



**Verified Carbon
Standard**

VERIFICATION REPORT FOR SOUBRÉ HYDROPOWER PROJECT



Carbon
— C H E C K —

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Summary:

CI- ENERGIES has appointed the validation/verification body Carbon Check (India) Private Ltd. to perform verification of the registered Project Activity (VCS 1522) “Soubré Hydropower Project” in Cote d’Ivoire (hereafter “project activity”) for the third monitoring period from 01 July 2021 to 30 June 2022 of the fixed crediting period 25-May-2017 to 24-May-2027.

The main purpose of this project activity is to generate clean form of electricity through renewable energy sources (Hydro Power Plant). CI- ENERGIES is the project proponent of the project activity. The project activity involves the operation of a 270MW hydropower plant and 5.35MW micro- hydro power plant on the Sassandra river about 5km from Soubre village, Cote d’Ivoire. The electricity generated from the Hydro Powerplant is sold to the national grid of Soubre- Buyo, Soubre- San Pedro and Soubre-Taabo. The project achieved emission reductions of 704,667 tCO₂e annually for the monitoring period by generating a net 1,166.281 GWh amount of electricity from the generation-mix of power plants connected to the national grid.

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

The verification scope is defined as an independent and objective review of the monitoring report (MR). The MR is reviewed against the relevant criteria and guidance documents provided by VCS which include the following: VCS Program Guide (v4.4, dated 29-August-2023), VCS Standard (v4.5, dated 29-August-2023), Program Definitions (v4.4, dated 29-August-2023), Registration & Issuance Process (v4.4, dated 31-August-2023), and in line with the VCS Validation and Verification Manual (v3.2, dated 19/10/2016) /B01/ applicable at the time in order to confirm that the emission reductions produced during the monitoring period are in accordance with the project activity as provided in the registered VCS PD. The CDM-approved methodology ACM0002, Version 16.0 has been applied for the project activity.

The verification consisted of the following three phases:

- i) a desk review of the Monitoring Report
- ii) Remote Audit
- iii) the resolution of outstanding issues and internal technical review followed by the issuance of the final verification report and opinion.
- iv) In the course of the verification process, 10 CARs and 06 CLs were raised, all have been successfully closed. One FAR has been raised and shall be checked during the next periodic verification. The list of Clarification and Corrective Actions Requests (CL and CAR) and Forward Action Requests is presented in this report.

CC IPL confirms that the project is implemented in accordance with the validated/ revised VCS-PD/22/ and the monitoring plan; and then, claimed emissions reductions are calculated without material misstatements. One project description deviation has been applied to the project activity in the reported monitoring period along with another project description deviation from the previous monitoring period (as listed in section 3.2.2 of the monitoring report).

CC IPL has performed the verification of the project activity “Soubré Hydropower Project” on the basis of all issues and criteria of VCS Standard version 4.5/B01-1/ and VCS Program Guide version 4.4/B01-2/ for VCS projects and also on the criteria given to provide for consistent project operations, monitoring and reporting. Hence, in CC IPL’s opinion, the project correctly applies the baseline and monitoring methodology ACM0002, version 16.0/B02/ and meets the relevant UNFCCC requirements for the CDM Methodology, Voluntary Carbon Standard requirements and the relevant host country criteria.

Therefore, CC IPL is able to certify that the emissions reductions from the “Soubré Hydropower Project” project during the period from 01 July 2021 to 30 June 2022 amount to 704,667 tCO_{2e}. The year-wise break up of verified emission reduction is as below:

Year	Baseline emissions or removals (tCO _{2e})	Project emissions or removals (tCO _{2e})	Leakage emissions (tCO _{2e})	Net GHG emission reductions or removals (tCO _{2e})
2021 (01/07/2021)	349,012	0	0	349,012

to 31/12/2021)				
2022 (01/01/2022 to 30/06/2022)	355,655	0	0	355,655
Total	704,667	0	0	704,667

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1 INTRODUCTION

1.1 Objective

CI- ENERGIES (Project Proponent) has appointed the VVB, Carbon Check India Pvt Ltd (CCIPL) for the verification service for the VCS registered Project activity - “S Soubré Hydropower Project” located on the Sassandra river about 5km from Soubre village, Cote d’Ivoire (hereafter referred to as “project activity”) against the requirement of the VCS Program.

Verification is the periodic independent review and ex post determination of both quantitative and qualitative information by the Validation and Verification Body (VVB) of the monitored reductions in GHG emissions that have occurred as a result of the VCS project activity during a defined monitoring period (monitoring period 3) (01/07/2021 to 30/06/2022).

The purpose of verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data and used to confirm the reductions in emissions is sufficient, definitive, and presented in a concise and transparent manner. Carbon Check’s objective is to perform a thorough, independent assessment of the registered projects activities. In particular, the monitoring plan, monitoring report and the project’s compliance are verified against the relevant criteria and guidance documents provided by VCS. This allows for the confirmation that the project has been implemented in accordance with the VCS PD/B04//22/ and conservative assumptions, as documented. And, also to confirm if the monitoring plan is in compliance with the VCS PD/B04//22/ and approved monitoring methodology, ACM0002, version 16.0/B02/. The objective of this verification was to verify and certify emission reductions reported for the “Soubré Hydropower Project” for the period 01/07/2021 to 30/06/2022.

1.2 Scope and Criteria

The verification of this project is based on the registered Project Description/B04//22/, the Monitoring Report of this monitoring period /01/, emission reduction calculation spread sheet /03/, supporting documents made available to the verifier and information collected through performing interviews and during the onsite visit assessment. Furthermore, publicly available information was considered as far as available and required.

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

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

- VCS Standard version 4.5/B01-/1
- VCS Program Guide version 4.4/B01-2/
- VCS Validation and Verification Manual version 3.2 /B01-3/
- Program Definitions (v4.4) /B01-5/
- Registration & Issuance Process (v4.4) /B01-4/
- Approved CDM methodology (ACM0002: Grid-connected electricity generation from renewable sources -- Version 16.0)/B02/
- Other relevant rules, including the host country legislation.

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

- To verify that the project is implemented as described in the project description;
- To assess the project’s compliance with other relevant rules including the host country legislation.
- To assess the implementation of the monitoring plan content as mentioned in the registered/ revised VCS-PD/22//B04/;
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions (VERs/VCUs) without any double counting and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation /03/, /04/.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

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

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

1. Completeness check and desk review:
2. Remote audit by the verification team followed by an Onsite Visit by the local expert (Team Leader/ Technical Expert attended remotely);
3. Resolution of outstanding issues and issuance of final verification report and applicable VCS Validation and Verification Deeds of Representation.

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

1.3 Level of Assurance

- Reasonable level of assurance
- Limited level of assurance

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

1.4 Summary Description of the Project

The project activity 'Soubré Hydropower Project' is a project activity consisting of a 270MW hydropower plant and 5.35MW micro- hydro power plant involves generation of grid-connected renewable energy. The power plant is connected to the national electricity grid of Soubre- Buyo, Soubre- San Pedro and Soubre- Taabo. The project is located on the Sassandra river about 5km from Soubre village, Cote d'Ivoire. The start date for the project is 25/05/2017 as per the commissioning certificate /11/ and Monitoring report /01/, the date on which the project activity is connected to the grid and begins generating GHG emission reductions.

The total emission reductions for the reported monitoring period 01-July-2021 to 30-June-2022 are 704,667 tCO_{2e}. This is the third monitoring period under VCS.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The method and criteria used for verification:

The verification consists of the following three phases:

1. Completeness check and desk review of the validation report, monitoring plan, monitoring report, monitoring methodology, VCS PD, applicable tools in particular attention to the frequency of measurements, quality of metering equipment's including calibration requirements, QA/QC procedures, any changes to the project activity and new project activity instances and other relevant documents;
2. Onsite visit and Remote audit (including follow-up interviews with project stakeholders, when deemed necessary). The onsite visit and remote audit assignment includes the following:
 - An assignment of implementation and operation of project activity with respect to validated VCS PD;
 - Review of information flows for generating, aggregating and reporting the monitoring parameters;
 - Interview with relevant personals to determine whether the operational and data collection procedures are implemented and in accordance with monitoring plan of the validated VCS PD;

- Cross check of information and data provided in the monitoring report with plant logbooks, inventories, purchase records or similar data sources;
- Check of monitoring equipment's, calibration frequency and monitoring practice in-line with methodology and validated VCS PD;
- Review of assumptions made in calculating the emission reduction;
- Implementation of QA/QC procedure in-line with the validated VCS PD and methodology requirement.

