



SOUBRÉ HYDROPOWER PROJECT



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Summary:

4K Earth Science Private Limited (4KES) has been contracted by “AERA Group” on behalf of CI-ENERGIES to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported from ‘Soubré hydropower project’ for the monitoring period 01/07/2023 to 31/12/2024 in the initial monitoring report version 1.0, date 06/02/2025.

Soubré Hydro Power Plant (hereafter referred to as “Soubré HPP”) is a greenfield project located about 5 km from Soubré village on the river Sassandra, San Pedro Province, Bas Sassandra region, Côte d’Ivoire. The geographical coordinates of the project extension limits are 5°48'33" W, 6°39'28" S (Northernmost point of the dam) and 5°46'56" W, 6°36'55" S (Easternmost point) which has been verified from the Location finder /08/.

The project activity is composed of a run-of-river hydropower plant with a capacity of 270 MW and a micro-hydro power plant of 5.35 MW generating capacity with a total estimated average gross electricity generation of 1,170 GWh per year, fed by a 17.3 km² reservoir. The plant is connected via three 225 kV transmission lines to the national grid: the transmission line Soubré-Buyo, Soubré-San Pedro and Soubré-Taabo.

Verification team has verified the technical details of the project equipment’s/capacity of the project activity by Microsoft Teams remote interview/physical site visit, also from the photos of the Turbines/alternators /09/. The project activity generated renewable electricity without any GHG emissions, which displaced part of the electricity otherwise supplied by grid connected fossil fuel fired power plants. Thus, GHG emission reductions can be achieved.

The purpose of this project activity is to generate clean form of electricity and the net electricity generated from this project is supplied to the national grid via the transmission lines.

The project activity generated renewable electricity without any GHG emissions, which displaced part of the electricity otherwise supplied by grid connected fossil fuel fired power plants. Thus, GHG emission reductions can be achieved.

The project activity is operational since commissioning of first unit and during current monitoring period i.e. from 01/07/2023 – 31/12/2024, the project activity has supplied 2,152,158 MWh net electricity to the grid, there by resulted in emission reduction of 1,300,333 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 5th periodic verification of the project activity. In the course of the verification, 04 Corrective Action Request (CAR) and 00 Clarification (CL) were raised.

The management of the ‘CI-ENERGIES’ 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 3.0 dated 25/03/2025. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the AERA Group. The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report Version 3.0 dated 25/03/2025.

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 01/07/2023 – 31/12/2024 based on the reported emission reductions in the final monitoring report Version 3.0 dated 25/03/2025 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: 01/07/2023 – 31/12/2024

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)
01/07/2023 to 31/12/2023	433,992	0	0	433,992	0	433,992
01/01/2024 to 31/12/2024	866,341	0	0	866,341	0	866,341
Total	1,300,333	0	0	1,300,333	0	1,300,333

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1 INTRODUCTION

1.1 Objective

4KES has been commissioned by 'AERA Group' on behalf of CI-ENERGIES to perform verification of its registered VCS project 'Soubré Hydropower Project', for the reported GHG emission reductions for the given monitoring period 01/07/2023 – 31/12/2024 (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 /09/, /10/, /13/, /15/, /16/ and /20/ for all the monitoring parameters 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 interview/Physical site visit 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/Physical site visit and found in accordance with the monitoring report /1.2/ and registered VCS PD /05/. Verification team has also verified the technical details of the project equipment's and metering arrangement during the remote interview/physical site visit and also with the supportive document /09/ and /14/ and found correct. Therefore, 4KES confirms that the verification is conducted with reasonable level of assurance.

1.4 Summary Description of the Project

Soubré Hydro Power Plant (hereafter referred to as “Soubré HPP”) is a greenfield project located about 5 km from Soubré village on the river Sassandra, San Pedro Province, Bas Sassandra region, Côte d'Ivoire. The geographical coordinates of the project extension limits are 5°48'33" W, 6°39'28" S (Northernmost point of the dam) and 5°46'56" W, 6°36'55" S (Easternmost point) which has been verified from the Location finder /08/.

The project activity is composed of a run-of-river hydropower plant with a capacity of 270 MW and a micro-hydro power plant of 5.35 MW generating capacity with a total estimated average gross electricity generation of 1,170 GWh per year, fed by a 17.3 km² reservoir. The plant is connected via three 225 kV transmission lines to the national grid: the transmission line Soubré-Buyo, Soubré-San Pedro and Soubré-Taabo. The technical specification of the turbines/alternators and the installed capacity of the project activity has been verified during the remote interview/physical site visit and also from the photos of the Turbines/alternators /09/.

The purpose of this project activity is to generate clean form of electricity and the net electricity generated from this project is supplied to the national grid via the transmission lines and PPA is signed between PP and the utility company /12/.

The project activity generated renewable electricity without any GHG emissions, which displaced part of the electricity otherwise supplied by grid connected fossil fuel fired power plants. Thus, GHG emission reductions can be achieved.

Soubré hydropower project had a planned execution time of 56 months and was completed ahead of schedule by Sinohydro International EPC contractor, in May 2017 as per following progressive commissioning by turbo-generator group:

- **G1:** 25 May 2017
- **G2:** 23 August 2017
- **G3:** 25 October 2017
- **G4 (mini plant):** 28 November 2017

The commissioning date of each turbine has been verified during the remote interview/physical site visit and also from the supportive document /10/ and found consistent.

During current monitoring period i.e. 01/07/2023 to 31/12/2024, the project activity has supplied 2,152,158 MWh net electricity to the grid, there by resulted in emission reduction of

1,300,333 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 5th 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 PD 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 v4.7.

Duration of Verification:

Verification Contract	06/02/2025
Audit	11/03/2025 (Microsoft Teams remote audit by Team leader and Physical site visit by Local Expert & Technical Expert)
Findings raised	12/03/2025
Draft Verification Report	31/03/2025
Final Verification Report	07/04/2025

2.2 Document Review

The verification is performed primarily as a document review of the approved PD and associated documents as stated in detail in appendix II of this document. The assessment is performed by a verification team using a protocol. Cross-checks between information provided in the Monitoring report, PD 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/Physical site visit and interviewed PP representative/Employees/Carbon Consultant/Local Stakeholders (identified randomly from nearby local village) and reviewed documents to achieve a reasonable level of assurance in the verification. No sampling procedures were adopted in document verification and all the documents were cross checked to ensure conservative estimation of emission reduction. Kindly find below names of the persons interviewed (Microsoft Teams remote interview/Physical site visit).

