still valid. Operation and Maintenance of the project plant is done by Wartsila Burkina Faso as verified from O&M Contract /19/.

The technical characteristics of the modules, inverters and transformers installed are those in the tables below:

Electrical and mechanical characteristics of the modules (Standard Test Conditions)

Peak Power (W)	115 W	117.5 W
Type of cells	Thin-film CdTe semiconductor	
Rated voltage (V_{mpp}) (V)	69.3	70.1
Rated current (I_{mpp}) (A)	1.66	1.68

Efficiency (%)	16.0	16.3
Length (mm)	1,200	
Width (mm)	600	
Thickness (mm)	6.8	

Technical data of the inverters

Parameter	Unit	Description
Manufacturer		ABB
Model		PVS980, -1909kVA-J
Maximum DC input power ($P_{PV,max}$)	kWp	3,055
Nominal AC output power (SN(AC))	kVA	1,909
Maximum AC output power (Smax (AC))	kVA	2,100
Output frequency range	Hz	50/60
Nominal output voltage	V	630
Maximum efficiency	%	98.8
Own consumption in operation	W	2,500
Own consumption in standby	W	225

Technical data of transformers

Parameter	Unit	Description
Manufacturer	-	ABB
Rated power	kVA	3818
High voltage	V	6600
Low voltage (no load)	V	630 (630)
Rated frequency	Hz	50

The technical details of the project equipment have been verified from Microsoft Teams remote interview, Manufacturer technical specifications /11/ and photographs /20/ etc.

The project was commissioned on 01/06/2018 as verified from commissioning certificate /12/.

The Project is located in north-eastern Burkina Faso (host party), West Africa. It straddles the boundary of the Oudalan and Seno provinces in the Sahel region of Burkina Faso and is approximately 330 km North-East of the capital, Ouagadougou. It is situated 42 km East of the nearest large town and the provincial capital of Oudalan, Gorom-Gorom. Its exact geo-coordinates

are provided under section 1.7 of the VCS MR /1.2/. Verification team has verified the physical address through internet /08/ and found consistent.

During current monitoring period i.e. from 01/07/2022 to 31/12/2023, the project activity has supplied 33,974 MWh net electricity to the buyer, there by resulted in emission reduction of 27,179 tCO₂e. The monitoring period subject to this monitoring report is inclusive of first and last day of period.

2 VERIFICATION PROCESS

The registered VCS project is undergoing 4th verification under VCS (1st Crediting period), the approach adopted to ensure the quality of emission reductions is described in the following sections.

2.1 Method and Criteria

4KES assessed and determined whether the proposed implementation and operation of the project activity and the steps taken to report emission reductions comply with the criteria and relevant guidance provided by the VCS Board. The validation/verification process consist of the following three phases;

- A desk review of the VCS Joint PD & MR and VCS MR
- follow up interviews with project stakeholders
- The resolution of outstanding issues and issuance of final report and opinion.

The prepared verification report and other supporting documents then undergo an internal quality control before being submitted to the VCS executive board for issuance of credits as per VCS standard v4.5.

Duration of Verification:

Verification Contract	01/03/2024
Audit	29/04/2024 (Microsoft Teams remote audit) 30/04/2024 (Microsoft Teams remote interview of stakeholders)
Findings raised	01/05/2024
Draft Verification Report	03/05/2024
Final Verification Report	15/05/2024

2.2 Document Review

The verification is performed primarily as a document review of the approved Joint PD & MR and associated documents as stated in detail in appendix I of this document. The assessment is performed by a verification team using a protocol. The cross checks between information provided in the Monitoring report, Joint PD & MR and information from sources other than those used, if available, the team's sectoral or local expertise and, if necessary, independent background investigations.

2.3 Interviews

Verification team performed the Microsoft Teams remote interview and interviewed PP representative/O&M Operator/Consultant/Local Stakeholders and reviewed documents to achieve a reasonable level of assurance in the verification. Physical site visit was not possible for the project activity due to security issues as confirmed from PP and public sources². No sampling procedures were adopted in document verification and all the document were cross checked to ensure conservative estimation of emission reduction. Kindly find below names of the persons interviewed (Microsoft Teams remote interview).

Location	The Project is located in north-eastern Burkina Faso (host party), West Africa. It straddles the boundary of the Oudalan and Seno provinces in the Sahel region of Burkina Faso and is approximately 330 km North-East of the capital, Ouagadougou. It is situated 42 km East of the nearest large town and the provincial capital of Oudalan, Gorom-Gorom.	
Dates	29/04/2024 (Microsoft Teams remote audit) 30/04/2024 (Microsoft Teams remote interview of stakeholders)	
Key points discussed	Name of person, interviewed	Designation, Organization
Project Implementation, Operational data, Calibration, Data collection, QA/QC, procedures, Calculation of ERs, VCS requirements	Emma KANTIONO	General Manager Asset Manager for Total Eren (majority shareholder (>90%) under Essakane Solar S.A.S.)
	Rachid Traore	Engineer, Wartsila Burkina Faso
	YAMEOGO Firmin Prosper	Power plant general formen, Essakane
	Jokhanan TOE	Carbon Project Manager, AERA Group SAS

² <https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories/burkina-faso-travel-advisory.html>

Sustainable development Impact, Complaints, Mode of communication, Environmental impact any other concerns	Moctar Maiga	Falangountou city hall commune, In-charge of communication, Local Stakeholder
	Abadramane Mande	Mayor of DORI, President of special delegation
	Anaroua Nazirou	Mayor of Falangountou, President of special delegation
	Martin Ouedraogo	Local leader of Falangountou
	Ibhahim Ag	Forestry local chief Falangountou

2.4 Site Visits

Verification team performed the Microsoft Teams remote interview and interviewed PP representative/O&M Operator/Consultant/Local Stakeholders and reviewed documents to achieve a reasonable level of assurance in the verification. Physical site visit was not possible for the project activity due to security issues as confirmed from PP and public sources³. No sampling procedures were adopted in document verification and all the document were cross checked to ensure conservative estimation of emission reduction. The name of the persons interviewed is reported under section 2.3 of this report.