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

2.2 Document Review

The registered VCS PD/B04//22/, VCS MR /01/, /02/, emission reduction calculation spread sheet /03/, /04/ and supporting documents related to the project implementation, project design, monitoring and baseline were reviewed as per VCS standard version 04 requirements. The desk review included:

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

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

These data values and other information related to project performance are available in the form of data records duly archived and maintained as per the quality assurance/quality control procedure specified as a part of monitoring plan in the registered VCS-PD/B04//22/.

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

2.3 Interviews

A remote audit to the project activity was undertaken on 24/11/2022 to assess the implementation and operation of the project activity and to review evidence, and interview key personnel to confirm evidence associated with the data generation, aggregation, and calculation and reporting of the monitoring parameters. The remote audit was followed up by a physical site visit from 02/05/2023 to 04/05/2023 of the project location and the interviews with the local stakeholders to complement the observations during the remote audit. The onsite visit assessment and the remote audit addressed:

- An assessment of the project implementation and operation as per the PD (including physical inspection to confirm physical existence and operation of project components);
- Review of information flows for generating, aggregating and reporting the monitoring parameters;
- Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the monitoring report /01/, /02/.

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

Date	Name	Organisation	Topic
08/11/2022	Kouakou Martin Kouassi	CI Energies	<ul style="list-style-type: none"> • Project Design • Project Implementation status • Project start date and Project Location • Roles and responsibility, Job descriptions of the personnel involved, Project Implementation and Operation status, Qualification and Training, Roles and responsibility. • Involved in Emissions Trading Programs and Other Binding Limits or Other Forms of Environmental Credit. • Monitoring Equipment, calibration records, validity of calibration etc. • Plant maintenance activities.
08/11/2022	Nazim Oualane	AERA Group SAS	<ul style="list-style-type: none"> • Project Design • Project Implementation status • Project start date and Project Location • Roles and responsibility, Project Implementation and Operation status, Qualification and Training, Roles and responsibility. • Emission Reduction calculations, Emission factor used for the calculation and other monitoring parameters and calculations
08/11/2022	Aiidatou Sakho	CI Energies	<ul style="list-style-type: none"> • CER calculation and completeness of monitoring report, Electronic Monitoring system • Project implementation and operation, Project design, monitoring procedure, data and information flow, compliance of monitoring plan with monitoring

			<p>methodology and approved VCS-PD.</p> <ul style="list-style-type: none"> • Project Implementation status • Monitoring and operating system • Quantification of emission reductions • Monitoring parameters • Emission factor for the grid • Roles and responsibility
08/11/2022	Maixent Honceany TOHA & Ouna Gunkapieu	CI Energies	<ul style="list-style-type: none"> • Project design • Turbine details • Monitoring plan • Monitoring procedures and monitoring equipment • Maintenance and operation plan • Data and information flow, Data input device, Roles and responsibility, Project implementation and operation, monitoring procedure.
08/11/2022	Frank Alain	CI Energies	<ul style="list-style-type: none"> • Installed capacity with the EPIAS grid
08/11/2022	Brice Inguessan & Yayo Adjohou	Local Stakeholders	Ongoing communication, grievances resolution.
02/05/2023	Bamba Bluley Karimou	Local Stakeholder – Policy Deputy	<ul style="list-style-type: none"> • Rehabilitation of administrative buildings including police station, fish market and health centres • Donation of patrol vehicle to the police • Restitution of the villages and families.
02/05/2023	Traore Lassina	Local Stakeholder – Mayor, Soubre	<ul style="list-style-type: none"> • Compliance with the rules defined in the local stakeholder consultation. • Construction and rehabilitation of schools, markets and health centres • Electrification of the villages • Access to safe drinking water
02/05/2023	Kotchi Kesse Tafoua	Local Stakeholder – Forest Authority Colonel	<ul style="list-style-type: none"> • Wildlife conservation of at least 200 metres • Donations for forest authority

02/05/2023	Kone Mamadou	Local Stakeholder – Director General of Soubré Radio	<ul style="list-style-type: none"> • Access to clean drinking water • Restitution of the villages
02/05/2023	Koutouan Henri Pierre Clavier	Local Stakeholder – MIRAH Regional Director	<ul style="list-style-type: none"> • Donations for ministry of animal and fishery resources (MIRAH)
03/05/2023	Ndri Gnenagoh Jules	Local Stakeholder – Regional Council	<ul style="list-style-type: none"> • Employment generation in the city and economic activity
03/05/2023	Digbeu Zobre	Local Stakeholder – Soubre Central Chief	Electrification of the villages and camps

2.4 Site Visits

Carbon Check has conducted a remote audit and an onsite visit for the assessment of the project activity. A reasonable level of assurance has been maintained through the remote audit/ onsite visit for the purpose of verification as follows:

- 1) An assessment of the implementation and operation of the project activity as per the registered VCS PD /B04//22/
- 2) A review of information aggregating and reporting of the monitoring parameters
- 3) Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the MP (section 2.3 above)
- 4) A cross-check between the emission reduction information provided in the MR /01/ and data from other sources (section 2.3 above).
- 5) A check of the monitoring equipment for calibration performance, and observations of monitoring practices against the requirements of the VCS PD/22/ B04-1/ and the applied monitoring methodologies /B02/
- 6) A review of calculations and assumptions made in determining the GHG data and ERs /02//04/, and
- 7) An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters
- 8) The monitoring processes, routines and documentations were audited to check their proper application.
- 9) The monitoring data were checked completely.

A remote audit/ onsite visit was carried out to verify that the project is implemented in accordance with the applicable criteria. Remote audit assessment is necessary to check the monitoring data with respect to accuracy to ensure the calculation of emission reductions. The remote audit/ onsite visit assessment included an investigation of whether all relevant equipment is installed and works as anticipated:

- The operating staff was interviewed and observed in order to check the risks of inappropriate operation and data collection procedures.
- Information processes for generating, aggregating, and reporting the selected monitored parameters were reviewed.
- The duly calibration/testing of all metering equipment was checked.
- The monitoring processes, routines and documentations were audited to check their proper application.
- The monitoring data were checked completely.

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

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

A remote audit inspection was carried out to check the project implementation and operation for the gap validation and verification for the VCS registered project activity, and to confirm that the project is developed as described in the VCS-PD/B04//22/. The project remote audit was inspected from 08/11/2022. On 08/11/2022, verification team was introduced to the project design, project implementation and operation and other description related to the project. The meeting was conducted at the project proponent's office in Cultural Centre, Soubre. The project site located on the Sassandra river about 5km from Soubre village, Cote d'Ivoire was also inspected remotely on 08/11/2022. A follow up site visit was conducted from 02/05/2023 to 04/05/2023 of the project location and the interviews with the local stakeholders to complement the observations during the remote audit.

2.5 Resolution of Findings

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

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

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

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

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

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

A total of 10 CARs and 06 CLs had been raised for the verification of the project activity and all the findings have been closed. One FAR has been raised and shall be checked during the next periodic verification.

2.5.1 Forward Action Requests

There are no forward action requests raised during the previous verification of the project activity. One forward action request has been raised during the reported monitoring period and shall be checked during the next periodic verification.

2.6 Eligibility for Validation Activities

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

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is already registered with VCS as a project activity (project ID is 1522). The project activity is registered under CDM with UNPA reference number 10326. Project proponent has provided a declaration/21/ confirming that the emission reductions are not claimed from the same monitoring period under CDM or any other GHG program.

3.2 Methodology Deviations

Not applicable.

3.3 Project Description Deviations

One project description deviation was approved in the previous monitoring period:

Actual project capacity has been updated based on installed groups power capacity converted in mega-watts, i.e. $3 * 105.88 \text{ MVA} * 0.85 + 6.7 \text{ MVA} * 0.8 = 270 + 5.35 = 275.354 \text{ MW}$ instead of $270 + 5.5 \text{ MW}$ as previously stated.

Related power density has been updated consequently to 19.98 W/m^2 . The deviation does not impact neither the applicability of the methodology, additionality nor the appropriateness of the baseline scenario.

One project description deviation has been proposed monitoring period:

Ex-ante emissions reductions were calculated based on an estimated 'sold electricity' average of $1,170 \text{ GWh/y} * 0.9$ (applying such 0.9 discount factor to conservatively account for auxiliary consumptions and losses from net power generation assumption of $1,170 \text{ GWh/y}$) 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.