Location	The project is located about 5 km from Soubré village on the river Sassandra, San Pedro Province, Bas Sassandra region, Côte d'Ivoire. The geographical coordinates of the project extension limits are 5°48'33" W, 6°39'28" S (Northernmost point of the dam) and 5°46'56" W, 6°36'55" S (Easternmost point).	
Dates	11/03/2025 (Microsoft Teams remote audit by Team leader and Physical site visit by Local Expert)	
Key points discussed	Name of person, interviewed	Designation, Organization
Project Implementation, Operational data, Calibration, Data collection, QA/QC, procedures, Calculation of ERs, VCS requirements	KONE KLANTCHA REGIS	Chef de la Centrale Hydroélectrique de Soubré, CI – ENERGIES
	KEBIE MARIE	Supervisor at Soubre hydro powerplant, CI- ENERGIES
	Nazim Oualane	Carbon Analyst
Sustainable development Impact, Complaints, Mode of communication, Environmental impact any other concerns	TRAORE BEREH	Housewife, Local resident
	TRAORE AMED	Worker, Local resident
	YEO KOLO	Worker, Local resident

2.4 Site Visits

Verification team performed the Microsoft Teams remote interview/Physical site visit and interviewed PP representative/Employees/Carbon Consultant/Local Stakeholders (identified randomly from nearby local village) and reviewed documents to achieve a reasonable level of assurance in the verification. No sampling procedures were adopted in document verification and all the documents 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 audit/Physical site visit. 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.
- 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 VCS 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 04 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 III of this report.

2.5.1 Forward Action Requests

No FAR was 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

[already formalized and approved at previous verification]

The technical details of Turbines/alternators installed under the project activity is different than the registered VCS-PD /05/. Section 3.2.2 of the MR /1.2/ has been filled accordingly. Verification team has verified the capacity of the project activity from the name plate photo of the turbines/alternators /09/ and found consistent. The impact of the change in project capacity has been checked and the verification team confirm that the deviation does not impact the applicability of the methodology nor the appropriateness of the baseline scenario. Since the change in the capacity is within 10%, which is already considered in the VCS-PD /05/ as part of the sensitivity analysis. Hence the deviation does not have any impact on the additionality of the project activity and the project is still additional.

Ex-ante emissions reductions were calculated based on an estimated 'sold electricity' average of 1,170 GWh/y * 0.9 (applying such 0.9 discount factor to conservatively account for auxiliary consumptions and losses from net power generation assumption of 1,170 GWh/y) at time of (CDM)PDD registration, which lowered expected emission reductions by 10%. However, such losses between gross power plant generation and delivery sub-station exports are actually less than 1%, and irrelevant to the emission reductions since already accounted in the net metered energy at substation anyway. Considering this change with respect to registered VCS PD /05/, section 3.2.2 of the MR /1.2/ is filled accordingly which is found OK. Corrections do not affect the scale, baseline or the additionality of the project and hence accepted to the verification team.

VWB Justification: Verification team confirm that the deviation does not negatively impacts the conservativeness of the quantification of GHG emission reductions or removals. Further the Verification team confirms that the deviation do not impact the methodology.

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

Soubré Hydro Power Plant (hereafter referred to as “Soubré HPP”) is a greenfield project located about 5 km from Soubré village on the river Sassandra, San Pedro Province, Bas Sassandra region, Côte d’Ivoire. The geographical coordinates of the project extension limits are 5° 48'33" W, 6° 39'28" S (Northernmost point of the dam) and 5° 46'56" W, 6° 36'55" S (Easternmost point) which has been verified from the Location finder /08/.

The project activity is composed of a run-of-river hydropower plant with a capacity of 270 MW and a micro-hydro power plant of 5.35 MW generating capacity with a total estimated average gross electricity generation of 1,170 GWh per year, fed by a 17.3 km² reservoir. The plant is connected via three 225 kV transmission lines to the national grid: the transmission line Soubré-Buyo, Soubré-San Pedro and Soubré-Taabo. The technical specification of the turbines/alternators and the installed capacity of the project activity has been verified during the remote interview/physical site visit and also from the photos of the Turbines/alternators /09/.

Soubré hydropower project had a planned execution time of 56 months and was completed ahead of schedule by Sinohydro International EPC contractor, in May 2017 as per following progressive commissioning by turbo-generator group:

- **G1:** 25 May 2017
- **G2:** 23 August 2017
- **G3:** 25 October 2017
- **G4 (mini plant):** 28 November 2017

The commissioning date of each turbine has been verified during the remote interview/physical site visit and also from the supportive document /10/ and found consistent.

It has also been verified as per the guidelines in ACM0002 Version 16.0 /07/ that the calculations for the GHG emission reductions is done in accordance with the aforesaid methodology /07/.

The key technical indicators of the power plant are shown below:

Specifications of the power plant:				
Turbines	Manufacturer	Type	Rated Power	Rated flow
3	Alstom	Francis HLF250-LJ	93.93 MW	238 m ³ /s
Generator	Manufacturer	Type	Rated Power	Rated speed
3	Alstom	SF90-56	90 MW / 105.88 MVA	107.14 r/min
Specifications of the micro-hydro power plant:				
Turbines	Manufacturer	Type	Rated Power	Rated flow
1	Alstom	Bulb GZ4B068-WP	5.51 MW	50 m ³ /s
Generator	Manufacturer	Type	Rated Power	Rated voltage
1	Alstom	SFWG5360-28	6.7 MVA	6.6 kV

Verification team has verified the technical specification of the turbines/alternators and the installed capacity of the project activity during the remote interview/physical site visit and also from the photos of the Turbines/alternators /09/.

The net electricity generated from the projects is supplied to the grid and PPA is signed between PP and Utility company (COMPAGNIE IVOIRIENNE D'ÉLECTRICITÉ (CIE)) /12/ which is still valid.

During current monitoring period i.e. 01/07/2023 to 31/12/2024, the project activity has supplied 2,152,158 MWh net electricity to the grid, there by resulted in emission reduction of 1,300,333 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 and necessary clearances for setting the project activity. List of documents reviewed during the course of verification is presented under Appendix II of this report.

The selected monitoring period i.e. 01/07/2023 – 31/12/2024 (both days included) is within the 1st crediting period i.e. 25/05/2017 to 24/05/2027 which is accepted to the verification team. As per the registered VCS-PD /05/, the expected start date of the project activity was 01/01/2017 however the commissioning of the first turbine occurred on 25/05/2017 /10/, hence the start date/crediting period start date has been revised to 25/05/2017 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 as confirmed from the interviews and monthly electricity reports /15/.

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period except the deviation mentioned under section 3.2 of this report. The project design as mentioned in the registered PD & 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 PD & monitoring report are available and implemented in an appropriate manner.

The organisational role and responsibility as mentioned in the registered VCS PD /05/ & monitoring report /1.2/ is followed onsite. All the emergency preparedness as mentioned in the registered VCS PD & 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 VCS PD, monitoring report and no deviation on project design or monitoring plan is observed except deviations as mentioned under section 3.2 of this report which do not affect the scale, baseline or the additionality of the project and hence accepted to the verification team.

The emission reduction achieved during the current monitoring period i.e., from 01/07/2023 to 31/12/2024 is 23% higher than the ex-ante estimation for the same period.

This is due to (i) equipment's availability (thanks to good maintenance), (ii) increasing power demand from the grid, and (iii) upstream water releases from Buyo dam (due to in-operational group). Further Hydro generation is unexpected i.e. based on the water availability and not in the control of PP.