2.5 Resolution of Findings

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

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

- Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;

³ <https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories/burkina-faso-travel-advisory.html>

- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CLs raised by the 4KES during verification shall be resolved prior to submitting a request for issuance.

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

During the Verification process, total 02 CAR and 00 CL were raised and resolved satisfactorily. No FAR has been raised in the verification. The list of CARs/CLs/FARs raised and the response provided, the mean of validation, reasons for their closure and references to correction in the relevant documents are provided in Appendix II of this report.

2.5.1 Forward Action Requests

No FAR raised during the verification.

2.6 Eligibility for Validation Activities

4KES conducted the verification activity; the validation was performed by the other VVB. 4KES has a valid UNFCCC accreditation in the sectoral scope from UNFCCC. The accreditation scope can be checked from the below link: <http://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0069>.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

No deviation is applied during the monitoring period or previous monitoring period.

3.2 Project Description Deviations

No deviation is applied during the monitoring period or previous monitoring period.

3.3 New Project Activity Instances in Grouped Projects

The project is not a grouped project. Therefore 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

“Off-grid Solar PV project at IAMGOLD Essakane SA Gold Mine” (hereafter referred to as the “Project” or “Project Activity”) is a small-scale project activity, which involves the development, construction and operation by Essakane Solar S.A.S. of a greenfield solar PV plant with a total installed capacity of 14.928 MWp at the Essakane gold mine, which is in the Sahel region of Burkina Faso about 330 km North-East from Ouagadougou.

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Verification team has verified the capacity of the project activity by Microsoft Teams remote interview, technical specification /11/, photographs /20/ and Monthly reports from O&M Contractor /25/ etc.

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The project was commissioned on 01/06/2018 as verified from commissioning certificate /12/.

During current monitoring period i.e. from 01/07/2022 to 31/12/2023, the project activity has supplied 33,974 MWh net electricity to the buyer, there by resulted in emission reduction of 27,179 tCO₂e. The monitoring period subject to this monitoring report is inclusive of first and last day of period.

During the process of verification, 4KES confirmed the capacity, power generation, arrangement for evacuation of electricity generated, technical specifications, date of commissioning, arrangements for Operation & Maintenance (O&M) and necessary clearances for setting the project activity. List of documents reviewed during the course of verification is presented under Appendix I of this report.

The selected monitoring period i.e. 01/07/2022 to 31/12/2023 (both days included) is within the 1st crediting period i.e. 01/06/2018 to 31/05/2025 which is accepted to the verification team.

There was no major breakdown or shutdowns during the monitoring period which might affect the applicability of methodology or might cause material errors in emission reductions.

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period. The project design as mentioned in the registered Joint PD & MR & monitoring report submitted is implemented and thus the same is acceptable to the assessment team. All required monitoring equipment's and procedures as mentioned in the registered Joint PD & MR & monitoring report are available and implemented in an appropriate manner.

The organisational role and responsibility as mentioned in the registered Joint PD & MR /05/ & monitoring report /1.2/ is followed onsite. All the emergency preparedness as mentioned in the registered Joint PD & MR & monitoring report is followed onsite and no discrepancies were found regarding the same.

The assessment team found that the project is in line with the registered Joint PD & MR, monitoring report, and no deviation on project design or monitoring plan is observed.

As per the registered Joint PD & MR /05/, ex-ante emission reductions for this monitoring period are 27,872 tCO₂e however actual emission reductions corresponding to this monitoring period are 27,179 tCO₂e. The actual emission reduction is lower than the estimated emission reduction and hence accepted to the verification team.

Section 1.2 of the VCS MR /1.2/ mention about the audit history. The registered VCS project is undergoing 4th periodic verification for the monitoring period 01/07/2022 to 31/12/2023 (including both the days) under VCS 1st Crediting period i.e. 01/06/2018 to 31/05/2025 (including both the days). Verification team has checked the audit history table mentioned under section 1.2 of the VCS MR /1.2/ and found accurate.