In accordance with the §3.21 of the VCS Standard, version 4.5/B01-1/, *"Projects may deviate from the validated project description in certain cases in order to accommodate changing circumstances post-validation. Such deviations must be described and assessed by a validation/verification body during the next project verification."*

In accordance with the §3.21.2(1) of the VCS Standard, version 4.5/B01-1/,

"Where the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario, the deviation shall be described and justified in a revised version of the project description. This shall include a description of when the deviation occurred, the reasons for the deviation and how the deviation impacts the applicability of the methodology, additionality and/or the appropriateness of the baseline scenario."

Accordingly, the deviation has been justified in the revised version of the project description.

PP has demonstrated that the project activity continues to remain additional even after considering the change in the emission reductions and the sensitivity analysis applicable for the generation of emission reductions. Thus, the project description change has been accepted by the verification team.

Overall, the proposed project description deviation complies with the requirements of the VCS Standard, version 4.5/B01-1/.

3.4 Grouped Project

The project activity is not a grouped project activity and thus this section is not applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity, “Soubré Hydropower Project”, in Cote d’Ivoire applying the methodology ACM0002, version 16.0, /B02/. The project has been registered under VCS with VCS ID 1522. The Project Proponent for the project activity is CI – ENERGIES.

The project activity, Soubré Hydropower Project, is located on the Sassandra river about 5km from Soubre village, Cote d’Ivoire, which enables an annual generating capacity of more than 1,170 GWh. Verification team confirmed from the registered VCS PD/B04//22/ and remote audit that the location of the project activity including the coordinates is same as mentioned in the registered VCS PD/B04//22/.

The ex-ante fixed grid emission factor of 0.6042 tCO₂/MWh has been used for the baseline emission calculation, which is line with the registered VCS PD/B04//22/.

The registered VCS-PD/B04//22/ clearly describes the monitoring and responsibility of monitoring is with PP. During the remote audit and onsite visit, monitoring and reporting procedures were confirmed with the relevant staff and through the document review.

The monitoring plan is in accordance with the UNFCCC approved methodology ACM0002, version 16.0/B02/. All the data is collected and archived in accordance with the methodology and included in the monitoring plan. The monitoring has been carried out in accordance with the provision of monitoring plan, the verification team reviewed if:

- The monitoring of reductions in GHG emissions resulting from the proposed VCS project activity were implemented in accordance with the monitoring plan contained in the registered VCS-PD/B01/.
- The monitoring plan and the applied methodologies had been properly implemented and followed by the project participants.
- All parameters stated in the monitoring plan, the applied methodologies and relevant VCS requirements had been sufficiently monitored and updated.
- The responsibilities and authorities for monitoring and reporting were in accordance with the responsibilities and authorities stated in the monitoring plan.

During the onsite visit, CCIPL was able to verify the implementation and operation status of the hydroelectric power plant. There were no material misstatements between the actual monitoring system, and the monitoring plan set out in the project description/B04//22/ and the applied methodology/B02/.

The GHG emission reductions generated by the project activity are not included in an emissions trading program or any other mechanism that includes GHG allowance trading, this has been confirmed from the review of the PD/B04//22/ and also confirmed during the remote audit. The project activity has not received or sought any other form of environmental credit, this has been confirmed from the review of the PD/B04//22/ and also confirmed during the remote audit. PP has confirmed that no claim are being made from the project registered during the same monitoring period/21/.

The sustainable development contribution of the project activity to the host country, Cote d'Ivoire, have been provided in the PD/B04//22/ and the contributions were confirmed with the PP during the remote audit and onsite visit. The main sustainable development contributions have been listed under Energy, Employment opportunities and combating climate change.

The project has implemented the activities that result in the SD contributions described in the monitoring report.

SDG6.1: 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/13/. This was confirmed based on the list of the water subscribers/13/.

SDG7.1: 7.1.1 Proportion of population with access to electricity; During the monitoring period 100,947 new clients have been connected to the grid and have access to electricity/13/. This was confirmed based on the list of the electricity distribution subscribers/13/.

SDG7.2: 7.2.1 Renewable energy share in the total final energy consumption; 1,166,281 MWh delivered to the grid during the monitoring period. (47.36% of national hydropower production and 10.11% of total national energy production)/13-3/.

SDG13: Tonnes of greenhouse gas emissions avoided or removed; By building the hydroelectrical power station, the project contributed to Emission Reductions amounting to 704,667 tCO_{2e} for this monitoring period/02/.

The SDGs are defined by the project proponent based on the project activity in the project description and deemed appropriate for the type of project activity.

There was a project description deviation in the project activity which has been assessed in the section 3.3 of this document.

Overall, the project has been implemented in accordance with the registered VCS-PD/B04//22/.

4.2 Safeguards

4.2.1 No Net Harm

The project produces impacts on the natural resources, protected areas, resettlement and several mitigation measures are taken against the impacts/12-1/. The mitigation measures have been provided by the project proponent and the evidence/12-1/ have been provided for the same. Based on the Environmental and Social Management Plan/12-2/, the overall progress of each mitigation measure is provided as:

- Creation of a biodiversity zone: 100%
- Tai National Park Protection: 100%
- Enhanced monitoring of natural habitats near Soubré: 100%
- Capture of animals on the islets before launching: 100%
- Fisheries development plan in the Soubré sector : 100%
- Kpéhiri – Amaragui road restoration: 100%
- Improvement of the collective infrastructure of the village of Gnamagui: 100%
- Support for village economic development and crop productivity improvement: 100%
- Setting up an alert system: 20%. It was planned to put in place a system of warning of the riparian populations on the manoeuvres to the spillway of floods. The features of the beacon have been approved and orders are in progress to allow its installation in late 2023.
- Rural electrification and extension of the electricity grid: 100%
- Adaptation of the SODECI pumping station: 100%
- Sassandra water quality monitoring: 100%
- Monitoring of the health conditions of the villages around the detention: 100%
- Securing hydroelectric works: 100%

The mitigation measures were also cross-checked with the local stakeholders through an onsite assessment and through the review of the VCS PD/B04//22/, MR/02/ and confirmed during the onsite visit and remote audit.

4.2.2 Local Stakeholder Consultation

Project is operational since 2017 and there is an ongoing communication with locals. Stakeholder consultation has been organized before project start date, details of which is given in PDD. Project manager is accessible by locals all the time. Project sponsors also support local community through providing support for local organization cultural events. After implementation of the project, no unexpected change has occurred with respect to risks, cost of locals. In terms of regulation, all staff recruited is trained as per the requirements of their assignment and regulations. Trainings include first aid, electrical equipment operation certificates, crane operator and occupational competency trainings.

All the supporting documents, training certificates, were submitted to the validating DOE, and they have found to be in line with the monitoring period.

Stakeholder's consultations have been organized following the regulatory Ivorian laws regarding public consultation in the framework of Environmental Impact Assessment. A representative of Designated National Authority of Côte d'Ivoire, Mr Sylvain Amalaman, Environmental Impact Assessment study office chief has been designated to follow closely the implementation of the consultation process and has delivered an environmental license based on the conclusion that consultation requirements have been fulfilled. The launch meeting of overall consultation process consisted of a public meeting held on 30/01/2013 at Soubré's cultural center, Côte d'Ivoire.

Comments/20/ were received from local stakeholders during ongoing communication regarding the economic benefits & Project's benefits. The comments/20/ received from the local stakeholders have not been classified as complaints as they were requests as classified by the project proponent. Furthermore, interviews with the local stakeholders were conducted to confirm appropriate mitigation actions are being undertaken in context of the natural resources,

protected areas, resettlement. No complaints/20/ were received by the project proponent during the reported monitoring period.

4.3 AFOLU-Specific Safeguards

Not Applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Total Emission Reduction has been determined as.

$$ER_y = BE_y - PE_y - LE_y$$

Where;

ER_y = Emission reductions in year y (tCO₂)

BE_y = Baseline emissions in year y (tCO₂)

PE_y = Project Emissions in year y (tCO₂)

LE_y = Leakage emissions in year y (tCO₂)

Being a hydropower project, the project activity does not lead to any form of emission; Hence Project Emission (PE_y) = 0. Also, the leakage for the project activity is nil as per the registered CDM PDD, the VCS PD and the applied methodology. Hence Leakage (LE_y) = 0

Thus, $ER_y = BE_y - PE_y$

Baseline Emissions

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

Where: BE_y : Baseline emissions in year y (tCO₂/year)

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

$EF_{grid,CM,y}$: Combined Margin CO₂ emission factor (tCO₂/MWh), which is 0.6042 tCO₂/MWh in the validated PD.