As per the registered IRR excel sheet /06/, the additionality breaching point for the power generation is +34.2%. Since the generation is 23% higher during this monitoring period which is less than +34.2%, project is still additional with the higher generation. Hence verification team confirm that higher generation do not have any impact on the project additionality and project is still additional. The same is accepted to the verification team.

Project activity provides local jobs and upgrade the existing roads, directly contributing to the improvement of infrastructure in region. 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 site visit interview of the Local people (Section 2.3 of this report) and supportive documents /23/.

Section 1.2 of the VCS MR /1.2/ mention about the audit history. The registered VCS project is undergoing 5th periodic verification for the monitoring period 01/07/2023 to 31/12/2024 (including both the days) under 1st crediting period i.e. 25/05/2017 to 24/05/2027 (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 simultaneously registered as a CDM Project activity under the UNFCCC (Project 10326); however, it either claims emission reduction under the VCS program or under the CDM, never both. Verification team confirms that it has checked that there is no double counting associated with project activity being participation of other GHG programs. Declaration /11/ for the same has been submitted.

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. Côte d'Ivoire is not a participant in any emission trading programs, 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 for the same monitoring period. The same is confirmed from the PP's representative interviews and declaration /11/.
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 project is simultaneously registered as a CDM Project activity under the UNFCCC (Project 10326); however, it either claims emission reduction under the VCS program or under the CDM, never both. Verification team confirms that it has checked that there is no double counting associated with project activity being participation of other GHG programs. Declaration /11/ for the same has been submitted.
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 6.1: 6.1.1 Proportion of population using safely managed drinking water services; During the monitoring period there was no increase in the population likely to have access to water per locality, as most of the connections had been done during previous MP as confirmed from supportive documents /25/. SDG Target 7.1: 7.1.1 Proportion of population with access to electricity; During this monitoring period, no new localities have been electrified/connected to the grid as confirmed from ESMP activity report /26/. SDG Target 7.2: During the current monitoring period, the project activity generated 2,152,158 MWh of net renewable energy, which displaced part of the electricity otherwise supplied by grid connected fossil fuel fired power plants. Verification team has checked the calculation from the monitoring report /1.2/ and the ER calculation sheet /2.2/ and found correct. SDG Target 13.0: The project, in the current reporting period has resulted in emission reduction of 1,300,333 tCO_{2e}. Verification team has checked the calculation from the monitoring report /1.2/ and the ER calculation sheet /2.2/ and found correct.

Additional information
relevant to the project

No commercially sensitive information has been excluded from the public version of the monitoring report.

Finding: CAR-01, CAR-02 and CAR-03 are raised and successfully closed.

Opinion:

Assessment team concludes the following:

- a) There are no material discrepancies between project implementation and the project description provided in the PD /05/ except deviations as mentioned under section 3.2 of this report which do not affect the scale, baseline or the additionality of the project and hence accepted to the verification team.
- 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 are 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) For this monitoring period, the project has not received or sought any other form of environmental credit.

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 except deviations as mentioned under section 3.2 of this report which do not affect the scale, baseline or the additionality of the project and hence accepted to the verification team.

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 Microsoft Teams remote interview/physical site visit, 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	As per stakeholders' consultation, there was no conflict regarding land tenure rights, as compensation was done to all impacted people. The same is confirmed during the Microsoft Teams remote interview/site visit observation and local stakeholder interviews.
Stakeholder diversity and changes over time	Stakeholders were identified at validation, including local authorities, local people with social, economic, and cultural similarities. Stakeholder groups have not changed over time. The same is confirmed during the Microsoft Teams remote interview/site visit observation and local stakeholder interviews.
Expected changes in well-being	The project impact positively the stakeholders' well-being as it provides renewable energy source. The same is confirmed during the Microsoft Teams remote interview/site visit observation and local stakeholder interviews.
Location of stakeholders	All stakeholders are located in Soubre. The same is confirmed during the Microsoft Teams remote interview/site visit observation and local stakeholder interviews.
Location of resources	N/A.

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/physical site visit. During the monitoring period (from 01/07/2023 to 31/12/2024), there are no comments received for the project activity which was confirmed during the interview of PP representative & Local stakeholders and comment book /27/. Since all stakeholders are located in Soubre (near the power plant), in case of a request, they can go to the project's site in order to have a physical meeting with PP. Since there was no change in the project

	design, there was no need to consult stakeholders again. The same is confirmed from the Microsoft Teams remote interview/site visit observation, local stakeholder interviews and comment register /27/. During current monitoring period, there are no grievances received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Date(s) of stakeholder consultation	30-January-2013.
Communication of monitored results	No comment has been filled/registered on the grievance logbook. The same is confirmed from the Microsoft Teams remote interview/site visit observation, local stakeholder interviews and comment register /27/.
Consultation records	There is a register of all the incoming mails which are classified according to their type, as follows: Request for visit, Request for help, Complaints, Request for visit, Invitation, Study visit, Information. During this monitoring period, project proponent received several mails but none of it was a complaint. No comment has been filled/registered on the grievance logbook. The same is confirmed from the Microsoft Teams remote interview/site visit observation, local stakeholder interviews and comment register /27/.
Stakeholder input	There was no input received since validation, since no need to change project design. No comment has been filled/registered on the grievance logbook. The same is confirmed from the Microsoft Teams remote interview/site visit observation, local stakeholder interviews and comment register /27/.

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. The resettlement option considered is collective or group rehousing of village communities. Generally speaking, the majority of people

	surveyed in the project's direct impact zone opted for collective or grouped resettlement on a given site for households in the same locality. The choice is mainly that of the customary authorities of the villages affected by the project. It is also the wish of the majority of heads of households (75% of heads of households) interviewed individually. The continuation of agricultural activities is also an expressed choice. The same is confirmed from the Microsoft Teams remote interview/site visit observation, local stakeholder interviews, EIA report/22/, Public Interest Decree/18/ and The Right of use /19/. PP has a mechanism for on-going communication with local stakeholders which has been discussed during the Microsoft Teams remote interview/physical site visit. During the monitoring period (from 01/07/2023 to 31/12/2024), there are no comments received for the project activity which was confirmed during the interview of PP representative & Local stakeholders and grievance register /27/. During current monitoring period, there are no grievances received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Outcome of FPIC discussion	All impacted people were relocated and support for improving crop productivity were provided, as per EIA report. No ongoing or unresolved conflicts are going on which was confirmed during the interview of PP representative & Local stakeholders and grievance register /27/. The same is confirmed from the Microsoft Teams remote interview/site visit observation, local stakeholder interviews, EIA report/22/, Public Interest Decree/18/ and The Right of use /19/.

