




Verification and certification report form for CDM programme of activities
(version 01.0)

Complete this form in accordance with the "Attachment. Instructions for filling out the verification and certification report form for CDM programme of activities" at the end of this form.

VERIFICATION AND CERTIFICATION REPORT

Title of the programme of activities (PoA)	Guacamaya Small Scale Hydropower Programme of Activities	
UNFCCC reference number of the PoA	8950	
Version number(s) of the PoA-DD(s) applicable to this report	Version 7 dated 04/12/2012	
Version number of the verification and certification report	03	
Completion date of the verification and certification report	31/01/2018	
Monitoring period number	01 st	
Duration of this monitoring period	01/06/2015 – 30/04/2017 (including both dates)	
Number and version number of the monitoring report to which this report applies	Version 04, dated 22/12/2017	
Coordinating/managing entity (CME)	Anaconda Carbon S.A.	
Host Party(ies)	Host Party(ies) of the PoA	Is this a host Party to a CPA covered in this report?(yes/no)
	Honduras	Yes
	Nicaragua	No
	Costa Rica	No
Sectoral scope(s)	Sectoral Scope 1: Energy industries (renewable - / non-renewable sources)	
Selected methodology(ies)	AMS- I.D., version 17- Grid connected renewable electricity generation.	
Selected standardized baseline(s)	NA	
Total estimated GHG emission reductions or net GHG removals for this monitoring period in the included CPA(s) covered in this report	33,885	
Total certified GHG emission reductions or net GHG removals for this monitoring period for the included CPA(s) covered in this report	23,081	

Name of DOE	Carbon Check (India) Private Ltd.
Name, position and signature of the approver of the verification and certification report	Amit Anand, CEO 

SECTION A. Executive summary

The Co-ordinating Managing Entity/Project Participant has commissioned the DOE, Carbon Check (India) Private Ltd. to perform an independent verification of the CDM Programme of Activities “PoA 8950:Guacamaya Small Scale Hydropower Programme of Activities” in Honduras, Nicaragua and Costa Rica (hereafter referred to as “Programme of Activities or PoA”) for the CPAs titled “Zinguizapa Small – Scale Hydropower Project” (Reference number: CPA 8950-0002) and “Puringla Sazagua Small Scale Hydropower Project” (Reference number: CPA 8950-0003) . The PoA supports the development of new small-scale hydropower projects in Honduras, Nicaragua and Costa Rica that supply electricity to the respective national grid. Each CPA under this PoA has a combined installed capacity of no more than 15 MW, the threshold for small-scale CDM projects.

During the current monitoring period, the CPAs 8950-0002 and 8950-0003 were only implemented and the CPA 8950-0001 was not implemented. CPA 8950-0001 is not included in this monitoring report. The CPAs are designed to generate emission reductions by activity new small-scale hydropower projects in Honduras that supply electricity to the respective national grid ENEE (Honduran National Electricity Company) and displace electricity that is otherwise produced by coal and fossil fuels. The project activity displaces electricity generation in the baseline.

This report summarises the findings of the verification of the project, performed on the basis of paragraph 62 of the CDM Modalities & Procedures, as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the CDM Executive Board. Verification is required for all registered CDM project activities intending to confirm their achieved emission reductions and proceed with request for issuance of CERs. This report contains the findings and resolutions from the verification and a certification statement for the certified emission reductions.

Objective:

Verification is the periodic independent review and ex-post determination of both quantitative and qualitative information by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the registered CDM project activity during a defined monitoring period.

Certification is the written assurance by a DOE that, during a specific period in time, a project activity achieved the emission reductions as verified.

The objective of this verification was to verify and certify emission reductions reported for the “Guacamaya Small Scale Hydropower Programme of Activities” in the host country Honduras, Nicaragua and Costa Rica for the period 01/06/2015 to 30/04/2017.

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 anthropogenic emissions by sources, is sufficient, definitive and presented in a concise and transparent manner. CCIPL’s objective is to perform a thorough, independent assessment of the registered programme of activities.

In particular, the monitoring plan, monitoring report and the project’s compliance with relevant UNFCCC and host Party criteria are verified in order to confirm that the component project/s has/have been implemented in accordance with the previously registered/included or revised

component project design and conservative assumptions, as documented. It is also confirmed if the monitoring plan is in compliance with the registered/included or revised CPA-DDs and the approved monitoring methodology.

Scope:

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered/included CPA-DD or revised CPA-DD
- To verify the implemented monitoring plan with the registered/included CPA-DD or revised CPA-DD and applied baseline and monitoring methodology.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- 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 verification comprises a review of the monitoring report covering the monitoring period from 01/06/2015 to 30/04/2017 and based on the revised CPA-DDs /22/ including the monitoring plan, emission reduction calculation spread-sheet, monitoring methodology and all related evidence provided by project participant.

On-site visit and stakeholders' interviews are also performed as part of the verification process.

The verification team assigned by the DOE concludes that the PoA-DD /B04/, CPAs 8950-0002 and 8950-0003, as described in the revised CPA-DDs /22/ and monitoring report, Version 04, /01-(d)/, meets all relevant requirements of the UNFCCC for CDM project activities including article 12 of the Kyoto Protocol and paragraph 62 of CDM M& P, the modalities and procedures for CDM (Marrakesh Accords) and the subsequent decisions by the COP/MOP and CDM Executive Board. The verification has been conducted in-line with the VVS requirements Version 09.0 /B01-1/.

The component project activity was correctly implemented according to selected monitoring methodology, monitoring plan and the revised CPA DD/s /22/. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review and on site visit the verification team confirms that the PoA has resulted in the 23,081 tCO₂e emission reductions during the third monitoring period.

CC IPL, as a DOE, is therefore pleased to issue a positive verification opinion expressed in the attached Certification statement.