Item	Evidence gathering activities, evidence checked, and assessment conclusion:
Audit history	Verification team has checked the audit history mentioned under section 1.2 of the MR /1.2/ and found that MR /1.2/ has been filled appropriately.
Double counting and participation under other GHG programs	The project is registered under the Clean Development Mechanism (Project #10398) on 05 May 2018, although its GHG emission reduction will either be claimed under the VCS programme or the CDM programme, never both. CDM Monitoring period: 01-June-2018 – 31-May-2019, CER issued: 19,119: https://cdm.unfccc.int/Projects/DB/KBS_Cert1502356514.63/iProcess/Plus1565174567.59/view Declaration /21/ for the same has been submitted. Verification team confirms that it has checked that there is no double counting associated with project activity being participation of other GHG programs. Thus emission reductions

	generated by project will be solely claimed by PP and PP has the right of use, which is acceptable.
No double claiming with emissions trading programs or binding emission limits	Net GHG emission reductions or removals generated by this project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions as the host country i.e. Burkina Faso is not a participant in any emission trading programs or nor does it have any binding limits. Also the project has not sought or received another form of GHG-related environmental credits including renewable energy certificates.
No double claiming with other forms of environmental credit	Project activity has not sought, received, or is planning to receive credit from another GHG-related environmental credit system. The same is confirmed from the PP's representative interviews.
Supply chain (scope 3) emissions double claiming	Project proponent or authorized representative is not a buyer or seller of a product whose emissions footprint is changed by the project activities. The same is confirmed from the PP's representative interviews.
Sustainable development contributions	Verification team has checked the supportive for the activities that result in the SD contributions from the project activity for each SDG. SDG Target 13.0: During the monitoring period, project has avoided the emission of 27,179 tCO₂e. Verification team has checked the calculation from the monitoring report /1.2/ and the ER calculation sheet /2.2/ and found correct. SDG Target 7.2: During the monitoring period, 33,974 MWh of renewable energy was delivered. Verification team has verified the reported electricity export/import data with the monthly Joint meter reading reports /13/ and found consistent. The electricity supplied to buyer is also cross-checked from the monthly invoices /14/ and found consistent. SDG Target 8.5: The project employed 45 people in 2022-2023. Verification team has verified the same during the remote interviews and also from the list of employees /22/. Project activity provide local jobs. Section 1.12 of the Monitoring report has been checked and found OK. The project activity contributes positively to sustainable development which has been verified from the interviews of local people (Section 2.3 of this report) and supportive documents /22/.
Additional information relevant to the project	No commercially sensitive information has been excluded from the public version of the monitoring report.

Opinion:

Assessment team concludes the following:

- a) There is no material discrepancies between project implementation and the project description provided in the Joint PD & MR /05/.
- b) The monitoring plan is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters) is appropriate.
- c) There is no material discrepancies between the actual monitoring system and the monitoring plan set out in the project description and the applied methodology.
- d) The GHG emission reductions or removals generated by the project have not included in an emissions trading program or any other mechanism that includes GHG allowance trading.
- e) The project has not received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification.
- f) The project is registered under CDM and VCS. Verification team has checked the CDM website /06/ to confirm that no CDM MR has been hosted for the current monitoring period. Hence Verification team confirms that there is no double counting associated with project activity being participation of other GHG programs which is also verified from the declaration given by the PP /21/.

In view of the information's as verified above the assessment team is able to conclude that the project has been implemented as described in the project description.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	All stakeholders were identified at validation. During the remote interviews, the assessment team interviewed PP's representative/stakeholders and confirmed that no local stakeholder consultation was conducted for this project activity for this monitoring period. Thus, this section is not applicable.
Legal or customary tenure/access rights	N/A. Refer above justification.

Stakeholder diversity and changes over time	N/A. Refer above justification.
Expected changes in well-being	N/A. Refer above justification.
Location of stakeholders	N/A. Refer above justification.
Location of resources	N/A. Refer above justification.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	PP has a mechanism for on-going communication with local stakeholders which has been discussed during the Microsoft Teams remote interview. During the monitoring period (from 01-July-2022 to 31-December-2023), there are no comments received for the project activity which was confirmed during the Microsoft Teams remote interview of PP representative & Local stakeholders. For ongoing stakeholder's communication, any grievance received is analysed at the headquarters in the Zogona district of Ouagadougou or in the Ouagadougou, or at the information centers of the Health, Safety and Sustainable Development Department. Depending on the geographical location of the request, mail is forwarded either to the Corporate Affairs Department (requests at the national level), or to the SSDD Department (requests at the regional level). The grievances are analysed weekly basis and resolution is done by the concerned departments. There is well written procedure/SOP for the grievance handling /24/. During the remote audit, same was confirmed. During current monitoring period there are no grievances received related to the solar power plant. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Date(s) of stakeholder consultation	N/A. Refer above justification.

Communication of monitored results	N/A. Refer above justification.
Consultation records	N/A. Refer above justification.
Stakeholder input	N/A. Refer above justification.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	The free prior and informed consent took place during the public consultations when the project was explained publicly. No ongoing or unresolved conflicts are going on. PP has a mechanism for on-going communication with local stakeholders which has been discussed during the Microsoft Teams remote interview. During the monitoring period (from 01-July-2022 to 31-December-2023), there are no comments received for the project activity which was confirmed during the Microsoft Teams remote interview of PP representative & Local stakeholders. There is well written procedure/SOP for the grievance handling /24/. During the remote audit, same was confirmed. During current monitoring period there are no grievances received related to the solar power plant. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Outcome of FPIC discussion	The free prior and informed consent took place during the public consultations when the project was explained publicly. No ongoing or unresolved conflicts are going on which was confirmed during the Microsoft Teams remote interview of PP representative & Local stakeholders.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	PP has a mechanism for on-going communication with local stakeholders which has been discussed during the Microsoft Teams remote interview. During the monitoring period (from 01-July-2022 to 31-December-2023), there are no comments received for the project activity which was confirmed during the Microsoft Teams remote interview of PP representative & Local stakeholders. There is well written procedure/SOP for the grievance handling /24/. During the remote audit, same was confirmed. During current monitoring period there are no grievances received related to the solar power plant. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Grievance redress procedure	PP has a mechanism for on-going communication with local stakeholders which has been discussed during the Microsoft Teams remote interview. During the monitoring period (from 01-July-2022 to 31-December-2023), there are no comments received for the project activity which was confirmed during the Microsoft Teams remote interview of PP representative & Local stakeholders. There is well written procedure/SOP for the grievance handling /24/. During the remote audit, same was confirmed. During current monitoring period there are no grievances received related to the solar power plant. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism 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 comment received.	N/A	N/A