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	There is a register of all the incoming mails which are classified according to their type, as follows: Request for visit, Request for help, Complaints, Request for visit, Invitation, Study visit, Information. Each type is color coded to make it easier to find them in the Excel file, for each year. During this monitoring period, project proponent received several mails but none of it was a complaint. Mails received during this monitoring period concerned: work request, help request, visit request, request for information, Invitations, and study visits. Although

	the register also records complaints received via telephone calls and face-to-face complaints, no such complaints were received. No comment has been filled/registered on the grievance logbook. The same is confirmed from the Microsoft Teams remote interview/site visit observation, local stakeholder interviews and comment register /27/. During current monitoring period, there are no grievances received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Grievance redress procedure	There is a register of all the incoming mails which are classified according to their type, as follows: Request for visit, Request for help, Complaints, Request for visit, Invitation, Study visit, Information. Each type is color coded to make it easier to find them in the Excel file, for each year. During this monitoring period, project proponent received several mails but none of it was a complaint. Mails received during this monitoring period concerned: work request, help request, visit request, request for information, Invitations, and study visits. Although the register also records complaints received via telephone calls and face-to-face complaints, no such complaints were received. No comment has been filled/registered on the grievance logbook. The same is confirmed from the Microsoft Teams remote interview/site visit observation, local stakeholder interviews and comment register /27/. During current monitoring period, there are no grievances received. 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
During this monitoring period, no comment received for the project activity which was confirmed during the interview of PP representative & Local stakeholders and comment book /27/.	N/A	N/A

4.2.6 Risks to Local Stakeholders and the Environment

4.2.6.1 Management Experience

Soubre hydropower plant is managed by CI-ENERGIES, the national company in charge of producing and transporting electricity, thus experienced in energy production projects all over the country. Verification team has found the PP justification acceptable.

4.2.6.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human induced risks to stakeholders' wellbeing	The project has positive impacts on the environment, society and economy; and has no risks to stakeholders' wellbeing. The same is confirmed from the Microsoft Teams remote audit/site visit observation, local stakeholder interviews, detailed EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.
Risks to stakeholder participation	PP has a mechanism for on-going communication with local stakeholders which has been discussed during the Microsoft Teams remote audit/physical site visit. During the monitoring period (from 01/07/2023 to 31/12/2024), there are no comments received for the project activity which was confirmed during the interview of PP representative & Local stakeholders and comment book /27/. During current monitoring period, there are no grievances received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Working conditions	All safety measures are provided at project site. This is also verified from Microsoft Teams remote audit/physical site visit interviews with PP's representative/employees, and list of employees /23/.
Safety of women and girls	No risk to safety of women and girls. This is also verified from Microsoft Teams remote audit/physical site visit with PP's representative/employees.
Safety of minority and marginalized groups, including children	There is no risk related to Safety of minority and marginalized groups, including children. This is also verified from Microsoft Teams remote audit/physical site visit with PP's representative/employees and list of employees /23/.

Pollutants (air, noise, discharges to water, generation and release of hazardous materials and chemical pesticides and fertilizers)	No risk of significant impact other than during the construction phase was identified regarding polluted materials. Potential impacts and appropriate mitigation measures are presented in detail in the detailed EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.
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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	Project is not involved in discrimination and sexual harassment as confirmed during the interviews with PP's representatives/employees and Grievance mechanism /27/.
Sexual harassment	Project is not involved in discrimination and sexual harassment as confirmed during the interviews with PP's representatives/employees and Grievance mechanism /27/.
Gender equity in labor and work	There is no risk in gender equity and work as confirmed during the interviews with PP's representatives/employees and employment records /23/.
Forced labor	Project does not use victims of human trafficking, forced labour and child labour. The same is confirmed during the interviews with PP's representatives/employees.
Child labor	Project does not use victims of human trafficking, forced labour and child labour. The same is confirmed during the interviews with PP's representatives/employees and list of employees /23/.
Human trafficking	Project does not use victims of human trafficking, forced labour and child labour. The same is confirmed during the interviews with PP's representatives/employees.

4.2.7.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	There are no indigenous people living around the project's site. Furthermore, Ivory Coast is part of ILO convention since 21.11.1960. As a public company, CI-Energies is aligned to the ratified conventions. The same is confirmed during the interviews with PP's representatives/employees.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	No specific risk identified. As per EIA report /22/, a survey of the immediate area of the site showed that it contains no classified cultural or religious heritage features. No indigenous peoples were identified in the same analysis and report. The same is confirmed during the interviews with PP's representatives/stakeholders and EIA report /22/.

4.2.7.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	No specific risk identified. There are no ongoing or unresolved conflicts related to land use right. Therefore, there is no risk related to protecting and preserving the property rights. The same is confirmed during the interviews with PP's representatives/stakeholders.

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	N/A, the same is confirmed during the interviews with PP's representatives/stakeholders.

Benefit sharing during the monitoring period

N/A, the same is confirmed during the interviews with PP's representatives/stakeholders.

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	As per ESMP of 2021, the project had at that time, completed 90% of the creation of a secure biodiversity zone with: - Acquisition and securing of the site identified as a conservation area since 2016. - Organization of an information and mobilization workshop for administrative and political authorities, community leaders of villages impacted by the project and training of 20 community relays in the last quarter of 2016. - Physical development of the conservation area in 2017. - Research, seed collection, pre-treatment, treatment and planting; - Capture and transfer of residual fauna before the flooding in March 2017; - Carrying out various thematic studies on flora and fauna and assessment of ecosystem services in progress. - Study, monitoring and control of the construction of an ecological hut for ecotourism completed. - Organization of periodic ecological monitoring mission 2018-2021 (4 days/quarter). The last monitoring mission took place on April 20, 2021. The same can be verified from the detailed EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.
Soil degradation and soil erosion	No risk identified for the project activity as confirmed from the stakeholder interviews, EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.
Water consumption and stress	No risk identified for the project activity as confirmed from the stakeholder interviews, EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.

Usage of fertilizers	No risk identified. The same is confirmed from the interviews and EIA report /22/.
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4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	There is no impact on rare, threatened and endangered species as per EIA report. The same confirmed from the EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.
Areas needed for habitat connectivity	Not Applicable as not identified related to habitat connectivity

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
N/A as confirmed from stakeholder interviews, EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.	N/A as confirmed from stakeholder interviews, EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
N/A as confirmed from stakeholder interviews, EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.	N/A as confirmed from stakeholder interviews, EIA /22/, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN /21/, ESMP report 2022 /26/.

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	No risk identified as confirmed from PP's representatives and stakeholders interviews.

4.3 Accuracy of Reduction and Removal Calculations

The verification team was able to confirm that the monitoring plan contained in registered VCS-PD/05/ and MR/1.2/ is in accordance with the approved large-scale methodology applied for the project activity i.e. “ACM0002 ver. 16 - Grid-connected electricity generation from renewable sources” /07/ and its applicable tools.

The parameters 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 ACM0002 Version 16.0 /07/, VCS-PD /05/ and the formulae given in the monitoring report /1.2/.

Parameters monitored:

During the verification, all relevant monitoring parameters of the registered monitoring plan have been verified with regard to the appropriateness of the verification method; the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures. All monitoring parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. It is confirmed that the monitoring mechanism is effective and reliable.