Thus, the emission reduction (in tonnes CO₂) for the years between 01 July 2021 and 30 June 2022 is calculated as given in table below.

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
------	---	--	--	--

01 July 2021 - 31 Dec 2021	349,012	0	0	349,012
01 Jan 2022 - 30 June 2022	355,655	0	0	355,655
Total	704,667	0	0	704,667

The verification team has determined whether the registered monitoring plan in the PDD/B01/ has been properly implemented and followed by the PP and whether all parameters fixed ex-ante for emission reduction calculation are as per the registered PDD/B01/. The verification team's assessment of each data and parameter fixed ex-ante is provided below:

Data/Parameter	Description	Value	Unit	Source
EF _{grid,CM,y}	Combined margin CO2 emission factor for connected power generation in year y	0.6042	t CO ₂ /MWh	Calculated using the latest version of the "Tool to calculate the emission factor for an electricity system". The weighted value of w _{OM} = 0.5 and w _{BM} = 0.5 have been used.
Cap _{BL}	Installed capacity of the hydro power plant before the implementation of the project activity.	0	W	Project site. This is a greenfield project activity and thus installed capacity before the implementation of the project activity is 0/B04/.
ABL	Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project	0	m ²	Project site

Data/Parameter	Description	Value	Unit	Source
	activity, when the reservoir is full (m ²).			

The values are consistent with the registered VCS PD/B01/ and defined fixed ex-ante during 1st crediting period of the project activity. The fixed ex-ante data and parameter have been listed in the monitoring report/01/ and confirmed by the verification team as correct and consistent with that stated in the registered VCS PD/B01/. The verification team confirms that the MR/01/ and the ER calculation spreadsheet/03/ have considered the parameters fixed ex-ante correctly.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

CCIPL was able to confirm that the calculations are based on authentic data. The spreadsheets/03/ used to calculate the VCU calculations and all figures were tracked, checked, and found to be consistent.

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

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

When assessing the audit trails, CCIPL also examined:

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

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

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

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

Monitored Parameters

Data / Parameter	Net Electricity generated and delivered to the grid by the proposed project in year y ($EG_{\text{facility},y}$)
Measuring frequency/ Recording frequency	Continuous measurement at the site and daily and monthly recording were applied. The plant manager and the staff extracted the records regularly every day. The monthly records recorded by CI- ENERGIES, and the plant were used for monitoring emission reductions.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment	Make/model: Itron, Inc. Type: SL764A081 / 2014 Precision: 0.2s Serial number of first power meter: 67008922 Serial number of second power meter: 67008923 Serial number of third power meter: 67008929 Serial number of fourth power meter: 67008924
Value(s) of monitored parameter	1,166,281 MWh
Is accuracy of the monitoring equipment as stated in the PDD?	Yes, the accuracy of the monitoring equipment is as stated in the VCS PD/B04//22/.
Calibration frequency /interval	Annual. The meters have been verified/ calibrated by the central direction of energy transport and telecommunications sub-direction maintenance / control department of CIE on 18 February 2021. The next calibration has been done from 15/12/2022 to 20/12/2022 (delayed from annual frequency) and the error identified in the delayed calibration test is beyond the maximum permissible error of the measuring equipment. The calibration done on 15/12/2022 has been done by CIE and the calibration valid upto 14/12/2023. The certificate number/09/ for the calibration is DCET/SAT-MES 12 2022. Thus, paragraph 366 (b) of CDM validation and verification standard for project activities version 03.0, is applied. Therefore, the applicable error of 0.204% was conservatively deducted for the period going from 01/02/2022 to 30/06/2022 (end date of the crediting period).

Is the calibration interval in line with the monitoring plan of the PDD?	No. The meters have been verified/ calibrated by the central direction of energy transport and telecommunications sub-direction maintenance / control department of CIE on 18 February 2021. The next calibration has been done from 15/12/2022 to 20/12/2022 (delayed from annual frequency) and the error identified in the delayed calibration test is beyond the maximum permissible error of the measuring equipment. Thus, paragraph 366 (b) of CDM validation and verification standard for project activities version 03.0, is applied. Therefore, the applicable error of 0.204% was conservatively deducted for the period going from 01/02/2022 to 30/06/2022 (end date of the monitoring period). FAR01 has been raised in this regard to consider the error in the next periodic verification.
Company performing the calibration	CIE (Compagnie Ivoirienne d'Electricité)
Did calibration confirm proper functioning of monitoring equipment? (Yes / No)	Yes
Is(are) calibration(s) valid for the whole reporting period?	The meters have been verified by the central direction of energy transport and telecommunications sub-direction maintenance / control department of CIE on 18 February 2021. The next calibration has been done from 15/12/2022 to 20/12/2022 (delayed from annual frequency) and the error identified in the delayed calibration test is beyond the maximum permissible error of the measuring equipment. Thus, paragraph 366 (b) of CDM validation and verification standard for project activities version 03.0, is applied. Therefore, the applicable error of 0.204% was conservatively deducted for the period going from 01/02/2022 to 30/06/2022 (end date of the crediting period).
If applicable, has the reported data been crosschecked with other available data?	Yes, the reported data has been cross-checked with the electricity sales invoices/05/ in accordance with the QA/QC procedures provided in the section B.7.1 of the registered VCS PD/B04//22/.
How were the values in the monitoring report verified	The values in the monitoring report were verified through the comparison with the values in the ER sheet/03/ and the raw data provided therein, and cross checked with the electricity sales invoices/05/.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place.

Data / Parameter	Installed capacity of the hydro power plant after the implementation of the project activity (CAP _{Pj})
Measuring frequency/ Recording frequency	Once at the beginning of each crediting period
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment	Determine the installed capacity based on manufacturer's specifications or commissioning data or recognized standards
Value(s) of monitored parameter	275,354,000 W
Is accuracy of the monitoring equipment as stated in the PDD?	NA
Calibration frequency /interval	NA
Is the calibration interval in line with the monitoring plan of the PDD?	NA
Company performing the calibration	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No)	NA
Is(are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been crosschecked with other available data?	Yes, the reported data has been cross-checked maps provided by the project proponent in accordance with the QA/QC procedures provided in the section B.7.1 of the registered VCS PD/B04//22/.
How were the values in the monitoring report verified	The values in the monitoring report were verified.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and are necessary.

Data / Parameter	Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (AP _i)
Measuring frequency/ Recording frequency	Yearly
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes

Type of monitoring equipment	Topographical studies like surveys, maps, satellite pictures etc.
Value(s) of monitored parameter	13,778,000 m ²
Is accuracy of the monitoring equipment as stated in the PDD?	NA
Calibration frequency /interval	NA
Is the calibration interval in line with the monitoring plan of the PDD?	NA
Company performing the calibration	NA
Did calibration confirm proper functioning of monitoring equipment? (Yes / No)	NA
Is(are) calibration(s) valid for the whole reporting period?	NA
If applicable, has the reported data been crosschecked with other available data?	Yes, the reported data has been cross-checked with the maps provided by the project proponent in the geophysical studies and topographical study/23/ in accordance with the QA/QC procedures provided in the section B.7.1 of the registered VCS PD/B04//22/.
How were the values in the monitoring report verified	The values in the monitoring report were verified.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and are necessary.

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

Verification team confirms that the quality of evidence to determine the GHG reductions and removals produced was found satisfactory. The detailed information flow with the roles and responsibilities of the individuals and the monitoring system have been provided in the VCS-MR/01/.

4.6 Non-Permanence Risk Analysis

Not applicable.

5 VERIFICATION OPINION

Carbon Check (India) Private Limited has performed the verification of the project activity “Soubré hydropower project” in Côte d’Ivoire, with regards to the relevant requirements for VCS project activities.

The conclusions can be summarised as follows:

- The project is implemented and installed as planned and described in the registered VCS PD/B04//22/ and the project activity confirms with the verification criteria for project and their GHG emission reductions or removals set out in the VCS rules.
- The monitoring plan is in accordance with the applied approved methodology, i.e. ACM0002, version 16/B02/ and monitoring plan as sought out in the registered VCS-PD/B04//22/.
- The monitoring system is in place and functional. The project has generated verifiable GHG emission reductions.