4.2.6 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Risks to stakeholder participation	PP has a mechanism for on-going communication with local stakeholders which has been discussed during the Microsoft Teams remote interview. During the monitoring period (from 01-July-2022 to 31-December-2023), there are no comments received for the project activity which was confirmed during the Microsoft Teams remote interview of PP representative & Local stakeholders. There is well written procedure/SOP for the grievance handling /24/. During the remote audit, same was confirmed. During current monitoring period, there are no grievances received related to the solar power plant. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Working conditions	There is no risk related to working conditions in the power plant. This is also verified from remote interviews with PP's representative/employees.
Safety of women and girls	The project is within a closed project area, no un-authorized person can come in. There is no risk related to Safety of women and girls. This is also verified from remote interviews with PP's representative/employees.
Safety of minority and marginalized groups, including children	The project is within a closed project area, no un-authorized person can come in. There is no risk related to Safety of minority and marginalized groups, including children. This is also verified from remote interviews with PP's representative/employees.
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	The project does not involve major construction activity. It primarily requires the installation of the Solar power plant, transmission line, electricity meter and transformers etc. Potential impacts and appropriate mitigation measures are presented in detail in the Environmental and Social management system /22/ on the identification and assessment of impacts and in the Environmental and Social Impact Statement report /22/ which have been checked by the verification team. Project activity does not result in direct air pollution, noise and water pollution. There was no harm identified from the proposed project activity. Hence verification team confirms that there are no significant impacts on air, water, soil quality and ambience due to the project activity.

The project activity doesn't cause negative socioeconomic impacts which is confirmed from the interview of the local people (refer section 2.3 of this report). The project activity creates positive socioeconomic impacts by providing jobs to local people as confirmed from the interview of the local people (refer section 2.3 of this report) and from the supportive documents /22/.

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	Project is not involved in discrimination and sexual harassment as confirmed during the remote interviews with PP's representatives/employees.
Management experience	Project is not involved in discrimination and sexual harassment as confirmed during the remote interviews with PP's representatives/employees.
Gender equity in labor and work	There are 14 women employed in the project (sub contractors included). There is no risk in gender equity and work as confirmed during the remote interviews with PP's representatives/employees and employment records /22/.
Human trafficking, forced labor, and child labor	Project does not use victims of human trafficking, forced labour and child labour. The same is confirmed during the remote interviews with PP's representatives/employees.

4.2.7.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	All workers are declared to competent authorities. The project recognize and respect the rights of workers and local stakeholders. The same is confirmed during the remote interviews with PP's representatives/employees.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	No indigenous people is affected by the project. The same is confirmed during the remote interviews with PP's representatives/stakeholders.

4.2.7.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Disputes over rights to territories and resources	N/A
Respect for property rights	N/A

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	N/A
Benefit sharing during the monitoring period	N/A

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	No risk identified.

Soil degradation and soil erosion	No risk identified.
Water consumption and stress	No risk identified.
Usage of fertilizers	No risk identified.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	The site did not have endangered species living on it.

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	N/A

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	N/A

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	N/A

4.3 Accuracy of Reduction and Removal Calculations

The verification team was able to confirm that the monitoring plan contained in registered Joint PD & MR /05/ and MR /1.2/ is in accordance with the applied methodology for the project activity i.e. “AMS-I.A. “Electricity generation by the user” Version 16.0” /07/ and its applicable tools.

The parameter stated in the monitoring plan /05/ and the applied methodology /07/ have been fulfilled in the current monitoring period.

The GHG emission reductions were correctly calculated on the basis of the applied methodology AMS-I.A. “Electricity generation by the user” Version 16.0 /07/, Joint PD & MR /05/ and the formulae given in the monitoring report /1.2/.

Parameter monitored:

Verification team confirms through remote interviews and from the document review, the actual monitoring system complies with the monitoring plan mentioned in the registered validated Joint PD & MR /05/. According to the monitoring plan in the registered Joint PD & MR, there is only one monitoring parameter required to be monitored.

1. EG_y (MWh)

		VVB Assessment
Data / Parameter	EG_y	The monitoring parameter, Unit and description are as per the registered Joint PD & MR /05/.
Data unit	MWh/monitoring period	
Description	Annual net output of the solar photovoltaic power plant	
Source of data	Electricity meters	The monitoring parameter is continuously measured by a bidirectional main energy meter (owned by IAMGOLD ESSAKANE S.A., buyer) and check energy meter (owned by Essakane Solar S.A.S., seller) measuring the net electrical energy delivered to IAMGOLD ESSAKANE S.A. (Electricity buyer) installed at each IAMGOLD power station's feed-in points (Wärtsilä 1 & Wärtsilä 2) with accuracy class of 0.2s verified during the remote audit, from single line diagram /09/, technical specifications of meters /11/ and meter photos /20/. The source of data is in accordance with the