Verification team confirms through remote interviews/physical site visit and from the document review, the actual monitoring system complies with the monitoring plan mentioned in the registered VCS-PD /05/. According to the monitoring plan in the registered PD /05/, there are 3 monitoring parameter required to be monitored. Following are the details of monitoring in accordance with the monitoring plan of the registered VCS PD /05/:

1. $EG_{\text{facility},y}$ (MWh)

		VB Assessment
Data / Parameter	$EG_{\text{facility},y}$	The monitoring parameter, Unit and description are as per the registered PD /05/.
Data unit	MWh/yr	
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y	
Source of data	Measured directly with electricity meter(s) at project site.	The monitoring parameter is measured by energy meters installed at power house and at the delivery point at 225kV substation.

		One meter per group has been installed in the power house as well as at the delivery substation, totalling 8 devices. The metering arrangement is verified during the remote interview/physical site visit and single line diagram /14/. The source of data is in accordance with the registered VCS-PD /05/.
Description of measurement methods and procedures to be applied	This parameter should be calculated as difference between (a) the quantity of electricity supplied by the project plant/unit to the grid, and (b) the quantity of electricity delivered to the project plant/unit from the grid. In case it is calculated then the following parameters shall be measured: (a) The quantity of electricity supplied by the project plant/unit to the grid; and (b) The quantity of electricity delivered to the project plant/unit from the grid Meters will be installed at the substation of the hydro power plant to measure directly and continuously the electricity supply to (and, if any, import from) the grid. The metering instruments will be calibrated annually in accordance with manufacturers specifications. Accuracy class of the meters is 0.2	The monitoring parameter is measured by energy meters installed at powerhouse and at the delivery point at 225kV substation. One meter per group has been installed in the powerhouse as well as at the delivery substation, totalling 8 devices. The meters are bi-directional. The metering arrangement is verified during the remote interview/physical site visit and single line diagram /14/. Monthly electricity export and import are measured at 225 kV substation by PP and CIE as confirmed during the remote interview/physical site visit. The electricity

		supplied to grid is calculated by subtracting Electricity export to grid and Electricity import from grid. The measurement method is in accordance with the registered VCS-PD /05/.								
Frequency of monitoring/recording	Continuous measurement and at least monthly recording	The electricity export and import are continuously measured and monthly recorded in the form of the monthly reports /15/ as verified during the remote interview/physical site visit. The frequency of monitoring/recording is in accordance with the registered VCS-PD /05/.								
Value monitored	<table> <tr> <th>Year</th> <th>2023</th> <th>2024</th> <th>Total</th> </tr> <tr> <td>EG_{facility,y}</td> <td>718,292</td> <td>1,433,866</td> <td>2,152,158</td> </tr> </table>	Year	2023	2024	Total	EG _{facility,y}	718,292	1,433,866	2,152,158	Verification team has verified the reported electricity export/import data with the monthly electricity reports /15/ and found consistent.
Year	2023	2024	Total							
EG _{facility,y}	718,292	1,433,866	2,152,158							
Monitoring equipment	Electricity meter calibrated as per manufacturer's requirements.	Verification team has checked the meter details during the remote interview/physical site visit, from the photos /09/ and found consistent with the details mentioned in the monitoring report /1.2/. The energy meters are in accordance with the registered VCS-PD /05/.								

		During the monitoring period, no replacement of meter was observed. Electricity export and import is measured at two levels i.e. energy meters installed at powerhouse and energy meters installed at substation. Last calibration of the energy meters was done on 20/12/2022 and latest calibration was done in 29/12/2024 /13/ by government authority. Since the calibration was delayed, PP has applied the maximum error 0.2% identified during the latest calibrations (29/12/2024) /13/ for the period from 01/12/2023 to 31/12/2024 and monthly electricity export and import has been corrected accordingly. The same is verified from the revised ER sheet /2.2/ and revised MR /1.2/. Verification team has found the approach conservative and hence accepted to the verification team. CAR-04 has been raised in this regard and successfully closed. Refer Appendix III of this report for more details.
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QA/QC procedures to be applied	Cross check measurement results with records for sold electricity	The electricity export and import has been cross checked from the monthly reconciliations for invoicing /16/ 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 PD /05/.
Calculation method	-	-
Comments	The information is provided monthly by CI-ENERGIES and contradictorily reconciled with CIE off-taker at invoicing stage. The electricity generated and delivered by Soubré to the grid is monitored both at the hydropower plant departure and at the substation delivery points, through metering equipments with a respective accuracy of 0.2% all, and invoiced monthly to CIE based on the reconciled, signed joint readings of delivered net electricity (after transmission losses). The meters have been verified by the central direction of energy transport and telecommunications sub-direction maintenance / control department of CI-Energies between 27/12/2024 and 29/12/2024, valid until 28/12/2025. Previous verifications have been done between 15/12/2022 and 20/12/2022 valid until 14/12/2023 for G1, 15/12/2023 for G3 and 19/12/2023 for G2 & G4. As there was a delay in calibration of one year, and latest meters' verification report shows a maximum error of less than 0.2% (maximum applicable error), thus, paragraph 366 (a) of CDM validation and verification standard for project activities version 03.0 is applied. Therefore, the applicable error of 0.2% was conservatively deducted for the period going from 01/12/2023 to 31/12/2024. All meters have been calibrated at installation and are annually tested by CI-Energie.	Verification team has checked the meter details during the remote interview/physical site visit, from the photos /09/ and found consistent with the details mentioned in the monitoring report /1.2/. The energy meters are in accordance with the registered VCS-PD /05/. During the monitoring period, no replacement of meter was observed. Electricity export and import is measured at two levels i.e. energy meters installed at power house and energy meters installed at substation. Last calibration of the energy meters was done on 20/12/2022 and latest calibration was done in 29/12/2024 /13/ by government authority. Since the

		calibration was delayed, PP has applied the maximum error 0.2% identified during the latest calibrations (29/12/2024) /13/ for the period from 01/12/2023 to 31/12/2024 and monthly electricity export and import has been corrected accordingly. The same is verified from the revised ER sheet /2.2/ and revised MR /1.2/. Verification team has found the approach conservative and hence accepted to the verification team. CAR-04 has been raised in this regard and successfully closed. Refer Appendix III of this report for more details.
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2. CAP_{PJ} (W)

		VVB Assessment
Data / Parameter	CAP _{PJ}	The monitoring parameter, Unit, and descriptions are as per the registered VCS-PD /05/.
Data unit	W	
Description	Installed capacity of the hydro power plant after the implementation of the project activity	
Source of data	Project site	The source of data is in accordance with the registered VCS-PD /05/.
Description of measurement methods and procedures to be applied	Determine the installed capacity based on manufacturer's specifications or commissioning data or recognized standards	The measurement method is in accordance with the registered VCS-PD /05/.
Frequency of monitoring/recording	Once at the beginning of each crediting period	The frequency of monitoring/recording is

		in accordance with the registered VCS-PD /05/.
Value monitored	275,354,000	Verification team has verified the capacity of the project activity from the Name plate photos of the turbines/alternators /09/ and found correct.
Monitoring equipment	-	Not Applicable
QA/QC procedures to be applied	-	Not Applicable
Purpose of the data	Calculation of project emissions	The purpose of the monitoring parameter is to calculate the project emission which is in accordance with the registered VCS-PD /05/.
Calculation method	-	-
Comments	This parameter is used to calculate the power density.	The purpose of the monitoring parameter is to calculate the power density (ultimately project emission) which is in accordance with the registered VCS-PD /05/.