SECTION B. Verification team, technical reviewer and approver**B.1. Verification team members**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader	IR	Singh	Vikash Kumar	CC IPL	X	X	X	X
2.	Verifier	IR	Singh	Vikash Kumar	CC IPL	X	X	X	X
3.	Technical Expert	IR	Singh	Vikash Kumar	CC IPL	X	X	X	X
4.	Local Expert	EI	Valladares	Katherine	CC IPL		X	X	

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Dimri	Anubhav	CC IPL
2.	Approver	IR	Anand	Amit	CC IPL

SECTION C. Means of verification**C.1. Desk review**

Documents reviewed or referenced during the verification are listed in Appendix 3 below.

C.2. On-site inspection

Duration of on-site inspection: 25/07/2017 to 26/07/2017				
No.	Activity performed on-site	Site location	Date	Team member
1.	An assessment of the implementation and operation of the registered project activity as per the registered PoA-DD, registered/included CPA-DDs.	CPA002 and CPA003 site	25/07/2017 to 26/07/2017	Vikash Kumar Singh Katherine Valladares
2.	A review of information flows for generating, aggregating and reporting the monitoring parameters	CPA002 and CPA003 site	25/07/2017 to 26/07/2017	Vikash Kumar Singh Katherine Valladares
3.	Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the CPA-DD	CPA002 and CPA003 site	25/07/2017 to 26/07/2017	Vikash Kumar Singh Katherine Valladares
4.	A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources	CPA002 and CPA003 site	25/07/2017 to 26/07/2017	Vikash Kumar Singh Katherine Valladares
5.	A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the CPA-DD and the selected methodology and corresponding tool(s), where applicable	CPA002 and CPA003 site	25/07/2017 to 26/07/2017	Vikash Kumar Singh Katherine Valladares
6.	A review of calculations and assumptions made in determining the GHG data and emission reductions	CPA002 and CPA003 site	25/07/2017 to 26/07/2017	Vikash Kumar Singh Katherine Valladares
7.	An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters	CPA002 and CPA003 site	25/07/2017 to 26/07/2017	Vikash Kumar Singh Katherine Valladares

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Giles	Christian	Anaconda Carbon S.A.	25/07/2017 to 26/07/2017	Project operation, CER calculation and completeness of monitoring report, Quality Assurance – Management and operating system, compliance of monitoring plan with monitoring methodology and registered CPA-DDs.	Vikash Kumar Singh Katherine Valladares
2.	Manadraga	Pablo	GA Energy (CPA002)	25/07/2017 to 26/07/2017	Project implementation and operation, monitoring procedure, data and information flow, Roles and responsibility, Quality Assurance – Management and operating system, Qualification and Training	Vikash Kumar Singh Katherine Valladares
3.	Ramos	Sentos Vicente	GA Energy (CPA002)	25/07/2017	Project technical specification and operation including metering and QA/QC	Vikash Kumar Singh Katherine Valladares
4.	Maldonade	Edras	GA Energy (CPA002)	25/07/2017	Project technical specification and operation including metering and QA/QC	Vikash Kumar Singh Katherine Valladares
5.	Darehame	Kevin	CECA(CPA 003)	26/07/2017	Project implementation and operation, monitoring procedure, data and information flow, Roles and responsibility, Quality Assurance – Management and operating system, Qualification and Training	Vikash Kumar Singh Katherine Valladares
6.	Velasquez	Anderson	CECA(CPA 003)	26/07/2017	Project technical specification and operation including metering and QA/QC	Vikash Kumar Singh Katherine Valladares
7.	Henrriquez	Bernis	CECA(CPA 003)	26/07/2017	Project technical specification and	Vikash Kumar Singh Katherine Valladares

					operation including metering and QA/QC	
--	--	--	--	--	--	--

C.4. Sampling approach

N/A

C.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General			
Compliance of the monitoring report with the monitoring report form	--	--	--
Remaining forward action requests from validation and/or previous verification	--	--	--
Specific-case CPA(s) considered for verification and covered in this report	--	--	--
Programme of activities			
Compliance of the programme implementation with the registered PoA-DD	--	04	--
Implementation and operation of the management system	01	--	--
Post-registration changes			
<ul style="list-style-type: none"> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline 	--	--	--
<ul style="list-style-type: none"> Corrections 	--	--	--
<ul style="list-style-type: none"> Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s)) 	--	--	--
<ul style="list-style-type: none"> Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline 	--	--	--
<ul style="list-style-type: none"> Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA 	--	--	--
<ul style="list-style-type: none"> Types of changes specific to afforestation and reforestation activities 	--	--	--
Component project activity(ies)			
Compliance of the CPA implementation with the included CPA design document	--	04	--
Post-registration changes			
<ul style="list-style-type: none"> Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline 	--	--	--
<ul style="list-style-type: none"> Corrections 	--	--	--
<ul style="list-style-type: none"> Changes to the start date of the crediting period 	--	--	--
<ul style="list-style-type: none"> Inclusion of a monitoring plan to an included CPA-DD 	--	--	--
<ul style="list-style-type: none"> Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline 	--	--	--
<ul style="list-style-type: none"> Changes to the programme design of the included CPA-DD 	--	--	--
<ul style="list-style-type: none"> Types of changes specific to afforestation and reforestation component project activities 	--	--	--
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline	--	--	--
Compliance of monitoring activities with the registered			

monitoring plan			
• Data and parameters fixed ex ante or at renewal of crediting period	--	--	--
• Data and parameters monitored	--	02	--
• Implementation of sampling plan	--	--	--
Compliance with the calibration frequency requirements for measuring instruments	--	02	--
Assessment of data and calculation of emission reductions or net removals			
• Calculation of baseline GHG emissions or baseline net GHG removals by sinks	01	01	--
• Calculation of project GHG emissions or actual net GHG removals by sinks	--	--	--
• Calculation of leakage GHG emissions	--	--	--
• Summary of calculation of GHG emission reductions or net GHG removals by sinks	01	01	--
• Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA	--	--	--
• Remarks on difference from estimated value in registered PDD	--	--	--
Others (please specify)- during internal technical review process	--	01	--
Total	02	08	00

SECTION D. Internal quality control

The final verification report passed a technical review before being submitted to the UNFCCC Executive Board. The technical review was performed by a technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM validation and verification.