		registered Joint PD & MR /05/.
Description of measurement methods and procedures to be applied	Measured continuously by electricity meters and recorded at least once per day. Auxiliary consumption deducted through bi-directional metering.	The monitoring parameter is continuously measured by a bidirectional main energy meter (owned by IAMGOLD ESSAKANE S.A., buyer) and check energy meter (owned by Essakane Solar S.A.S., seller) measuring the net electrical energy delivered to IAMGOLD ESSAKANE S.A. (Electricity buyer) installed at each IAMGOLD power station's feed-in points (Wärtsilä 1 & Wärtsilä 2) with accuracy class of 0.2s verified during the remote audit, from single line diagram /09/, technical specifications of meters /11/ and meter photos /20/. Based on this data, a monthly Joint meter reading /13/ is signed off by Essakane Solar S.A.S. and IAMGOLD ESSAKANE S.A. as confirmed during the remote audit and from monthly Joint meter reading reports /13/. Monthly electricity delivered is invoiced to IAMGOLD ESSAKANE S.A. /14/. The measurement methods and procedures are in accordance with the registered Joint PD & MR

		/05/. The monitoring procedure was verified during the remote audit and found in accordance with the Joint PD & MR/05/.				
Frequency of monitoring/recording	Continuously, aggregated at least annually	The electricity export/import is continuously measured and monthly recorded /13/ as verified during the remote audit and from monthly Joint meter reading reports /13/. The frequency of monitoring/recording is in accordance with the registered Joint PD & MR /05/.				
Value monitored	<table><tr><td>2022</td><td>2023</td></tr><tr><td>11,415</td><td>22,559</td></tr></table>	2022	2023	11,415	22,559	Verification team has verified the reported electricity export/import data with the monthly Joint meter reading reports /13/ and monthly invoices /14/ and found consistent.
2022	2023					
11,415	22,559					
Monitoring equipment	The PowerLogic PM8420 digital meters installed at IAMGOLD power station’s feed-in points (Wärtsilä 1 & Wärtsilä 2) have an accuracy of class 0.2S (active energy) and class 0.5S (reactive energy) at the two delivery points. ID of the meters: BA0904 Meter 1: ME-1706B040-02 (Iamgold, buyer: main) Meter 2: ME1706B060-02 (Essakane Solar, seller : check) BA0911	Verification team has checked the meter details during the remote audit, from single line diagram /09/, technical specifications of meters /11/ and meter photos /20/ and found consistent with the details mentioned in the monitoring report /1.2/. The energy meters are in accordance with the registered Joint PD & MR /05/. During the monitoring period, no replacement of meter was observed.				

	Meter 1: ME1706B032-02 (Essakane Solar) Meter 2: ME/1706B257-02 (IamGold)	Initial Calibration /16/ of the energy meters was done in 2017 by the manufacturer Schneider Electric which is checked by the verification team and found OK. Further PP has clarified that no calibration is required for the energy meters which is confirmed from the User manual of the electricity meter /17/ which is also in accordance with the Joint PD & MR/05/ and hence accepted to the verification team. Further check energy meter (owned by Essakane Solar S.A.S., seller) has been installed for the cross-check purpose in case of any fault in the main meter which is accepted to the verification team.
QA/QC procedures to be applied	As per PowerLogic PM8000 Series manual, “all meters are tested and verified at the factory in accordance with International Electrotechnical Commission (IEC) and American National Standards Institute (ANSI) standards. [These] digital power meters typically do not require re-calibration”. Besides the installation of a main & back-up meter at each feed-in point, reconciliation of measurement results between Essakane Solar and IAMGOLD will occur monthly before electricity invoicing takes place. Furthermore, Essakane Solar has installed its own meters at the transformer’s point for transmission losses assessment.	QA/QC procedure has been maintained. Initial Calibration /16/ of the energy meters was done in 2017 by the manufacturer Schneider Electric which is checked by the verification team and found OK. Further PP has clarified that no calibration is required for the energy meters which is confirmed from the User manual of the electricity meter /17/ which is also in accordance with the Joint PD & MR/05/ and hence accepted to the

		verification team. Further check energy meter (owned by Essakane Solar S.A.S., seller) has been installed for the cross-check purpose in case of any fault in the main meter which is accepted to the verification team. The electricity supplied to buyer is cross-checked from the monthly invoices /14/ and found consistent.
Purpose of the data	Calculation of Baseline emissions	The purpose of the monitoring parameter is to calculate the baseline emission which is in accordance with the registered Joint PD & MR /05/.
Calculation method	N/A	The calculation method is in compliance with the registered Joint PD & MR /05/.
Comments	Invoices to the mine serve as a cross-check basis	The electricity supplied to buyer is cross-checked from the monthly invoices /14/ and found consistent.

Opinion: The verification team confirms;

- The monitoring plan has been implemented as per the Joint PD & MR /05/;
- The monitoring complies with the requirement of the applied methodology /07/;
- The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included above under parameter and confirms to the requirement of the Joint PD & MR /05/;
- The values included in the monitoring report and corresponding emission reduction sheet are verified and included under monitoring parameter, wherever appropriate;

Parameters not monitored/ex-ante:

1. Data/Parameter: EF_{CO2, default} (Unit: kg CO₂/kWh)

Description: CO₂ emission factor

	Discussion and verification assessment
Purpose of data	Calculation of baseline emissions
Verified value	0.8 kg CO ₂ /kWh
Source of value	Registered Joint PD & MR /05/ and applied methodology AMS-I.A. Version 16.0 /07/
Justification	It is fixed for the entire crediting period as per the registered Joint PD & MR /05/. The value of the CO ₂ emission factor has been correctly taken as per the registered Joint PD & MR /05/ and Hence accepted by the verification team.