3. A_{PJ} (Unit: m^2)

		VVB Assessment
Data / Parameter	A_{PJ}	The monitoring parameter, Unit, and descriptions are as per the registered VCS-PD /05/.
Data unit	m^2	
Description	Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full	

Source of data	Project site	The source of data is in accordance with the registered VCS-PD /05/.
Description of measurement methods and procedures to be applied	Measured from topographical surveys, maps, satellite pictures, etc.	The measurement method is in accordance with the registered VCS-PD /05/.
Frequency of monitoring/recording	Once at the beginning of each crediting period	The frequency of monitoring/recording is in accordance with the registered VCS-PD /05/.
Value monitored	13,778,000	Loi HSV_Centrale Soubré_vF.pdf (abacus/framework in application for water level & superficy equivalence, at nominal height of CRN = 152,00 m), abacus was determined by SinoHydro (EPC Contractor) during the water filling of the dam, under the supervision of Tractebel engineering (Consulting Company). Verification team has verified the area of the reservoir /20/ and found correct.
Monitoring equipment	-	Not Applicable
QA/QC procedures to be applied	-	Not Applicable
Purpose of the data	Calculation of project emissions	The purpose of the monitoring parameter is to calculate the project emission which is in

		accordance with the registered VCS-PD /05/.
Calculation method	-	-
Comments	This parameter is used to calculate the power density.	The purpose of the monitoring parameter is to calculate the power density (ultimately project emission) which is in accordance with the registered VCS-PD /05/.

Finding: CAR-04 is raised and successfully closed.

Opinion: The verification team confirms.

- The monitoring plan has been implemented as per the PD /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 PD /05/.
- The values included in the monitoring report and corresponding emission reduction sheet are verified and included under monitoring parameter, wherever appropriate.
- The net generation for this monitoring period is higher than the ex-ante estimated. Verification team has checked the IRR sheet, the breaching point for the electricity generation for additionality is 34.2%. The increase in generation is lower than that, hence project is still additional. Further Hydro generation is unexpected i.e. based on the water availability and not in the control of PP.

Parameters not monitored/ex-ante:

1. Data/Parameter: $EF_{grid,CM,y}$ (Unit: tCO₂/MWh)

Description: Combined margin CO₂ emission factor for grid connected power generation in year y

	Discussion and verification assessment
Purpose of data	Calculation of baseline emissions
Verified value	0.6042 tCO ₂ /MWh
Source of value	Registered VCS-PD /05/

Justification	It is fixed for the entire crediting period as per the registered VCS-PD /05/. The value of the Combined margin emission factor has been correctly taken as per the registered VCS-PD /05/ and hence accepted by the verification team.
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2. Cap_{BL} (W)

Description: Installed capacity of the hydro power plant before the implementation of the project activity.

	Discussion and verification assessment
Purpose of data	Calculation of project emissions
Verified value	0
Source of value	Registered VCS-PD /05/
Justification	Project is a new hydro power plant which has been verified from various documents /10/, /12/, /18/, /19/, /21/. For new hydro power plants, this value is zero. The value has been correctly taken as per the registered VCS-PD /05/ and hence accepted by the verification team.

3. ABL (m²)

Description: Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m²).

	Discussion and verification assessment
Purpose of data	Calculation of project emissions
Verified value	0
Source of value	Registered VCS-PD /05/
Justification	Project is a new hydro power plant which has been verified from various documents /10/, /12/, /18/, /19/, /21/. For new hydro power plants, this value is zero. The value has been correctly taken as per the registered VCS-PD /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 PD /05/ and correctly applied in MR /1.2/, emission reductions spreadsheet /2.2/ and justified.

Assessment of Data and Calculation of GHG emission reductions:

The verification team has reviewed the emission reduction (ER) spread sheet /2.2/ and checked all the formulae and verified them to be correct and in line with the monitoring plan of the registered VCS PD /05/ and the applied monitoring methodology /07/.

All the monitored parameters are described above in this section. All the ex-ante parameters which are used in the calculation of emission reduction are also presented in this section transparently. It is confirmed that all the ex-ante parameters have been correctly used in the emission reduction calculation.

According to the approved methodology ACM0002 “Grid-connected electricity generation from renewable sources” Version 16.0 /07/, Emission Reductions are calculated as follows:

Baseline Emissions

As per the VCS PD /05/, baseline emissions (BE_y) is calculated as follows:

Baseline emissions include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are calculated as follows:

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

Where:

BE_y	=	Baseline emissions in year y (tCO ₂ /yr)
$EG_{PJ,y}$	=	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the VCS project activity in year y (MWh/yr)
$EF_{grid,CM,y}$	=	Combined margin CO ₂ emission factor for grid connected power generation in year y (tCO ₂ /MWh)

Calculation of $EG_{PJ,y}$

Since the project activity is “the installation of a new grid-connected renewable power plant at a site where no renewable power plant was operated prior to the implementation of the project activity”, it verifies the case of a Greenfield renewable energy power plant of the ACM0002 methodology Version 16.0 whereby:

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

Where:

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

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

$EG_{facility,y}$ is an ex-post parameter and $EF_{grid,CM,y}$ is an ex-ante parameter justified above.

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

	$EG_{PJ,y}$	$EF_{grid,CM,y}$	BE_y
	MWh	(tCO ₂ e/MWh)	tCO ₂
From 01/07/2023 to 31/12/2023	718,292	0.6042	433,992
From 01/01/2024 to 31/12/2024	1,433,866	0.6042	866,341
Total	2,152,158	-	1,300,333

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

$$BE_y = 1,300,333 \text{ tCO}_2$$

Project Emissions

According to the registered PDD /05/ and applied methodology ACM0002, Version 16.0 /07/, Project emissions shall be accounted by using the following equation:

$$PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y}$$

Where:

PE_y = Project emissions in year y (t CO₂e/yr)

$PE_{FF,y}$ = Project emissions from fossil fuel consumption in year y (t CO₂/yr)

$PE_{GP,y}$ = Project emissions from the operation of geothermal power plants due to the release of non-condensable gases in year y (t CO₂e/yr)

$PE_{HP,y}$ = Project emissions from water reservoirs of hydro power plants in year y (t CO₂e/yr)

Project emissions from fossil fuel consumption ($PE_{FF,y}$)

According to para 31 of ACM0002 “for all renewable energy power generation activities, emissions due to the use of fossil fuels for the backup generator can be neglected, hence $PE_{FF,y} = 0$.

Project emission from the operation of geothermal power plants due to the release of non-condensable gases ($PE_{GP,y}$)

Project is hydro power plant hence inapplicable and $PE_{GP,y} = 0$.

Emissions from water reservoirs of hydro power plants ($PE_{HP,y}$)

Since the calculated Power Density is 19.98 W/m^2 , hence as per para 39 of the applied methodology (ACM0002 Version 16), $PE_{HP,y}$ is zero. Verification team has checked the power density calculation and found correct.