As the result of the verification of project activities, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. Carbon Check (India) Private Ltd. herewith confirms that the project has achieved emission reductions in the below mentioned reporting period as follows. The project complies with the verification criteria for projects and their GHG emissions reductions or removals set out in VCS rules. The GHG statement provided herein is the responsibility of the project proponent and project conforms with the verification criteria for projects and their GHG emission reductions or removals set out in VCS Standard Version 4.5/B01-1/. The project has been implemented in accordance with the project description and subsequently validated variations (project instance inclusions and project description deviations). In the course of the verification process *10 CARs, 06 CLs and 01 FARs* were raised, all the CARs and CLs are closed. One FAR has been raised during the course of verification and shall be checked during the next periodic verification

For the project description deviation included in the project activity, the project conforms with the validation criteria for projects set out in VCS Version 4.5/B01-1/.

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

Verification period: From 01-July-2021 to 30-June-2022 (both days inclusive)

Verified GHG emission reductions and removals in the above verification period, broken down by calendar year:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
Year 2021 (01-July-2021-- 31-December-2021)	349,012	0	0	349,012
Year 2022 (01-January-2022-- 30-June-2022)	355,655	0	0	355,655
<i>Total</i>	704,667	0	0	704,667

The summary of emission reductions for each vintage with the comparison of values reported in the ex-ante estimates is provided below:

Year	Ex-ante emissions reductions /removals	Achieved emissions reductions/r emovals	Percent difference	Justification for the difference
Year 2021 (01-July-2021-- 31-December-2021)	349,922	349,012	-0.3%	The value is lower than the ex-ante estimates compared. However, the difference is marginal.
Year 2022 (01-January-2022-- 30-June-2022)	349,922	355,655	+1.6%	The value is slightly higher than the ex-ante estimates. However, the difference is marginal.
<i>Total</i>	699,844	704,667	+0.7 %	The value is slightly higher than the ex-ante estimates. However, the difference is marginal.

APPENDIX 1: REFERENCES

S. No.	Document
/01/	Monitoring Report (Version 1.0 dated 26/09/2022)
/02/	MR Final Version (Final Version – Version 9.0 dated 29 September 2023)
/03/	Emission reductions sheet (ER Ex-post Calc - SHPP - MR3 Corresponding to /01/)
/04/	Emission reductions sheet (ER Ex-post Calc - SHPP - MR3 Final Version)
/05/	Electricity Sales/ Purchase Invoices for the period 01/07/2021 to 30/06/2022
/06/	Electricity generation records (for total hours and any downtimes) from Soubre July 2021 to June 2022
/07/	Electricity meter specifications (Power Plant, Micro-hydro power plant, Generators and Turbines – Power Meters)
/08/	Photographs of all the electricity meters from the substation (ID Numbers: 67008922, 67008923, 67008929, 67008924, 201512000007, 201512000008, 1708417095000001, 201512000002)
/09/	<ol style="list-style-type: none"> 1. Electricity meters calibration records for G1 (15/12/2022), G2 (20/12/2022), G3 (16/12/2022) and G4 (20/12/2022) Certificate reference: DCET/SAT-MES 12 2022 2. Calibration records for the last calibration dated 18/02/2021 reference M45022021
/10/	Technical specifications from the manufacturer for: <ol style="list-style-type: none"> 1. Turbines 2. Generator 3. Power Meters
/11/	Plant Commissioning Certificate by CI-Energies dated 15/06/2020 with the following dates of commissioning: G1 – 25/05/2017 G2 – 23/08/2017 G3 – 25/10/2017 G4 – 28/11/2017
/12/	<ol style="list-style-type: none"> 1. Evidence of resolution of no net harm impacts during the monitoring period 2. Activity report of the Environmental and Social Management Plan December 2022
/13/	SDG compliance during the monitoring period including the water subscribers and electricity distribution subscribers sheets: <ol style="list-style-type: none"> 1. Electricity - CIE subscribers evolution 2. Water - Evolution of SODECLI subscribers and Subscribers to water supply 3. National Production from July 2021 to June 2022


/14/	Power Purchase Agreement between CI Energies, CIE and Ministry of Energy, Côte d'Ivoire, Ministry of Finance, Côte d'Ivoire dated 26/07/2013
/15/	Plant layout dated 16/07/2016
/16/	Line diagram for metering location Reference FHV-001-001
/17/	SCADA surveillance system details
/18/	Verification contract signed between PP and VVB dated 21/09/2022
/19/	Emergency plant Shutdown records and maintenance records during the monitoring period
/20/	Local Stakeholder Consultation comments during the reported monitoring period (2022_Suivi des courriers arrivée_Usine Soubré_Rev20220923.xlsx)
/21/	Declaration from the PP confirming no double counting and not having created or sought any other form of environmental credit for the same period. Credits not claimed from the CDM project activity dated 17/10/2022
/22/	Revised Project Description version 2.3 dated 26/09/2023, Revised ex-ante ER calculation spreadsheet (161012 - ER Ex-ante Calc - SHPP -xls) and IRR sheet (10326 IRR Calculation - MP3 check.xls)
/23/	<ol style="list-style-type: none"> 1. Geophysical study report of the site reference 001/07-2019/DC/NSS 2. Topographic and cartographic study by Tractebel Engineering and BNEDT reference P004929-NEXT-17
/B01/	<ol style="list-style-type: none"> 1. VCS Standard, Version 4.5 2. VCS Program Guide, Version 4.4 3. VCS Validation and Verification Manual, Version 3.2 4. Registration and Issuance Process, Version 4.4 5. VCS Program Definitions, Version 4.4
/B02/	ACM0002 (version 16.0, EB 81, Annex 9) Large Scale Consolidated Methodology "Grid-connected electricity generation from renewable sources"
/B03/	VCS MR Template Version 4.2 (Based on Row 51 of the AUGUST 2023 OVERVIEW OF VCS PROGRAM UPDATES AND EFFECTIVE DATES, version 4.2 of the monitoring report and verification report may be used till 01 March 2024)
/B04/	<ol style="list-style-type: none"> 1. VCS PD (version 2.1 dated 13/10/2016) and the corresponding Validation report. 2. CDM PDD (Version 3.2, dated 19/09/2016) and the corresponding Validation report. 3. VCS MR for MP2 - version 1.2 dated 14 December 2021 and the corresponding verification report.

/B05/	<p>Websites:</p> <ol style="list-style-type: none">1. http://cdm.unfccc.int/2. www.ipcc.ch
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APPENDIX 2: ABBREVIATIONS

BAU	Business As Usual
BNETD	Bureau National d'Etudes Techniques et de Développement, Côte d'Ivoire
CA	Corrective Action / Clarification Action
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CIE	Compagnie Ivoirienne d'Electricité
CL	Clarification Request
CO₂	Carbon Dioxide
CO₂e	Carbon Dioxide Equivalent
DVR	Draft Validation Report
EF	Emission Factor
FA	Final Approval
FAR	Forward Action Request
FVR	Final validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
MW	Megawatts
MWh	Mega Watt Hour
OSV	On Site Visit
PP	Project Proponent
QC/QA	Quality control/ Quality assurance
SDG	Sustainable Development Goals
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
UNPA	UNFCCC CDM Project Activity
VER	Verified Emission Reduction
VCS	Verified Carbon Standard
VCU	Verified Carbon Units
VVB	Validation / Verification Body

APPENDIX 3: COMPETENCY CERTIFICATE



Carbon
CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Anubhav Dimri

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:



for the following functions and requirements:

<input checked="" type="checkbox"/> Validator	<input checked="" type="checkbox"/> Verifier	<input checked="" type="checkbox"/> Team Leader	<input checked="" type="checkbox"/> Technical Expert
<input checked="" type="checkbox"/> Technical Reviewer	<input type="checkbox"/> Health Expert	<input type="checkbox"/> Gender Expert	<input type="checkbox"/> Plastic Waste Expert
<input checked="" type="checkbox"/> SDG+	<input checked="" type="checkbox"/> Social no-harm(S+)	<input checked="" type="checkbox"/> Environment no-harm(E+)	<input type="checkbox"/> CCB Expert
<input checked="" type="checkbox"/> Financial Expert	<input checked="" type="checkbox"/> Local Expert for India, South Africa and Spanish speaking countries		

in the following Technical Areas:

<input checked="" type="checkbox"/> TA 1.1	<input checked="" type="checkbox"/> TA 1.2	<input type="checkbox"/> TA 2.1	<input checked="" type="checkbox"/> TA 3.1	<input type="checkbox"/> TA 4.1
<input type="checkbox"/> TA 4. n	<input type="checkbox"/> TA 5.1	<input type="checkbox"/> TA 5.2	<input type="checkbox"/> TA 7.1	<input checked="" type="checkbox"/> TA 8.1
<input type="checkbox"/> TA 9.1	<input type="checkbox"/> TA 9.2	<input type="checkbox"/> TA 10.1	<input checked="" type="checkbox"/> TA 13.1	<input type="checkbox"/> TA 13.2
<input type="checkbox"/> TA 14.1	<input type="checkbox"/> TA 15.1			

<p>Issue Date</p> <p>1st January 2023</p>	<p>Expiry Date</p> <p>31st December 2023</p>
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 <hr style="width: 80%; margin: 0 auto;"/> <p>Mr. Vikash Kumar Singh Compliance Officer</p>	 <hr style="width: 80%; margin: 0 auto;"/> <p>Mr. Amit Anand CEO</p>
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CCIPL_FM 7.9 Certificate of Competency_V2.1_012023



Carbon Check (India) Private Limited

Certificate of Competency

Ouattara Moussa Famory

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

- Validator
- Verifier
- Team Leader
- Technical Expert
- Technical Reviewer
- Health Expert
- Gender Expert
- Plastic Waste Expert
- SDG+
- Social no-harm(S+)
- Environment no-harm(E+)
- CCB Expert
- Financial Expert
- Local Expert for Cote d'Ivoire

in the following Technical Areas:

- TA 1.1
- TA 1.2
- TA 2.1
- TA 3.1
- TA 4.1
- TA 4. n
- TA 5.1
- TA 5.2
- TA 7.1
- TA 8.1
- TA 9.1
- TA 9.2
- TA 10.1
- TA 13.1
- TA 13.2
- TA 14.1
- TA 15.1

Issue Date
03rd May 2023

Expiry Date
02nd May 2024



Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO



Carbon Check (India) Private Limited

Certificate of Competency

Mr. S. Ranganathan

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

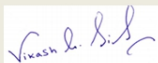
- Validator
- Verifier
- Team Leader
- Technical Expert
- Technical Reviewer
- Health Expert
- Gender Expert
- Plastic Waste Expert
- SDG+
- Social no-harm(S+)
- Environment no-harm(E+)
- CCB Expert
- Financial Expert
- Local Expert for India

in the following Technical Areas:

- TA 1.1
- TA 1.2
- TA 2.1
- TA 3.1
- TA 4.1
- TA 4. n
- TA 5.1
- TA 5.2
- TA 7.1
- TA 8.1
- TA 9.1
- TA 9.2
- TA 10.1
- TA 13.1
- TA 13.2
- TA 14.1
- TA 15.1

Issue Date
1st January 2023

Expiry Date
31st December 2023



Mr. Vikash Kumar Singh
Compliance Officer



Mr. Amit Anand
CEO

APPENDIX 4: LIST OF FINDINGS

TABLE 1: CORRECTIVE ACTION REQUESTS (CARs) AND CLARIFICATION REQUESTS (CLs)

Finding	CL 01		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 1.1 of the MR, the relevant implementation dates of the project like date of construction, date of commissioning and continued operation periods are not mentioned in accordance with the §3.4.3 of the VCS Standard, version 4.3.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	The relevant dates have been added in section 1.1.		
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	The relevant dates have been provided in the section 1.1 of the MR. CL01 is closed.		
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed		

Finding	CL 02		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 1.11 of the MR, PP has provided the SDG indicators 6.1.1, 7.1.1 and 7.b.1. <ol style="list-style-type: none"> a. The relevance of SDG indicator 6.1.1 to the project activity is not clear. b. The current project contributions and contributions over project lifetime are not clear for indicators 6.1.1, 7.1.1 and 7.b.1. PP shall also provide the justification of the values provided and the reference to the values. The units provided for the contributions are not consistent with the Metadata for each indicator. c. The value from the footnote 6 is 274.34 kWh per capita per year for Côte d'Ivoire. However, it is not clear how a value of 0.01 kW per capita has been calculated as the units for energy 		

	generation capacity electricity consumption are different.
<p>Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>a) The SDG indicator 6.1.1 is relevant to the project activity as the construction of the Soubré dam has allowed SODECI (The Water Distribution Company of Côte d'Ivoire) to increase its capacity of water treatment for urban consumption. And during previous verifications, it was highlighted that hydraulic pumps have been built in the villages of Mayo1, Gueyo, Mayo2, Adingrakro, Gnamagui, Konedougou, Mathieukro and Konankro and only the villages of Amaragui and Petit Tiémé were waiting for their respective pumps due to delays in the work by the IBS company. But now, all villages have their pumps. Which led to an increase in subscribers for access to clean water. (Please see "Soubre_SDG_contribution_report_VCS2" for previous situation)</p> <p>b) For SDG 6.1.1: It was corrected on the MR. During this monitoring period, there was no increase in overall population likely to have access to clean water (please see and compare "2022_Water access improvement" and "2021_Water access improvement" files regarding the number of people having access to clean water). However, there was an increase in subscribers among this population year after year, and which correspond to the 81% increase highlighted in the "Contributions over project lifetime" (please see "Evolution of SODECI subscribers" highlighting the increase in subscribers having access to clean water. For SDG 7.1.1: The indicator used correspond to the number of subscribers from CI-energies (number of people subscribed to CI-energies) having access to clean energy thanks to the dam. Please see "CIE subscribers evolution" file showing the evolution in the number of subscribers. The value corresponds to the sum of the number of subscribers from July 2021 to June 2022. For SDG 7.1.b: This was replaced by SDG 7.2.1 Renewable energy share in the total final energy consumption. As it gives a more accurate value.</p> <p>c) No more applicable as SDG 7.1.b is not applied anymore.</p>

<p>VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<ul style="list-style-type: none"> a) PP has clarified that hydraulic pumps were built in villages. However, it is not clear if the water provided was safely managed drinking water. PP shall provide the water quality test reports for the water supplied to ensure the quality of drinking water. Furthermore, all the numbers shall be presented in internationally recognizable format. CL02.1 remains open. b) The form provided to the verification team refers to Soubre Zone. It is not clear if the subscribers have been provided electricity from Soubre Hydro Power plant only. CL02.2 remains open. c) The actual renewable energy has been provided in the section 1.11 of the MR. However, the total energy share has not been provided. CL02.3 remains open.
<p>Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<ul style="list-style-type: none"> a) see the results of the technical study reports “Technical report, physico-chemical analysis, pumping test in the villages” .attesting to the potability of the water b) As highlighted and shown during the remote audit, as well as explicitly mentioned by PP during previous interactions, the electricity subscribers file sent by the concessionaire to CI-Energies concern data from the NAWA region and precisely the localities impacted by the Soubre project. c) Energy share from Soubre’s hydropower plant is now available in the file “National production from 07-2021 - 06/2022” as well as total production coming from all hydraulic sources plus total thermal production, which give total national production (Please note that values in the file are slightly different from values used for ER GHG calculation as they are based on “gross energy” production and not “net energy” - used in ER GHG calculation)
<p>VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<ul style="list-style-type: none"> a) PP has provided the technical report with the physico-chemical analysis of the water pumps confirming potability of water. CL02.1 is closed. b) PP has clarified that the subscribers list send by CI-Energies is from the Nawa region and provides localities impacted by the Soubre project. CL02.2 is closed. c) PP has provided the % of energy generation from the project activity compared to the national electricity generation. CL02.3 is closed.
<p>Conclusion Tick the appropriate checkbox</p>	<ul style="list-style-type: none"> <input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CL 03		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 2.1 of the MR, PP shall provide the status of each mitigation measure separately. The supporting evidence to support the status of mitigation measures shall also be provided.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	Please see « 12_Amélioration Accès Routier » file for improvement of road access Regarding the measures to prevent spontaneous immigration, as discussed during the remote audit, there is no data available as the monitoring of the demography of cities is done by the Ministry of Planning and Development.		
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	PP has not provided the status of each mitigation measure separately in the reported monitoring period in the section 2.1 of the MR. CL03 remains open.		
Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	The status of each mitigation measure is now provided separately in the MR. For further details please see “Activity report of ESMP projects” file.		
VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	PP has provided the status of the mitigation options in the section 2.1 of the MR. CL03 is closed.		
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed		

Finding	CL 04		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 2.2 of the MR, PP has not provided the procedures or methods used for documenting the outcomes of the local stakeholder communication. Furthermore, PP shall clarify what input was received through emails received during ongoing communication and how due account of such inputs was taken.		