SECTION E. Verification opinion

Carbon Check (India) Private Ltd. (CC IPL) has performed the first (1st) periodic verification of the registered CDM Programme of Activities "PoA 8950:Guacamaya Small Scale Hydropower Programme of Activities" in Honduras, Nicaragua and Costa Rica (hereafter referred to as "Programme of Activities or PoA") for the CPAs titled "Zinguizapa Small – Scale Hydropower Project" (Reference number: CPA 8950-0002) and "Puringla Sazagua Small Scale Hydropower Project" (Reference number: CPA 8950-0003) . During the current monitoring period, the CPAs 8950-0002 and 8950-0003 were only implemented and the CPA 8950-0001 was not implemented. CPA 8950-0001 is not included in this monitoring report.

The verification team assigned by the DOE concludes that the PoA-DD (Version 7, date 04/12/2012), CPAs 8950-0002 and 8950-0003 as described in the respective revised CPA-DDs /22/ and the monitoring report (Version 04, dated 22/12/2017) /01-d/, meet all relevant requirements of the UNFCCC for CDM project activities including article 12 of the Kyoto Protocol and paragraph 62 of CDM M& P, the modalities and procedures for CDM (Marrakesh Accords) and the subsequent decisions by the COP/MOP and CDM Executive Board. The verification has been conducted in-line with the VVS requirements Version 09.0 /B01-1/.

Verification methodology and process

The Verification team confirms the contractual relationship signed on 22/05/2017 between the DOE, Carbon Check (India) Private Ltd. and the Project Participant, (Carbonbay GmbH & Co. KG). The team assigned to the verification meets the CCIPL's internal procedures including the UNFCCC requirements for the team composition and competence. The verification team has conducted a thorough contract review as per UNFCCC and CCIPL's procedures and requirements.

The verification has been performed as per the requirements described in the VVS Version 09.0 and constitutes the review and completion of the following steps:

- Reviewing the registered PoA-DD (Version 7, date 04/12/2012), the CPA DDs for 8950-0002 /22/, /B04/, 8950-0003 /22/, /B04/ including the monitoring plan and the corresponding validation report/s /B04/;
- Publication of the MR (Version 1, 12/06/2017) /1/ on the UNFCCC website on 16/06/2017
- Desk review of the validation report, MR and other relevant documents including documents related to the projects activities in emission reductions
- Review of the applied monitoring methodology (AMS-I.D. Version 17) /B02/;
- Review of any CMP and EB decisions, clarifications and guidance /B05/;
- On-site assessment (25/07/2017 – 26/07/2017)
- Resolution of CARs and CLs raised during verification
- Issuance of Verification Report

The component project activities were correctly implemented according to selected monitoring methodology, monitoring plan and the revised CPA DD/s /22/. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review and on site visit the verification team confirms that the PoA has resulted in the 23,081 tCO₂e emission reductions during the third monitoring period.

Verified emission reductions for the PoA: 23,081 tCO₂e.

The break-up of emission reduction up-to 31/12/2012 and 01/01/2013 onwards as verified during the course of verification are as below:

Item	Emission reductions up to 31 December 2012	Emission reductions from 1 January 2013 onwards
Emission reductions (t CO₂e)	0	23,081

Break up of emission reductions CPA wise:

8950-0002: 9,068 tCO₂e

8950-0003: 14,013 tCO₂e

CCIPL as a DOE is therefore pleased to issue a positive verification opinion expressed in the attached Certification statement.

SECTION F. Certification statement

Carbon Check (India) Private Ltd., the DOE, has performed the verification of the registered Programme of Activities, "PoA 8950:Guacamaya Small Scale Hydropower Programme of Activities" in Honduras, Nicaragua and Costa Rica (hereafter referred to as "Programme of Activities or PoA") for the CPAs "CPA 8950-002 Zinguizapa Small – Scale Hydropower Project" (Reference number: CPA 8950-002) and "Puringla Sazagua Small Scale Hydropower Project" (Reference number: CPA 8950-003) . The PoA supports the development of new small-scale hydropower projects in Honduras, Nicaragua and Costa Rica that supply electricity to the respective national grid. Each CPA under this PoA has a combined installed capacity of no more than 15 MW, the threshold for small-scale CDM projects.

The component project activities (8950-0002 and 8950-0003) of the Programme of Activities are designed to generate emission reductions by implementing new small-scale hydropower projects in Honduras that supply electricity to the respective national grid ENEE (Honduran National Electricity Company). The CME and CPA implementer are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the component project activity/ies. It is DOE's responsibility to express an independent verification statement on the reported GHG emission reductions from the component project/s. The DOE does not express any opinion on the selected baseline scenario or on the validated and registered PoA-DD/CPA-DD. The verification is carried out in-line with the VVS requirements.

The verification was performed to identify the compliance of the component project /ies with implementation and monitoring requirements, and to verify the actual amount of achieved emission reductions, through obtaining evidence and information on-site that included i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and ii) the collection of evidence supporting the reported data.

The verification is based on:

- PoA-DD Version 7, date 04/12/2012;
- CPA-DD/s /22/, /B04/ included in the registered PoA and its monitoring plan for the monitoring period 01/06/2015 – 30/04/2017.
- Approved monitoring methodology AMS- I.D., version 17- Grid connected renewable electricity generation;
- Validation report /B04/ for the PoA and the CPA/s;
- Monitoring report Version 04 dated 22/12/2017.

This statement covers verification period from 01/06/2015 – 30/04/2017.

The DOE had raised 02 clarification requests and 08 corrective action requests, all of which are closed.

The DOE considers necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan contained in the revised CPA-DDs /22/ are fairly stated.