2. Data/Parameter: I (Unit: NA)

Description: Average technical distribution losses

	Discussion and verification assessment
Purpose of data	Calculation of baseline emissions
Verified value	0
Source of value	Registered Joint PD & MR /05/ and applied methodology AMS-I.A. Version 16.0 /07/
Justification	It is fixed for the entire crediting period as per the registered Joint PD & MR /05/. The value has been correctly taken as per the registered Joint PD & MR /05/ and Hence accepted by the verification team.

Opinion:

In the opinion of assessment team, ex-ante parameters value that were applied in the calculations is consistent with Joint PD & MR /05/ and correctly applied in MR /1.2/, emission reductions spreadsheet /2.2/ and justified.

Assessment of Data and Calculation of GHG emission reductions:

According to the approved methodology AMS-I.A. "Electricity generation by the user" Version 16.0 /07/, Emission Reductions are calculated as follows:

Baseline Emissions

The baseline is described by Paragraph 8 of AMS-I.A., Version 16 as “...the fuel consumption of the technology in use or that would have been used in the absence of the project activity to generate the equivalent quantity of energy...”, estimated using one of three possible options.

For the project activity, Option 2 is applied, such that the energy baseline is calculated based on annual electricity generation from project renewable energy technologies as per the below:

$$E_{BL,y} = \sum_i EG_{i,y} / (1 - I)$$

Where:

$E_{BL,y}$	Annual energy baseline; kWh
$\sum_i$	The sum over the group of i renewable energy technologies (e.g. renewable energy technologies for solar home systems, solar pumps) implemented as part of the project activity.
$EG_{i,y}$	The estimated annual output of the renewable energy technologies of the group of i renewable energy technologies installed; kWh
I	Average technical and distribution losses that would have been observed in diesel powered minigrids installed by public programmes or distribution companies in isolated areas, expressed as a fraction.

The emission baseline is the energy baseline calculated in accordance with Paragraph 8(b) of AMS-I.A. times a default emission factor:

$$BE_{CO2,y} = E_{BL,y} * EF_{CO2}$$

Where:

$BE_{CO2,y}$	Emissions in the baseline in year, y ; tCO ₂
$E_{BL,y}$	Annual energy baseline in year, y ; kWh
EF_{CO2}	CO ₂ emission factor; tCO ₂ /kWh

$E_{BL,y}$ is a monitoring parameter, EF_{CO2} and I are ex-ante parameters and justified above in this section.

The baseline emission calculation for the monitoring period is described in the table below:

Month	BE_y	$E_{BL,y}$	EF_{CO2}
	t CO ₂	MWh	tCO ₂ /MWh
July 22	1,484	1,855	0.8000
August 22	1,411	1,764	0.8000
September 22	1,559	1,949	0.8000

October 22	1,505	1,881	0.8000
November 22	1,505	1,881	0.8000
December 22	1,668	2,085	0.8000
January 23	1,756	2,195	0.8000
February 23	1,160	1,450	0.8000
March 23	1,600	2,000	0.8000
April 23	1,570	1,962	0.8000
May 23	1,490	1,862	0.8000
June 23	1,410	1,762	0.8000
July 23	1,431	1,789	0.8000
August 23	1,373	1,716	0.8000
September 23	1,513	1,892	0.8000
October 23	1,548	1,935	0.8000
November 23	1,548	1,935	0.8000
December 23	1,648	2,061	0.8000
TOTAL	27,179	33,974	

The baseline emission (BE_y) for the monitoring period is:

$$BE_y = 27,179 \text{ tCO}_2 \text{ (rounded down)}$$

Project Emissions

Project emissions are equal to 0 as the project is an installation of a solar power plant which is in accordance to the registered Joint PD & MR /05/ and the applied methodology /07/. Therefore, project emissions are considered zero.

Leakage

Leakage emissions are not considered for the project activity which is in accordance to the registered Joint PD & MR /05/ and the applied methodology /07/.

Emission reductions

Reductions are calculated as follows:

$$ER_y = BE_y - PE_y - L$$

Where:

ER _y	=	Emission reductions in year y, t CO ₂ e
BE _y	=	Baseline emissions in year y, tCO ₂ e
PE _y	=	Project emissions in year y, tCO ₂ e
L	=	Leakage emissions in year y, tCO ₂ e

The results of the emission reduction are shown in the table below:

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU's (tCO ₂ e)	Removal VCU's (tCO ₂ e)	Total VCUs (tCO ₂ e)
2022 (01-July-2022 to 31-December-2022)	9,132	0	0	9,132	0	9,132
2023 (01-January-2023 to 31-December-2023)	18,047	0	0	18,047	0	18,047
Total	27,179	0	0	27,179	0	27,179

Opinion:

The verification team confirms that

- The complete data set for the identified and required parameter for the operational days in the current monitoring period was available;
- The reported data has been cross checked with available records, as indicated in the section 4.3 above under monitored data, wherever appropriate;
- The baseline, project and leakage emissions have been determined in accordance with the requirement of the applied methodology, as contained in the final monitoring report and corresponding emission reductions spreadsheet;
- The assumptions, emission factors and default values used are justified, as indicated in the section 4.3 above.

4.4 Quality of Evidence to Determine Reductions and Removals

All relevant documents were checked to assess the correctness and quality of data submitted by the project participants, which are used to determine emission reductions.