Leakage

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

Emission reductions

Reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

Where:

ER_y = Emission reductions in year y, tCO_{2e}

BE_y = Baseline emissions in year y, tCO_{2e}

PE_y = Project emissions in year y, tCO_{2e}

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

Vintage period	Baseline emissions (tCO _{2e})	Project emissions (tCO _{2e})	Leakage emissions (tCO _{2e})	Reduction VCU (tCO _{2e})	Removal VCU (tCO _{2e})	Total VCUs (tCO _{2e})
01-July-2023 to 31-Dec-2023	433,992	0	0	433,992	0	433,992
01-Jan-2024 to 31-Dec-2024	866,341	0	0	866,341	0	866,341

Total	1,300,333	0	0	1,300,333	0	1,300,333
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Opinion:

The verification team confirms that

- The complete data set for the identified and required parameters 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 Microsoft Teams remote audit/physical site visit. 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 monitoring parameter and confirms to the requirement of PD /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.

Evidence (Documents/Interviews) referred for verification of individual monitoring parameter and fixed parameter 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 II of this report. Verification team conclude that evidence 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 'AERA Group' on behalf of CI-ENERGIES, has performed the independent verification of the emission reductions for the VCS project activity (VCS ID - 1522) "Soubré hydropower project" in Côte d'Ivoire for the monitoring period 01/07/2023 to 31/12/2024 as reported in the Monitoring Report Version 3.0 dated 25/03/2025. CI-ENERGIES 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 ACM0002- Version 16.0, the monitoring plan contained in the registered VCS PD /05/, VCS guidelines version 4.4 and Monitoring Report (Version 3.0 dated 25/03/2025) 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 01/07/2023 to 31/12/2024 are fairly stated in the Monitoring Report Version 3.0 dated 25/03/2025. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002 "Grid-connected electricity generation from renewable sources" Version 16.0 and the VCS standard v4.7 /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 01/07/2023 to 31/12/2024 are fairly stated in the Monitoring Report Version 3.0 dated

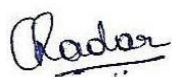
25/03/2025. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002 “Grid-connected electricity generation from renewable sources” Version 16.0 and the VCS standard v4.7 /03/. Verification team confirm that verification of the GHG statement was conducted in accordance with ISO 14064-3: 2019.

Verification period: From 01/07/2023 to 31/12/2024

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 VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-July-2023 to 31-Dec-2023	433,992	0	0	433,992	0	433,992
01-Jan-2024 to 31-Dec-2024	866,341	0	0	866,341	0	866,341
Total	1,300,333	0	0	1,300,333	0	1,300,333

Approved by



Chandrakala R

Managing Director

4K Earth Science Private Limited

Date: 07-April-2025

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-July-2023 to 31-Dec-2023	353,457	433,992	23%	The actual ER in this period is 23 % more than the estimated valued in the registered VCS PD /05/. This is due to (i) equipment's availability (thanks to good maintenance), (ii) increasing power demand from the grid, and (iii) upstream water releases from Buyo dam (due to in-operational group). Further Hydro generation is unexpected i.e. based on the water availability and not in the control of PP. As per the registered IRR excel sheet /06/, the additionality breaching point for the power generation is +34.2%. Since the generation is 23% higher during this monitoring period which is less than +34.2%, project is still additional with the higher generation. Hence verification team confirm that higher generation do not have any impact on the project additionality and project is still additional. The same is accepted to the verification team.
01-Jan-2024 to 31-Dec-2024	706,914	866,341	23%	The actual ER in this period is 23 % more than the estimated valued in the registered VCS PD /05/. This is due to (i) equipment's availability (thanks to good maintenance), (ii) increasing power demand from the grid, and (iii) upstream water releases from Buyo dam (due to in-operational group).

				Further Hydro generation is unexpected i.e. based on the water availability and not in the control of PP. As per the registered IRR excel sheet /06/, the additionality breaching point for the power generation is +34.2%. Since the generation is 23% higher during this monitoring period which is less than +34.2%, project is still additional with the higher generation. Hence verification team confirm that higher generation do not have any impact on the project additionality and project is still additional. The same is accepted to the verification team.
Total	1,060,371	1,300,333	23%	The actual ER in this period is 23 % more than the estimated valued in the registered VCS PD /05/. This is due to (i) equipment's availability (thanks to good maintenance), (ii) increasing power demand from the grid, and (iii) upstream water releases from Buyo dam (due to in-operational group). Further Hydro generation is unexpected i.e. based on the water availability and not in the control of PP. As per the registered IRR excel sheet /06/, the additionality breaching point for the power generation is +34.2%. Since the generation is 23% higher during this monitoring period which is less than +34.2%, project is still additional with the higher generation. Hence verification team confirm that higher generation do not have any impact on the project additionality and project is still additional. The same is accepted to the verification team.

APPENDIX I: COMMERCIALLY SENSITIVE INFORMATION

Section	Information	Justification	Assessment method and conclusion
Not applicable	Not applicable	Not applicable	Not applicable

APPENDIX II: LIST OF DOCUMENTS

/1/	/1.1/ Monitoring Report, Version 1.0, dated 06/02/2025 (Initial Version) /1.2/ Monitoring Report, Version 3.0 dated 25/03/2025 (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 v4.7 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 VCS PD version 2.1 dated 13/10/2016
/6/	Web-Link for the Registered project activity for Validation Report and Grid Emission factor calculation https://registry.verra.org/app/projectDetail/VCS/1522
/7/	Approved monitoring methodology: ACM0002 ver. 16.0 - Grid-connected electricity generation from renewable sources
/8/	Websites referred: http://www.itouchmap.com/latlong.html (Latitude-Longitude location finder)
/9/	Photos of major equipment (turbine, alternator and meters) along with Video of project site

/10/	Date of operation of each project unit: Final Works Supervision Report (Technical report of the works) by Tractebel engineering (a consultant company providing technical services to the project proponent), Document number: SBR-TEF-RF-18-01-B, dated 17-05-2019
/11/	Declaration by PP for No double counting of Emission Reductions, 10/02/2024
/12/	Power Purchase Agreement between PP and Utility company (COMPAGNIE IVOIRIENNE D'ÉLECTRICITÉ (CIE)) 26/07/2013
/13/	Calibration certificates of all the 8 energy meters installed at power house and at substation dated 29/12/2024 by central direction of energy transport and telecommunications sub-direction maintenance / control department of CIE (Government authority)
/14/	Single line diagram of the project connection with grid and monitoring points
/15/	Supportive for Electricity export and import to grid: SBRE_Rapport_Exploitation (Monthly reports)
/16/	Monthly power metering reconciliations for invoicing
/17/	Company registration certificates
/18/	The 'Public Interest Decree' promulgated by the President of Cote d'Ivoire
/19/	The Right of use: legal title to the flooded land >> Arrete IntMinist_Bareme Indemnisation Cultures (which evidences the indemnisation of relocated lands' owners, while the Public Utility decree grants state ownership/requisition of the flooded land).
/20/	Supportive for the area of the reservoir: Loi HSV_Centrale Soubré_vF.pdf (abacus/framework in application for water level & superficy equivalence, at nominal height of CRN = 152,00 m), abacus was determined by SinoHydro (EPC Contractor) during the water filling of the dam, under the supervision of Tractebel engineering (Consulting Company).
/21/	SOUBRE HYDROELECTRIC DEVELOPMENT ENVIRONMENTAL AND SOCIAL IMPACT STUDY, ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN, September 2019
/22/	The detailed environmental impact assessment was submitted to the Direction of Environment in February 2015 and approved by ANDE decree n°0078 of August 21st, 2015.
/23/	List of employees, wages
/24/	Previous verification (4 th periodic verification) Verification report and Monitoring Report https://registry.verra.org/app/projectDetail/VCS/1522
/25/	Water - Evoution of SODECI subcribers for soubre and 2022-2023 Water access improvement
/26/	ESMP report December 2022
/27/	Grievance register

APPENDIX III: VERIFICATION FINDINGS

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

This is the 5th periodic verification of the project activity. No FAR raised during the previous verification.