The DOE, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 23,081 tCO₂ equivalent and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records. The break-up of emission reduction up-to 31/12/2012 and 01/01/2013 onwards as verified during the course of verification are as below:

Item	Emission reductions up to 31 December 2012	Emission reductions from 1 January 2013 onwards
Emission reductions (t CO ₂ e)	0	23,081

SECTION G. Verification findings - General

G.1. Compliance of the monitoring report with the monitoring report form

Means of verification	DR
Findings	--
Conclusion	The latest available version of the Monitoring report form, for CDM programme of activities is Version 01.0 /B03/. Verification team confirms that the latest available version of monitoring report /01-(d)/ has been used by the CME and the MR is in compliance of the monitoring report form with the relevant form and instructions therein /B03/.

This confirms the compliance of § 381 and 382 of VVS, Version 09.0 /B01-1/.

G.2. Remaining forward action requests from validation and/or previous verification

This is the first (1st) periodic verification of the PoA. There are no forward action requests from validation of the PoA and the CPA.

G.3. Specific-case CPA(s) considered for verification and covered in this report

Reference number of the specific-case CPA included in the PoA as of the end of this monitoring period	Is the specific-case CPA considered for this verification? (yes/no)	Version number of the registered PoA-DD to which the specific-case CPA complies with	Confirmation that a request for issuance including the specific-case CPA has been published for the previous monitoring period (Y/N)
8950-0001: San Alejo Hydroelectric Project	NO	Version: 7 Date: 04/12/2012	N
8950-0002: Zinguizapa Small – Scale Hydropower Project	YES	Version 04 dated 22/12/2017) being submitted as a part of this issuance request (Issuance track PRC).	Y
8950-0003: Puringla Sazagua Small Scale Hydropower Project	YES	Version 04 dated 22/12/2017) being submitted as a part of this issuance request (Issuance track PRC).	Y

SECTION H. Verification findings – Programme of activities**H.1. Compliance of the programme implementation with the registered programme design document**

Means of verification	DR, I
Findings	CAR-01, CAR-02, CAR-04, CAR-05 has been raised and satisfactorily closed.
Conclusion	As part of the site visit, the verification team was able to confirm that the implementation of Programme of Activity (PoA) and the Component Project Activities (CPAs) are in accordance with the project description contained in the revised CPA-DDs (CPA02 and CPA03) /22/. The verification took cognizance of § 244 and 245 of the CDM Project Standard/B01-2/ and § 383 (a) and § 384 of VVS/B01-1/. Please refer to Appendix 5 for further details.

H.2. Implementation and operation of the management system

Means of verification	DR, I
Findings	CL-01 has been raised and satisfactorily closed.
Conclusion	The PoA management system including the record-keeping system has been explained in section C of the registered PoA DD /B04/. During the course of verification, verification team based on review of provided documents and OSV interview/observation has assessed this management system. Verification team evaluated the management systems in place to implement the monitoring of the project activity. This included the roles and responsibilities, operational diagram, training and capacity development records, procedures for technical review and inclusion of CPAs, procedures to assert legal rights for the carbon credits and avoid double counting, records and documentation control process for each CPA under the PoA, Measures for continuous improvements of the PoA management system. As outlined in section D.7.2 of the CPA-DDs /22/, /B04/ and section G of MR,

	<p>monitoring has been done by the CPA implementer, by means of monitoring equipment, which has been done in supervision and periodic review by the CME, Anaconda Carbon S.A.</p> <p>In order to ensure completeness and accuracy of monitoring information, electronic database(s) is operated and maintained by the CPA implementer. This information is further maintained by the CME. The provision for the avoidance of double counting as outlined in the PoA management system. It was confirmed during the OSV and by checking the monitoring system that all the roles and responsibilities related to monitoring are fulfilled by representatives of CME and the CPA implementer. The responsibilities and authorities for monitoring and reporting are in accordance with the responsibilities and authorities stated in the monitoring plan /22/.</p> <p>The details about monitoring system have been provided in Section G of the monitoring report /01-d/. The data flow and management and reporting structure was also checked during the site visit.</p> <p>Diagrams of the roles and responsibilities data collection transfer and aggregation procedures, data storage and archiving for the monitoring system have been provided in section F of the MR /01-d/.</p> <p>The verification team confirms that the monitoring management system of the CDM PoA is in place; with the responsibilities properly identified and in place. This confirms the compliance of § 83 (a), § 390 (b) (iv) and § 390 (e) of VVS version 09.0.</p>
--	--

H.3. Post-registration changes

H.3.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

There are no temporary deviations for the reported monitoring period from the registered PoA-DD.

H.3.2. Corrections

There are no correction/s in the registered PoA DD.

H.3.3. Inclusion of a monitoring plan in a registered PoA-DD (including its generic CPA-DD(s))

Monitoring plan has not been included to the registered PoA-DD during the monitoring period.

H.3.4. Permanent changes to the monitoring plan as described in the registered PoA-DD, applied methodology, or applied standardized baseline

No permanent changes from the registered monitoring plan in the PoA-DD, monitoring methodology or any standardized baseline have either been approved by the Board during the monitoring period or being submitted with the request of issuance.

H.3.5. Changes to the programme design of the registered PoA-DD (including corresponding changes to project design of the generic CPA-DD(s)) and updates to the eligibility criteria for inclusion of specific-case CPAs in the PoA

No programme design changes from the registered PoA-DD (including corresponding changes to the project design of the generic CPA-DD(s)) have either been approved by the Board during the monitoring period or being submitted with the request of issuance.

H.3.6. Types of changes specific to afforestation and reforestation activities

Not applicable. The programme of activities is not an afforestation and reforestation activity.

SECTION I. Verification findings – Component project activity(ies)**I.1. Compliance of the CPA implementation with the included CPA design document**

Means of verification	DR, I
Findings	CAR-01, CAR-02, CAR-04, CAR-05 has been raised and satisfactorily closed.
Conclusion	<p>Carbon Check's verification team considers the CPA description of the project contained in the revised CPA-DDs /22/ to be complete and accurate. The CPA-DDs /22/ complies with the relevant methodology, tools, forms and guidance at the time of CPA-DDs' submission for registration/inclusion. The CPAs have been implemented in accordance with the revised CPA-DDs /22/. During the current monitoring period, the CPAs 8950-0002 and 8950-0003 were only implemented and the CPA 8950-0001 was not implemented. CPA 8950-0001 is not included in this monitoring report. Further status of implementation and starting date of operation for each CPA has been provided in in Appendix 5.</p> <p>In summary, the monitoring period is reasonable and the operation of the CPAs is in accordance with the revised CPA-DDs /22/. The verification team took cognizance of § 239 to § 242 of CDM Project Standard and § 373 b (i), § 383, § 384 and § 385 of VVS version 09.</p>

I.2. Post-registration changes**I.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline**

There are no temporary deviations for the reported monitoring period from the registered CPA-DD.