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan /05/. No significant lack of evidence and missing data were detected during desk review and remote interview. 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 4.3 under each parameter and confirms to the requirement of Joint PD & MR /05/.

It was also verified 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 remote audit that internal training program for the monitoring staff are conducted on regular basis.

Evidences (Documents/Microsoft Teams interviews by Team Leader) referred for verification of individual monitoring parameter and fixed parameters are defined under section 4.3. We further confirm that, sufficient evidence covering the entire monitoring period and at the required frequency were available. A list of referred documents for verification is also included in Appendix 1 of this report. Verification team conclude that evidences used to determine the GHG reductions and removals are completely available for the monitoring period (sufficiency of quantity) and are appropriate in quality.

4.5 Non-Permanence Risk Analysis

Not applicable.

5 VERIFICATION OPINION

5.1 Verification Summary

4K Earth Science Pvt. Ltd. (4KES), contracted by 'Essakane Solar S.A.S.', has performed the independent verification of the emission reductions for the VCS project activity (VCS ID- 2434) "Off grid Solar PV project at IAMGOLD Essakane SA Gold Mine" in Burkina Faso for the monitoring period 01-July-2022 to 31-December-2023 as reported in the Monitoring Report Version 1.1 dated 02/05/2024. Essakane Solar S.A.S. are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity. It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

4KES commenced the verification on the basis of the baseline and monitoring methodology AMS-I.A. “Electricity generation by the user” Version 16.0, the monitoring plan contained in the registered Joint PD & MR /05/ and Monitoring Report (Version 1.1 dated 02/05/2024) as per the process described under Section 2 of this report.

4KES verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. 4KES planned and performed the verification by obtaining evidence and other information and explanations that 4KES considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01-July-2022 to 31-December-2023 are fairly stated in the Monitoring Report Version 1.1 dated 02/05/2024. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology AMS-I.A. “Electricity generation by the user” Version 16.0 and the VCS standard v4.5 /03/. Verification team confirm that verification of the GHG statement was conducted in accordance with ISO 14064-3: 2019.

5.2 Verification Conclusion

In our opinion the GHG emissions reductions reported for the project activity for the period 01-July-2022 to 31-December-2023 are fairly stated in the Monitoring Report Version 1.1 dated 02/05/2024. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology AMS-I.A. “Electricity generation by the user” Version 16.0 and the VCS standard v4.5 /03/. Verification team confirm that verification of the GHG statement was conducted in accordance with ISO 14064-3: 2019.

Verification period: From 01-July-2022 to 31-December-2023

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

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU (tCO ₂ e)	Removal VCU (tCO ₂ e)	Total VCU (tCO ₂ e)
2022 (01-July-2022 to 31-December-2022)	9,132	0	0	9,132	0	9,132
2023 (01-January-2023 to 31-	18,047	0	0	18,047	0	18,047

December-2023)						
Total	27,179	0	0	27,179	0	27,179

Approved by



Stalin S

Regional Manager

4K Earth Science Private Limited

Date: 15-May-2024

Place: Bangalore, India

5.3 Ex-ante vs Ex-post ERR Comparison

The comparison of the estimated ex-ante GHG emission reductions and removals and the achieved emission reductions and removals for this monitoring period are reported in the below table.

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-Jul-2022 to 31-Dec-2022	9,611	9,132	-5%	The actual emission reductions are lower than the estimated emission reductions for this monitoring period and hence accepted to the verification team.
01-Jan-2023 to 31-Dec-2023	18,261	18,047	-2%	
Total	27,872	27,179		

APPENDIX I: LIST OF DOCUMENTS

/1/	/1.1/ Monitoring Report, Version 1.0, dated 07/03/2024 (Initial Version) /1.2/ Monitoring Report, Version 1.1 dated 02/05/2024 (Final Version)
/2/	/2.1/ Draft Emission Reduction Calculation sheet (corresponding to initial Version of VCS MR) /2.2/ Final Emission Reduction Calculation Sheet (corresponding to final Version of VCS MR)
/3/	VCS Standard Version v4.5 https://verra.org/project/vcs-program/rules-and-requirements/
/4/	VCS Program Guide, v4.4 https://verra.org/project/vcs-program/rules-and-requirements/
/5/	Registered Joint Project Description & Monitoring Report, version 3.0 and dated 05/10/2021 Joint Validation & Verification Report, version 04 and dated 26/11/2021 Web-Link for the Registered project activity: https://registry.verra.org/app/projectDetail/VCS/2434
/6/	Web-Link for the CDM registration https://cdm.unfccc.int/Projects/DB/KBS_Cert1502356514.63/view
/7/	Approved monitoring methodology: AMS-I.A. "Electricity generation by the user" Version 16.0
/8/	Websites referred: http://www.itouchmap.com/latlong.html (Latitude-Longitude location finder)
/9/	Single line diagram showing monitoring points
/10/	Organization structure
/11/	Technical Specifications of major equipments: Energy meter, PV module, Inverter and Transformer
/12/	Commissioning certificate of the solar power plant on 01/06/2018
/13/	Monthly Joint meter readings for the electricity exported/imported for this monitoring period.
/14/	Monthly invoices for the electricity exported/imported for this monitoring period.
/15/	Company registration
/16/	Initial Calibration certificate for the electricity meters dated 14/06/2017 and 16/06/2017 by Manufacturer Schneider Electric