<p>Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>As it was added in the MR, 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. Please see : “2022_Suivi des courriers arrivée_Usine Soubré_Rev20220923” Showing the different emails received from 2019 to 2022. And for this monitoring period, there was no grief.</p>
<p>VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<p>PP has clarified that no complaint emails were received during the reported monitoring period. PP shall also clarify on the outcome of other modes of grievances such as writing, calling or physical meeting for the project activity during the reported monitoring period. CL04 remains open.</p>
<p>Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>PP has clarified by email that no complaint was received by call, physical meeting or writing.</p>
<p>VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<p>PP has confirmed that no complaints have been received by call, physical meeting or writing during the monitoring period. CL04 is closed.</p>
<p>Conclusion Tick the appropriate checkbox</p>	<p> <input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed </p>

Finding	CL 05		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	<ol style="list-style-type: none"> In section 4.2 of the MR, PP has stated that “The next calibration will be done in October 2022”. PP shall provide the calibration details carried out in the month of October 2022. Furthermore, for the application of error, PP shall refer Appendix of the VVS for the Project Activities, version 3 for the delay in calibration and justify the error applied. PP shall use internationally recognized format to represent the decimal values used in the section 4.2 and section 4.3 of the MR. PP shall provide the electricity generation and electricity consumption records available from the SCADA based system. 		

<p>Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<ol style="list-style-type: none"> 1. As mentioned during the audit, the calibration for 2022 was delayed. It has been done on December 15,16, and 20, 2022. 2. Paragraph 366 (a) of CDM validation and verification standard for project activities version 03.0 is applied and the applicable error of 0.2% was conservatively deducted for the period going from 01/02/2022 to 30/06/2022, based on meters' accuracy (0.2s). 3. Corrected, internationally recognized format is now used 4. Electricity generation and consumption from the SCADA system are now available. (Please see « Production_et_soutirage_Exrait_du_01_juillet_2021_au_30_juin_2022 » file).
<p>VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<ol style="list-style-type: none"> 1. The calibration of the electricity meters has been carried out on December 15,16, and 20, 2022. The statement has been revised in the section 4.2 of the MR. CL05.1 is closed. 2. PP has applied accuracy deduction of 0.2% for the period 01/02/2022 to 30/06/2022. The deduction is based on the accuracy of the meters. PP shall also clarify for the observed deviation during the delayed calibration for each meter and why such value is not applicable. CL05.2 remains open. 3. The format of the values has been revised in the section 4.2 and 4.3 of the MR. CL05.3 is closed. 4. It has been noted that the electricity generation and consumption data provided is not consistent with the values provided in the ER sheet. CL05.4 remains open.
<p>Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<ol style="list-style-type: none"> 2. Following paragraph 366 (a) of CDM validation and verification standard for project activities version 03.0, as there was a delay in calibration during this monitoring period, with an error lower than 0.2%, then the applicable error of 0.2% was conservatively deducted for the period going from 01/02/2022 to 30/06/2022 4. Data used in the ER sheet are based on Soubre's official records (net energy) which can be different from SCADA's data as they concern (gross energy). Please see the "Gross & net energy variance" file showing the % difference between gross energy (SCADA) and net energy (official readings). The difference is due to the internal consumption by the plant as well as the technical losses on the transmission lines.

<p>VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<ol style="list-style-type: none"> 1. Closed. 2. PP has clarified that the error percentage in the calibration reports is higher than 0.2%. However, it is noted that for few instances, the error is more than 0.2%. PP shall check the calibration certificates for the error values reported and consider the highest error observed during the calibration. CL05.2 remains open. 3. Closed. 4. PP has provided the file, "Gross & net energy variance" file showing the % difference between gross energy (SCADA) and net energy (official readings). Since, the total value of energy produced as net is lower than gross production reported from SCADA, the approach used is acceptable to the verification team. CL05.3 is closed.
<p>Corrective Action or clarification #3 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>2. Indeed, the error identified in the delayed calibration test is beyond the maximum permissible error of the measuring equipment. Thus, paragraph 366 (b) of CDM validation and verification standard for project activities version 03.0, is applied. And the applicable error of 0.204% was conservatively deducted for the period going from 01/02/2022 to 30/06/2022.</p>
<p>VVB Assessment #3 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<ol style="list-style-type: none"> 1. Closed. 2. PP has revised the error percentage used in the ER sheet in accordance with the highest error noted in the calibration reports. The error of 0.204% was noticed in only in case of the electricity meter for generator G1. For all other cases the error determined during the calibration is less than 0.2% and thus the approach of discounting the emission reductions by 0.204% is acceptable to the verification team. CL05.2 is closed. 3. Closed. 4. Closed.
<p>Conclusion Tick the appropriate checkbox</p>	<p> <input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed </p>

Finding	CL 06		
Classification	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 4.3 of the MR, PP has not provided procedures used for handling any internal auditing performed and any non-conformities identified in		

	<p>accordance with the §3.4.3 of the VCS Standard, version 4.3.</p>
<p>Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>The quantity of net electricity generation supplied by the project plant/unit to the grid every year is measured continuously and recorded at least once a month. The equipment used to ensure the measurement are the electronic electricity meters installed at the delivery station of CI-Energies.</p> <p>Also, the project proponent follows a specific QHSE procedure, please see “15-b_Schéma d'alarme” and “15-c_Schéma d'alerte” files.</p>
<p>VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<p>The statement provided by the PP does not constitute the procedures for internal auditing. CLO6 remains open.</p>
<p>Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>Corrected, the internal procedure related to monthly recording of the quantities of energy produced used for GHG emissions calculation is now mentioned.</p>
<p>VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<p>It is not clear how the statement reported by the project proponent constitute Internal Auditing Procedure. CLO6 remains open</p>
<p>Corrective Action or clarification #3 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>Internal audit procedure is now mentioned in the MR.</p>
<p>VVB Assessment # The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<p>The internal audit process has been provided in the section 4.3 of the monitoring report. CLO6 is closed.</p>
<p>Conclusion Tick the appropriate checkbox</p>	<p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>

Finding	CAR 01		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	<ol style="list-style-type: none"> 1. In section 2.1.1 of the MR, no information has been provided by the PP with regards to the methodology deviations (if any). PP shall clearly indicate in the section if methodology deviations are applicable to the project activity during the reported monitoring period. 2. In accordance with the §3.19.3 of the VCS Standard, version 4.3, PP has not listed the Project Description Deviation in the section 2.1.2 of the Monitoring Report. The information provided in section 2.1.2 of the Monitoring Report is not consistent with the monitoring report for the previous monitoring period(s). 		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	<ol style="list-style-type: none"> 1. Corrected on the MR. 2. The MR for this monitoring period is, now using the latest monitoring report template (Version 4.2) available on Verra's website. And based on the monitoring report template V4.2, Project description Deviations correspond to point 3.2.2 and present in the section 3.2 Deviation. Please see Monitoring report template version 4.2. 		
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	<ol style="list-style-type: none"> 1. PP has clarified that methodology deviations are not applicable for the project activity during the reported monitoring period. CAR01.1 is closed. 2. PP shall provide the project description deviation as provided in the previous monitoring period. CAR01.2 remains open. 		
Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	<ol style="list-style-type: none"> 2. Project description deviation added 		
VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	<ol style="list-style-type: none"> 1. Closed. 2. PP has provided the project description deviation in the MR. However, the reported project description deviation has not been justified in accordance with the §3.21.2 of the VCS Standard, v4.5. CAR01.2 remains open. 		
Corrective Action or clarification #3 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	Justification has been added		