I.2.2. Corrections

Issuance track PRC is being submitted as a part of this PRC. Please refer to the revised CPA DD /22/ (being submitted a part of this PRC) along with the PRC validation opinion.

I.2.3. Changes to the start date of the crediting period

Before start of the verification, CPA implementer has shifted the crediting period of CPA 001 from 01/06/2014 to 01/06/2015.

I.2.4. Inclusion of a monitoring plan to an included CPA-DD

Monitoring plan has not been included to the registered CPA-DD during the monitoring period.

I.2.5. Permanent changes to the monitoring plan as described in the included CPA-DD, applied methodology, or applied standardized baseline

Issuance track PRC is being submitted as a part of this PRC. Please refer to the revised CPA DD/22/ (being submitted a part of this PRC) along with the PRC validation opinion.

I.2.6. Changes to the programme design of the included CPA-DD

No programme design changes from the included CPA-DD are applicable to the reported monitoring period.

I.2.7. Types of changes specific to afforestation and reforestation component project activities

Not applicable. The programme of activities is not a afforestation and reforestation activity.

I.3. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline

Means of verification	DR
Findings	-
Conclusion	<p>The verification team is able to confirm that the monitoring plan contained in the revised CPA-DDs /22/ is in accordance with the approved methodology applied by the project activity, i.e. AMS-I.D, Version 17 /B02/.</p> <p>The monitoring plan /22/ is in accordance with the approved methodology, AMS-I.D, Version 17 /B02/, applied by the component project activity and as provided in the CPA-DDs /22/.</p> <p>The verification took cognizance of § 386 to § 388 of VVS Version 09.0 /B01-1/.</p>

I.4. Compliance of monitoring activities with the registered monitoring plan

I.4.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	DR
Findings	-
Conclusion	<p>Verification team confirms that the Data and parameters fixed ex ante are in compliance with the revised CPA-DDs /22/ and monitoring plan /22/.</p> <p>The verification took cognizance of § 389 of VVS, Version 09.0 /B01-1/.</p>

I.4.2. Data and parameters monitored

Means of verification	DR,I
Findings	CAR-02, CAR-03, CAR-05, CAR-06 has been raised and satisfactorily closed.
Conclusion	<p>The verification team has assessed the data and parameters monitored during the monitoring period in accordance with § 247, 248 and 249 of the CDM Project Standard version 09.0 /B01-2/. A complete assessment of each of the monitored parameters has been provided in Appendix 8 of the verification report.</p> <p>In summary, the verification team confirms that all the ex-ante and ex-post parameters are monitored in accordance with the revised monitoring plan /22/ and applied methodology. The verification took cognizance of § 389 to § 400 of the VVS version 09 /B01-1/.</p>

I.4.3. Implementation of sampling plan

Means of verification	N/A
Findings	N/A
Conclusion	N/A

I.5. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	DR,I
Findings	CAR-03, CAR-06 has been raised and satisfactorily closed.
Conclusion	QA/QC procedure has been followed as per the provision of the revised CPA DD /22/. Please refer to the assessment in appendix 7 of this report.

I.6. Assessment of data and calculation of emission reductions or net removals

I.6.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	DR,I
Findings	CL-02, CAR-07 has been raised and satisfactorily closed.
Conclusion	<p>Baseline emissions at CPA level are calculated as Methodology AMS-I.D, Version 17, which multiplies electrical energy baseline $EG_{BL,y}$ (expressed in MWh of electricity produced by the CPA) by the grid emission factor.</p> $BE_y = EG_{BL,y} * EF_{CO2,grid,y}$

	<p>Where:</p> <p>BE_y Baseline Emission in year y (tCO₂)</p> <p>$EG_{BL,y}$ Quantity of net electricity supplied to the grid as a result of the implementation of the Project Activity(ies) under the CPA in year y (MWh)</p> <p>$EF_{CO_2,grid,y}$ CO₂ emission factor of the grid in year y (tCO₂/MWh)</p> <p>The calculation of the grid emission factor is based on official data available at the time of the PoA Registration. The value of the grid emission factor is 0.6223 tCO₂/MWh, which is fixed ex-ante for the entire crediting period of the CPAs. The detailed grid emission factor calculation based on data available prior to publication of the PoA DD, is provided in section E.6.1 of the PoA DD. Hence, annual baseline emissions are calculated by multiplication of the annual quantity of net electricity supplied to the grid (as calculated above) with the grid emission factor.</p> <p>8950-0002:</p> $ \begin{aligned} BE_y &= EG_{BL,y} * EF_{CO_2,grid,y} \\ &= 14,572.35 \text{ MWh/y} * 0.6223 \text{ tCO}_2\text{e/MWh} \\ &= 9,068 \text{ tCO}_2\text{e} \end{aligned} $ <p>8950-0003:</p> $ \begin{aligned} BE_y &= EG_{BL,y} * EF_{CO_2,grid,y} \\ &= 22,519.56 \text{ MWh/y} * 0.6223 \text{ tCO}_2\text{e/MWh} \\ &= 14,013 \text{ tCO}_2\text{e} \end{aligned} $ <p>Verification team further confirms that no other emission source (which is not covered by the revised CPA DD /22/ and the applied methodology) were found at both the CPA sites, as verified during the on-site inspection. Furthermore, the calculation of power density are not applicable for both the CPAs as it is run of river project and does not involve construction of any reservoir, the same was verified during the on-site inspection.</p> <p>In summary, the verification team confirms that all the ex-ante and ex-post parameters are monitored in accordance with the revised monitoring plan /22/ and applied methodology. The verification took cognizance of § 401, §402 & § 403 of the VVS version 09 /B01-1/.</p>
--	--

I.6.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	N/A
Findings	N/A
Conclusion	N/A

I.6.3. Calculation of leakage GHG emissions

Means of verification	N/A
Findings	N/A
Conclusion	N/A

I.6.4. Summary of calculation of GHG emission reductions or net GHG removals by sinks

Means of verification	DR,I
Findings	CL-02, CAR-07 has been raised and satisfactorily closed.
Conclusion	Please refer to the table below.