/17/	User Manual for PowerLogic™ PM8000 series, dated December 2015
/18/	Power Purchase Agreement signed between Essakane Solar S.A.S. and IAMGOLD ESSAKANE S.A. dated 03/03/2017
/19/	Operation and Maintenance agreement between Essakane Solar S.A.S. and Wartsila Burkina Faso, dated 19/04/2017
/20/	Name plate pictures for PV modules, Inverter, transformer and meters
/21/	Declaration by PP for No double counting of Emission Reductions dated 19/03/2024
/22/	Supporting document for the sustainability criteria/No net harm: - ENVIRONMENTAL AND SOCIAL POLICY, December 2016 - ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM, June 2017 - ENVIRONMENTAL AND SOCIAL IMPACT STATEMENT report 2022-2023 - List of employees
/23/	EIA License
/24/	Email: Confirmation of no comments received during this monitoring period, STAKEHOLDER ENGAGEMENT PLAN, June 2017
/25/	Supportive document for the installed capacity of the project activity: Project monthly report by Wartsila Burkina Faso

APPENDIX II: VERIFICATION FINDINGS

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

This is the 4th periodic verification of the project activity. No FAR was raised during previous verification (3rd periodic Verification).

FAR ID	XX	Section no.		Date: DD/MM/YYYY
Description of FAR				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Table 2. CL from this verification

No CL raised during this verification

CL ID	XX	Section no.		Date: DD/MM/YYYY
Description of CL				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Table 3. CAR from this verification

CAR ID	01	Section no.	4.1	Date: 01/05/2024
Description of CAR				
On front page of the MR: PP need to fill “Original date of issue” and “Most recent date of issue”.				
Project participant response				Date: 02/05/2024
Front page of MR now indicates the original date of issue and Most recent date of issue.				

Documentation provided by project participant	
Monitoring report version 1.1	
DOE assessment	Date: 03/05/2024
Corrections have been done in the revised MR /1.2/ and found OK. Hence this CAR is closed.	

CAR ID	02	Section no.	4.2.2 and 4.2.3	Date: 01/05/2024
Description of CAR				
PP need to fill section 2.1.2 and 2.1.3 of the MR as per MR filling guidelines.				
Project participant response				Date: 02/05/2024
Section 2.1.2 and 2.1.3 now filled as per MR filling guidelines				
Documentation provided by project participant				
Monitoring report version 1.1				
DOE assessment				Date: 03/05/2024
Corrections have been done in the revised MR /1.2/ and found OK. Hence this CAR is closed.				

Table 4. FAR from this verification

No FAR raised during this verification.

FAR ID	xx	Section no.		Date: DD/MM/YYYY
Description of CAR				
NA				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

APPENDIX III: TEAM COMPETENCE

<u>Certificate of Competence</u>						
Name	☒ Mr. ☐ Ms.	Chetan Swaroop Sharma				
Qualification Procedure	Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.					
Appointed to work as:						
	CDM Validator/Verifier	Team Leader	Team Member	Technical Expert	Technical Reviewer	Financial Expert
<i>Appointed</i>	Yes	Yes	Yes	Yes	Yes	No
<i>Appointed Date</i>	15/07/2023					
Authorized to work as Technical Expert for:						
<i>Authorized Technical Area</i>	Sectoral Scope		TA Code	Technical Area within the scope		
	Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation		
	Energy industries (renewable - / non-renewable sources)		1.2	Renewables		
	Energy distribution		2.1	Energy distribution		
	Energy demand		3.1	Energy demand		
	Waste handling and disposal		13.1	Solid waste and wastewater		
	Waste handling and disposal		13.2	Manure		
Authorized to work as Local Expert for:						
<i>Country/Countries</i>	India, Mauritius, Vietnam, Senegal and Thailand					
Compliance check by: Anand S. R.						

<u>Certificate of Competence</u>

Name	☒ Mr. ☐ Ms.	Ma Paa Puratchikkanal				
Qualification Procedure	Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GHG Projects.					
Appointed to work as:						
	CDM Validator/Verifier	Team Leader	Team Member	Technical Expert	Technical Reviewer	Financial Expert
<i>Appointed</i>	Yes	Yes	Yes	Yes	Yes	No
<i>Appointed Date</i>	27-04-2021					
Authorized to work as Technical Expert for:						
<i>Authorized Technical Area</i>	Sectoral Scope		TA Code	Technical Area within the scope		
	Energy industries (renewable - / non-renewable sources)		1.1	Thermal energy generation		
	Energy industries (renewable - / non-renewable sources)		1.2	Renewables		
	Energy demand		3.1	Energy demand		
	Construction		6.1	Construction		
	Waste handling and disposal		13.1	Solid waste and wastewater		
	Waste handling and disposal		13.2	Manure		
	Agriculture		15.1	Agriculture		
Authorized to work as Local Expert for:						
<i>Country/Countries</i>	India and Sri Lanka					
Compliance check by: Anand S. R.						

APPENDIX IV: ABBREVIATIONS

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
EB	Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse Gases
IPCC	Intergovernmental Panel for Climate Change
MP	Monitoring Period
MR	Monitoring Report
MW	Mega Watt
MWh	Mega Watt hour
O&M	Operation & Maintenance
PD	Project Description
PP	Project proponent
PPA	Power Purchase Agreement
QA/QC	Quality Assurance/Quality Control
tCO ₂	Tonnes of Carbon Dioxide
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCU	Verified Carbon Unit