<p>VVB Assessment #3 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<ol style="list-style-type: none"> 1. Closed. 2. PP has provided a justification for the project description deviation in accordance with the §3.21.2 of the VCS Standard v4.5. CAR01.2 is closed.
<p>Conclusion Tick the appropriate checkbox</p>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CAR 02		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	In section 5 of the Monitoring Report, the section numbers are not in line with the VCS monitoring report template. PP shall correct the section numbers in accordance with the §3.4.3 of the VCS Standard, version 4.3.		
<p>Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	The section numbers are now in line with the VCS monitoring report template.		
<p>VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	The section numbers have been rectified in the section 5 of the monitoring report. However, latest version of the monitoring report template has not been provided. CAR02 remains open.		
<p>Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	The last monitoring report template is now used		
<p>VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<ol style="list-style-type: none"> 1. PP has updated the monitoring report to version 4.2. However, section 1.10 of the MR has not been provided in accordance with the MR template and §3.24.7 of the VCS Standard version 4.5. CAR02.1 is open. 2. In section 5.4 of the MR, PP has provided a comparison of emission reduction monitored and ex-ante estimates. The justification of increase has been provided as better hydrological performance. PP shall provide a comparison of hydrological performance monitored and that used ex-ante including the 		

	<p>flow considered and the underlying factors. PP shall also justify how the project continues to remain additional considering that the investment analysis was used to demonstrate additionality. CAR02.2 is open.</p>
<p>Corrective Action or clarification #3 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<ol style="list-style-type: none"> Information regarding scope 3 in section 1.10 have been added. As detailed in deviation section 3.2.2, 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.
<p>VVB Assessment #3 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<ol style="list-style-type: none"> Closed. PP has revised the error percentage used in the ER sheet in accordance with the highest error noted in the calibration reports. The error of 0.204% was noticed in only in case of the electricity meter for generator G1. For all other cases the error determined during the calibration is less than 0.2% and thus the approach of discounting the emission reductions by 0.204% is acceptable to the verification team. CAR02.2 is closed. Closed.
<p>Conclusion Tick the appropriate checkbox</p>	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CAR 03		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	PP is requested to provide the correct information regarding the meter number for the delivery station- G3.		

	The ID number on meters that have observed during the remote audit is found to be inconsistent with the MR.
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	Corrected, ID number on meters of G3 is now the one observed during the remote audit.
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	The ID number for the meters for G3 has been revised in the section 4.3 of the MR. CAR03 is closed.
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CAR 04		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	For the Micro hydropower plant, PP is requested to submit the video for the mentioned power plant.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	Video of the Micro hydropower plant G4) has been submitted, please see “3-b-Video groupe G4” and “4_Vidéo compteur G4” files.		
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	PP has provided the videos of the micro hydropower plant G4. CAR04 is closed.		
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed		

Finding	CAR 05		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR

Description of finding (VVB)	PP is requested to clarify about the type of turbine (whether it is Kaplan or Francis turbine) used for the hydropower plant.
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	Turbines of G1, G2 and G3 are Francis type but turbine of the micro-hydro power plant is a Bulb turbine. Please see “1-f_Plaques signalitiques G1 G2 G3” and “3-a_Plaque signalitique G4” files.
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	PP has clarified that G1, G2 and G3 are Francis type turbines, while G4 is a bulb type turbine. CAR05 is closed.
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CAR 06		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	PP is requested to provide evidence for the commissioning date of the G4 Mini hydropower plan. The commissioning date mentioned during the remote audit was found to be inconsistent with the commissioning date mentioned in the Monitoring Report.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	See “Plant’s specifications” file, page9 for the commissioning dates.		
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	PP has provided the milestone commissioning dates for G1, G2, G3 and G4 in the section 1.1 of the MR. CAR06 is closed.		
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed		

Finding	CAR 07
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Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	PP is requested to submit the daily indexes prepared and corrected by the staff regarding the monitoring plan part.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	See “Monthly electricity data” and “Synthesis” files.		
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	PP has provided the daily indexes and the monthly data. However, the monthly data values are not consistent with the sum of production and consumption data on daily basis. CAR07 remains open.		
Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	Because monthly data values are net energy but daily indexes are extracted from SCADA data (gross energy). Compare daily indexes with “Gross energy produced” column from “Gross & net energy variance” file, which give same results.		
VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	PP has provided the file, “Gross & net energy variance” file showing the % difference between gross energy (SCADA) and net energy (official readings). Since, the total value of energy produced as net is lower than gross production reported from SCADA, the approach used is acceptable to the verification team. CAR07 is closed.		
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed		

Finding	CAR 08		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	PP is requested to submit the evidence for the daily recordings of the generation data.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	See “Production_et_soutirage_Exrait_du_01_juillet_2021_au_30_juin_2022” file.		

VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	The daily recordings of the generation data have been provided to the verification team. CAR08 is closed.
Conclusion Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed

Finding	CAR 09		
Classification	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
Description of finding (VVB)	Electricity generation is found to be more in reported monitoring period and the previous years than the ex-ante electricity generation. PP is requested to justify it accordingly.		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	As already substantiated and verified during last monitoring periods this is due to more favourable hydrological performances than expected. These hydrological performances (precipitation) are dependent on unpredictable natural phenomena.		
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	PP has clarified that the electricity generation is more than the previous monitoring period due to more favourable hydrological performances than expected. PP shall also clarify, if the better performance was achieved due to any upgrade in the generators or turbine infrastructure of the hydropower plant. CAR09 remains open.		
Corrective Action or clarification #2 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)	As per email response from PP, there was no upgrade in the generators or turbine infrastructure during this monitoring period. (Please also compare documents shared during this monitoring period regarding the plant's infrastructures specifications and those mentioned in previous MP).		
VVB Assessment #2 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.	In section 5.4 of the MR, PP has provided a comparison of emission reduction monitored and ex-ante estimates. The justification of increase has been provided as better hydrological performance. PP shall provide a comparison of hydrological performance monitored and that used ex-ante including the flow considered and the underlying factors. PP shall also justify how the project continues to remain additional considering that the investment analysis was used to demonstrate additionality. CAR09 is open.		

<p>Corrective Action or clarification #3 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>As explained above, the actual emissions reductions have no impact on project's additionality as Ex-ante emissions reductions were calculated using a conservative factor of 90% (1,170 GWh * 0,9 * 0,6042 tCO2/MWh) to account for auxiliary consumptions and losses. Hence the erroneous consideration of 1,053,000 GWh/y in the ex-ante ER estimates instead of the net 1,170 GWh/y (as determined by feasibility study from third party engineering company and provided to the banks), which lowered expected results, while actual project power generation over the past 12 months has been very close to the initial net assumption: 1,166.281 GWh.</p>
<p>VVB Assessment #3 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<p>PP has clarified that the actual emission reductions have no impact on the project's additionality. However, since the revenue from electricity sales is considered for investment analysis, the ERs have direct impact on additionality, which has been assessed as part of the project description deviation applied by the project proponent. CAR09 is closed.</p>
<p>Conclusion Tick the appropriate checkbox</p>	<p> <input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed </p>

Finding	CAR 10		
<p>Classification</p>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<p>Description of finding (VVB)</p>	<p>During the remote audit, a delay in calibration was noticed. PP is requested to clarify whether the next calibration has been done and if so provide the calibration certificate for the calibration of the meters.</p>		
<p>Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)</p>	<p>The next calibration has been done on December 15,16 and 20, 2022. See "calibration reports".</p>		
<p>VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</p>	<p>The calibration certificates have been provided for the delayed calibration carried out on December 15,16 and 20, 2022. CAR10 is closed.</p>		
<p>Conclusion Tick the appropriate checkbox</p>	<p> <input type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input checked="" type="checkbox"/> The finding is closed </p>		

TABLE 2: FORWARD ACTION REQUESTS

Finding	FAR 01		
Classification	<input type="checkbox"/> CAR	<input type="checkbox"/> CL	<input checked="" type="checkbox"/> FAR
Description of finding (VVB)	<p>The calibration of electricity meters was done during the previous monitoring period on 18/02/2021. The calibration of electricity meters was carried out after the reported monitoring period on 15/12/2022. The monitoring period ends on 30/06/2022.</p> <p>PP shall apply the discount factor in accordance with the paragraph 366 (b) of CDM validation and verification standard for project activities version 03.0 for the delay in calibration during the next periodic verification.</p>		
Corrective Action or clarification #1 (PP shall write a detailed and clear corrective action or further information for clarification as per finding)			
VVB Assessment #1 The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.			
Conclusion Tick the appropriate checkbox	<input checked="" type="checkbox"/> To be checked during the next periodic verification <input type="checkbox"/> Outstanding finding (not closed) <input type="checkbox"/> The finding is closed		