Specific-case CPA reference number	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	GHG emission reductions or net GHG removals by sinks (tCO ₂ e)		
				Results achieved in the period up to 31 December 2012	Results achieved in the period from 1 January 2013 onwards	Results achieved in the entire monitoring period
8950-0002	9,068	0	0	0	9,068	9,068
8950-0003	14,013	0	0	0	14,013	14,013
Total	23,081	0	0	0	23,081	23,081

I.6.5. Comparison of actual GHG emission reductions or net GHG removals by sinks with estimates in included specific-case CPA

Means of verification	DR
Findings	-
Conclusion	Comparison of the actual GHG emission reductions with the estimates in the revised specific CPAs /22/ are given in the below table. The verification team took cognizance of § 401 of VVS Version 09 /B01/.

Specific-case CPA reference number	Value estimated in ex ante calculation in the included specific-case CPA-DD(s)	Actual values achieved by the specific-case CPA(s) during this monitoring period
8950-0002	9,578	9,068
8950-0003	24,307	14,013
Total	33,885	23,081

I.6.6. Remarks on difference from estimated value in registered PDD

Means of verification	DR
Findings	-
Conclusion	Verification team confirms that actual emission reduction is lower than the estimate of the revised CPA-DDs /22/ for the current monitoring period.

Appendix 1. Abbreviations

Abbreviations	Full texts
BAU	Business As Usual
CA	Corrective Action / Clarification Action
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CER	Certified Emission Reduction
CL	Clarification Request
CME	Co-ordinating and Managing entity
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
DR	Document review
DOE	Designated Operational Entities
DVR	Draft Verification Report
EB	CDM Executive Board
EF	Emission Factor
EI	External individual
FA	Final Approval
FAR	Forward Action Request
FVR	Final verification Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
I	Interview
IPCC	Intergovernmental Panel on Climate Change
IR	Internal resource
MWh	Mega Watt Hour
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PP	Project Participant
OSV	On Site Visit
QC/QA	Quality control/Quality assurance
RMP	Revised Monitoring Plan
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers



Carbon Check (India) Private Ltd.

Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input checked="" type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert ¹	<input checked="" type="checkbox"/>

In the following Technical Areas:

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

Mr. Amit Anand
CEO

Date of Approval
24/12/2017

Valid Till
23/12/2018

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2017	Annual Revision
24/12/2017	Annual Revision

¹India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED

Registered in India: U74930DL2012PTC232495

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

Corporate off: G 49 & 50, 3rd Floor, Sector - 3, NOIDA (Uttar Pradesh) - 201301

Tel: +91 120 4373114 | URL: www.carboncheck.co.in

e-mail: info@carboncheck.co.in



Carbon Check (India) Private Ltd.

Anubhav Dimri

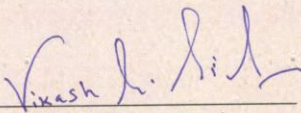
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 06.0):

For following functions:

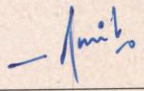
Validator	<input checked="" type="checkbox"/>	Team Leader	<input checked="" type="checkbox"/>	Technical reviewer	<input checked="" type="checkbox"/>
Verifier	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>	Local Expert ¹	<input checked="" type="checkbox"/>

In the following Technical Areas:

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


 Mr. Vikash Kumar Singh
 Compliance Officer

Date of Approval
 24/12/2017


 Mr. Amit Anand
 CEO

Valid Till
 23/12/2018

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2017	Annual Revision
24/12/2017	Annual Revision

¹India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED

Registered in India: U74930DL2012PTC232495

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

Corporate off: G 49 & 50, 3rd Floor, Sector - 3, NOIDA (Uttar Pradesh) - 201301

Tel: +91 120 4373114 | URL: www.carboncheck.co.in

e-mail: info@carboncheck.co.in

Appendix 3. Documents reviewed or reference

No.	Author	Title	References to the document	Provider
/01/	CME	a) Monitoring Report b) Monitoring Report c) Monitoring Report d) Final Monitoring Report	a) Version 01, dated 12/06/2017 b) Version 02, dated 12/06/2017 c) Version 03, dated 24/10/2017 d) Version 04, dated 22/12/2017	CME
/02/	CME	a) Emission reduction calculation spread sheet corresponding to /1-a/ b) Emission reduction calculation spread sheet corresponding to /1-b/ c) Emission reduction calculation spread sheet corresponding to /1-c/ d) Emission reduction calculation spread sheet corresponding to /1-d/	-- -- -- --	CME
Documents pertaining to CPA 8950-0002				
/03/	ENEE	Evidence for the commissioning of the hydro project on 01 st April 2015	Cert. dated 13/12/2016	CME
/04/	G A Energy	1. FICHA TECNICA (data sheet)-evidence for the technical specifications of the project equipment 2. Evidence for the technical specifications of the project equipment – photo-graph of the project equipment	September 2014	CME
/05/	ENEE	Power Purchase Agreement Signed between ENEE & G A Energy	Contract Number:050-2010 dated 23/04/2010	CME
/06/	ENEE	Month report- “ELECTRICAL ENERGY RECORDS IN THE ZINGUIZAPA HYDROELECTRIC POWER PLANT” for each month of the monitoring period	different dates & reference number for each month	CME
/07/	G A Energy	Copies of invoices (BILL OF SUPPLY OF ENERGY) for cross check of the energy meter readings covering the monitoring period	Different dates & reference number for each month	CME
/08/	ENEE	Meter installation certificate of: <ul style="list-style-type: none">▪ Meter Serial Number MW-1406A496-01 (pre-calibrated on June 2014) and installed on 26/11/2014 (Valid upto	REF NO: UAC-211-05/15 dated 21/05/2015	CME