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

Table 1. 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 2. CAR from this verification

CAR ID	01	Section no.	4.1	Date: 12/03/2025
Description of CAR				
In section 1.6 of MR, start date is reported as 25/05/2017 however as per the approved PD, start date of the project is 01/01/2017. PP need to justify the change.				
Project participant response				Date: 22/03/2025
While 01-January-2017 was the initially expected and registered start date as per VCS-PD, actual commissioning (as evidenced) only occurred on 25-May-2017 following implementation uncertainties/delays hence the start date revision.				
Documentation provided by project participant				
Plant's specification document.				
DOE assessment				Date: 31/03/2025
Clarification has been provided by PP and found OK. The initially expected and registered start date as per VCS-PD/05/ was 01/01/2017 but due to implementation uncertainties/delays the revised start date was changed to 25/05/2017. The same can be verified from Date of operation of each project unit /10/ provided by PP. Footnote has been added by PP accordingly. Hence this CAR is closed.				

CAR ID	02	Section no.	4.1	Date: 12/03/2025
Description of CAR				
In section 1.10 of MR, PP need to provide justification on how there is no double claiming for same emission reduction. The project is also registered under the UNFCCC (Project 10326). PP need to make changes in the MR accordingly.				
Project participant response				Date: 22/03/2025
See PP's self-declaration				
Documentation provided by project participant				
Self-declaration signed by PP				
DOE assessment				Date: 31/03/2025
Changes made by PP in revised MR/1.2/ and found OK. The same can be verified from Declaration by PP for No double counting/11/ and interviews. Hence this CAR is closed.				

CAR ID	03	Section no.	4.1	Date: 12/03/2025
Description of CAR				
In section 3.1 of MR, PP need to describe the implementation status of the project activity(s) including information on the following: The operation of the project activity(s) during the monitoring period including any information on events that may impact the GHG emission reductions or carbon dioxide removals and monitoring. (As per MR template requirement)				
Project participant response				Date: 22/03/2025
Information added in MR				
Documentation provided by project participant				
Revised MR				
DOE assessment				Date: 31/03/2025
Changes made by PP in revised MR/1.2/ and found OK. There were no major events or shutdowns that could have had an impact on GHG emission reductions and monitoring, the same can be verified from interviews and monthly electricity reports /15/. Hence this CAR is closed.				

CAR ID	04	Section no.	4.3	Date: 12/03/2025
Description of CAR				
In section 4.2 of MR, PP has mentioned "As the delayed in calibration is less than one month, and latest meters' verification report shows a maximum error of less than 0.2% (maximum applicable error), thus, the applicable error factor is not applied." which is not clear. Previous calibration was done in December 2022 and recent calibration was done in December 2024, hence calibration gap of 1 year. PP need to correct the statement and revise the emission reduction calculation accordingly.				
Project participant response				Date: 22/03/2025
Revised. Application error is now applied from 01/12/2023 to 31/12/2024.				
Documentation provided by project participant				
Revised MR & ER sheet				
DOE assessment				Date: 31/03/2025

Clarification has been provided by PP and found OK. Last calibration of the energy meters was done in December 2022, and latest calibration was done in 29/12/2024. Since the calibration was delayed, PP has applied the maximum error 0.2% identified during the latest calibrations (29/12/2024) /13/ for the period from 01/12/2023 to 31/12/2024 and monthly electricity export and import has been corrected accordingly. The same is verified from the revised ER sheet /2.2/ and revised MR /1.2/. Verification team has found the approach conservative and hence accepted to the verification team. 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 IV: TEAM COMPETENCE

<u>Certificate of Competence</u>							
Name	☒ Mr. ☐ Ms.	Chetan Swaroop Sharma					
Qualification Procedure	Fulfil the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.						
Appointed to work as:							
	Validator/ Verifier	Team Leader	Trainee	Technical Expert	Technical Reviewer	Financial Expert	Approver
<i>Appointed</i>	Yes	Yes	No	Yes	Yes	No	Yes
<i>Appointed Date</i>	30-08-2023						
Authorized to work as Technical Expert for:							
Authorized Technical Area	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:							
Country/Countries	India, Mauritius						

<u>Compliance check by:</u>	Anand S. R.
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<u>Certificate of Competence</u>							
Name	☒ Mr. ☐ Ms.	Mr. Saki Honore Kone					
Qualification Procedure	Fulfil the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.						
Appointed to work as:							
	Validator/ Verifier	Team Leader	Trainee	Technical Expert	Technical Reviewer	Financial Expert	Approver
<i>Appointed</i>	No	No	No	Yes	No	No	No
<i>Appointed Date</i>	03-01-2025						
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)		1.2		Renewables		
Authorized to work as Local Expert for:							
<i>Country/Countries</i>	Côte d'Ivoire						
<u>Compliance check by:</u>							
Anand S R							

<u>Certificate of Competence</u>							
Name	☒ Mr. ☐ Ms.	Vikas Pandey					
Qualification Procedure		Fulfil the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.					
Appointed to work as:							
	Validator/ Verifier	Team Leader	Trainee	Technical Expert	Technical Reviewer	Financial Expert	Approver
<i>Appointed</i>	No	No	Yes	No	No	No	No
<i>Appointed Date</i>	03-01-2025						
Authorized to work as Technical Expert for:							
<i>Authorized Technical Area</i>	Sectoral Scope		TA Code		Technical Area within the scope		
	-		-		-		
Authorized to work as Local Expert for:							
<i>Country/Countries</i>	-						
Compliance check by:							
				Anand S R			

<u>Certificate of Competence</u>		
Name	☒ Mr. ☐ Ms.	Ma Paa Puratchikkanal
Qualification Procedure		Fulfil the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.

Appointed to work as:							
	Validator/ Verifier	Team Leader	Trainee	Technical Expert	Technical Reviewer	Financial Expert	Approver
<i>Appointed</i>	Yes	Yes	No	Yes	Yes	Yes	Yes
<i>Appointed Date</i>	28-08-2023						
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 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						
<u>Compliance check by:</u>				Anand S. R.			

APPENDIX V: 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
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