		25/11/2017) ▪ Meter Serial Number MW-1409A770-01 (pre-calibrated on September 2014) and installed on 26/11/2014 (Valid upto 25/11/2017)		
/09/	CME	a. Layout plan of electricity transmission line b. Diagram showing the electricity generation, transmission, evacuation and metering system. c. Snap shot of PLC depicting different component (operational parameters) of the project d. Photographs of meters	--	CME
/10/	Different entities	Statutory clearances: a. Contract for the use of national waters for the generation of electricity from the hydroelectric project b. Environmental License c. ICF PERMISSIONS d. Municipal Permits	--	CME
/11/	CME	Organogram of the CPA Implementer	--	CME
/12/	Carbon ingenieria consultores en ingenieria	Feasibility Study Report	Ref No: 1101C01-S-003-DOC dated May 2011	
Documents pertaining to CPA 8950-0003				
/13/	ENEE	Evidence for the commissioning of the hydro project on 01 st April 2015	Cert. dated 03/06/2015	CME
/14/	OFICINA TÉCNICA DE ESTUDIOS Y CONTROL DE OBRAS, S.A.	1. Evidence for the technical specifications of the project equipment – photo-graph of the project equipment 2. STUDY OF FEASIBILITY AND FINAL DESIGN FOR THE DEVELOPMENT OF THE PURINGLA AND SAZAGUA HYDROELECTRIC POWER PLANT OF THE REPUBLIC OF HONDURAS	November 2010	CME
/15/	ENEE& CECA	Power Purchase Agreement Signed between ENEE & CECA	--	CME
/16/	ENEE	Month report- "ELECTRICAL ENERGY RECORDS IN THE ZINGUIZAPA HYDROELECTRIC POWER PLANT" for each month of the monitoring period	--	CME
/17/	CECA	Copies of invoices (BILL OF SUPPLY OF ENERGY) for cross	--	CME

		check of the energy meter readings covering the monitoring period		
/18/	ENEE	<p>Meter installation certificate of</p> <ul style="list-style-type: none"> ▪ Meter Serial Number MW-1409A771-01 (pre-calibrated on September 2014) and installed on:12/11/2014 (Valid upto 11/11/2017) ▪ Meter Serial Number MW-1206A274-01 (pre-calibrated on June 2012) and installed on:15/11/2014 (Valid upto 14/11/2017) 	Reference number: UAC-013-01/15 dated 08/01/2015	CME
/19/	CECA	<p>a. Diagram indicating location of power plant and its components.</p> <p>b. Line diagram showing the electricity generation, transmission, evacuation and metering system.</p> <p>c. Photographs of meters</p>	--	CME
/20/	Different entities	<p>Statutory clearances:</p> <p>a. Water contract</p> <p>b. Operation Contract</p> <p>c. Environmental Licence</p>	--	CME
/21/	EQUIPOS INDUSTRIALES SA	Record of purchase of meter installed at the project site	Dated 12/11/2014 and 15/11/2014	CME
Revised CPA DD				
/22/	CME	CPA DDs for 8950-0002, 8950-0003 Version 4 date 22/12/2017, Version 4 date 22/12/2017 respectively.	Version 4 dated 22/12/2017	CME
/23/	Schneider Electric	Electrical Network management page 128 of 262 provides technical specification of ION 8650 series. This also specifies accuracy class as 0.1	--	www.schneider-electric.com
/B01/	UNFCCC	<p>1. Validation and Verification Standard Version 09.0</p> <p>2. Project Standard Version 09.0</p> <p>3. Project Cycle Procedure Version 09.0</p>	http://cdm.unfccc.int/	Others
/B02/	UNFCCC	Applied baseline and monitoring methodology, AMS-I.D, Version 17	http://cdm.unfccc.int/	Others
/B03/	UNFCCC	Instructions for filling out the monitoring report form for CDM programme of activities Version 01.0	http://cdm.unfccc.int/	Others
/B04/	UNFCCC	Registered PoA-DD (Version 7, date 04/12/2012), the registered CPA DDs for 8950-0002, 8950-0003 (Version 3.4 date 09/05/2016, Version 3.1 dated 04/04/2016 respectively) and	http://cdm.unfccc.int/	Others

CDM-PoA-VCR-FORM

		corresponding validation reports.		
/B05/	Web sites	Websites: http://cdm.unfccc.int/ http://www.ipcc-nggip.iges.or.jp/	==	Others
/B06/	UNFCCC	SSC_530 Clarification on the maximum output capacity for a project activity applying AMS-I.D	http://cdm.unfccc.int/	Others

Appendix 4. Clarification requests, corrective action requests and forward action requests

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

FAR ID	xx	Section no.	Date: DD/MM/YYYY
Description of FAR			
N/A			
CME response			Date: DD/MM/YYYY
N/A			
Documentation provided by the CME			
N/A			
DOE assessment			Date: DD/MM/YYYY
N/A			

Table 2. CL from this verification

CL ID	01	Section no.	H.2	Date: 18/08/2017
Description of CL				
As per paragraph 246 of PS version 09.0, the monitoring report shall contain a description of the monitoring systems, quality assurance and/or quality control system employed by the project activity, data collection procedures (information flow including data generation, aggregation, recording, calculation and reporting), organizational structure, roles and responsibilities of personnel, emergency procedures for the monitoring system, and/or line diagrams showing all relevant monitoring points).				
The monitoring report is not in compliance with the above cited paragraph of PS, as the monitoring report lays down the requirements by specifying <u>what 'will be' done</u> . It does not describe how the <u>monitoring system has been put in place and how monitoring was carried out, as is illustrated by the following extracts from the monitoring report:</u>				
Extract 1: <i>Device calibration <u>will be</u> carried out periodically in accordance with manufacturer specifications where available. The calibration frequency <u>will comply</u> with applicable national regulations and requirements and will not exceed 3 years, as per CDM standards. Meter testing <u>will be</u> carried every 6 months as per the provisions of the PPA, or in case one of the meters is not working properly.</i>				
Extract 2: <i>The meter readings <u>will be</u> cross-checked with available internal and/or external information such as electricity invoices.</i>				
Extract 3: Data Collection: The electricity supplied to the grid by the project activity is measured by calibrated electricity meters located in the substation, the point of connection to the grid. Any electricity import <u>will be</u> discounted to calculate the net electricity supplied to the grid. The parameter is monitored at the project site and crosschecked with the invoices of electricity sold. Data is monitored continuously, measured hourly and recorded monthly as required by the applicable methodology.				
Extract 4: Data Calibration: All measurements are conducted with calibrated measurement equipment (electricity meters shall have a class of 0.15). The calibration and testing regime is defined by local authorities in the PPA, but <u>will be</u> performed at least every 3 years. The equipment used to monitor the electricity is provided by the project owner, and evidences provided to the CME.				
Extract 5: Data Report: Data recorded (control value) and the invoices (main value) are consolidated on a monthly basis and are subject to quality control. If there are discrepancies in the data, the source of the variation <u>will be</u> identified, whatever is the main measured value or the control value. The data is compiled monthly in a report and verified by the Project Developer's Head Office.				

Extract 6: Data Archives: The data recording, the data report and the invoices <u>will be archived</u> , together with this monitoring plan. All data collected as part of monitoring should be archived electronically and be kept at least for 2 years after the end of the last crediting period.	
CME response	Date: 20/09/2017
<i>The tense in the MR of the PoA has been modified to reflect actions that have taken place for this monitoring period as opposed to monitoring activities that are planned for the future.</i>	
Documentation provided by the CME	
<i>Updated MR.</i>	
DOE assessment	Date: 27/09/2017
Verification team reviewed the revised Monitoring report (version 02 dated 19/09/2017) and noted that changes has not been done in several sections of the monitoring report. CL is open.	
CME response	Date: 06/10/2017
All sections of the revised MR now has the monitoring parameter descriptions in present tense.	
Documentation provided by the CME	
Revised Monitoring report	
DOE assessment	Date: 14/11/2017
Required correction has been made by the CME in the revised Monitoring report, checked and confirmed by the verification team. CL is closed.	

CL ID	02	Section no.	I.6.1, I.6.4	Date: 18/08/2017
Description of CL				
The crediting period of CPA 002 and CPA 003 starts from 28/06/2016. Review of Emission reduction spread sheet reveals that emission reduction calculation has taken electricity generation data from July 2016. PP is requested to clarify the same while doing so CME is requested to provide commissioning certificate (of CPA 0002) and power purchase agreement of both the CPAs.				
CME response				Date: 20/09/2017
<i>The data from the 1st of July has been taken into account given that the billing cycles are from the first of each month.</i>				
Documentation provided by the CME				
<i>Commissioning certificates and PPAs for both projects.</i>				
DOE assessment				Date: 27/09/2017
As clarified by the CME, in order to match the billing cycle, electricity generation from 1 st of July has been considered and thus CME is not claiming credits from the electricity generation from 28/06/2016 to 30/06/2016. This is a conservative approach and thus acceptable to the verification team. CL is closed.				

Table 3. CAR from this verification

CAR: CPA0002 Zinguizapa Small Scale Hydropower Project

CAR ID	01	Section no.	H.1,I.1	Date: 18/08/2017
Description of CAR				
As per section A.3 and A.5 of the CPA DD, the project has a installed capacity of 3.276 MW generated from one Pelton Trubine and the same was verified during the OSV inspection. The capacity of generator however was not provided in the CPA DD. The capacity of generator as verified during the OSV is 3222 kVA. PP is requested to substantiate how the CPAs were implemented as per the registered specific CPA-DD while doing so please refer to Small Scale Working group clarification (SSC_530 Clarification on the maximum output capacity for a project activity applying AMS-I.D) and substantiate further how the installed capacity can be considered as 3.276 MW.				
CME response				Date : 20/09/2017

The information regarding the generator installed capacity has been included in the new CPA DD and in the MR. Data regarding this installed capacity is taken from the plaques of the generators and conforms with CDM requirements as stipulated in the SSC_530 Clarification on the maximum output capacity for a project activity applying AMS-I.D.

The installed capacity of the turbines can be considered 3.276 MW given that this is the information displayed on the plaque of the turbine.

Given that the difference in the size of the installed capacity of the turbine and the generator is minimal and well within the parameters for small-scale and microscale, this correction does not affect eligibility under the methodology nor does it affect additionality. Therefore, we strongly urge that this CPA correction be considered resolved in the issuance track due to following:

Corrections as per Project Standard Version 09.0 (Appendix 1) :

- Information regarding installed capacity of generators has been included.

Documentation provided by the CME

Updated MR and CPA DD. Picture from the generator plaque that states its installed capacity in kVA and conversion factor to KW.

DOE assessment

Date: 27/09/2017

Verification team reviewed the revised Monitoring report (version 02 dated 19/09/2017) and noted that changes made in the revised CPA DD is incomplete (and also incorrect) due to the following reasons:

- The statement “The turbine installed capacity would be of 3.276 MW generated from one Pelton Trubine that will produce an estimated 18,480 Mwh annually.” Is misleading as the generator can generate the electricity and not the turbine alone.
- It is unclear to the verification team how the revised installed capacity (i.e based on generators capacity of 2.899) yields the same electricity as was previously provided in the CPA DD (based on 3.276 MW installed capacity). While doing so please also note that, as per the CPA DD, the electricity was derived by using a PLF of 70% and deduction due to losses whereas, the ER spread sheet at the time of project registration mention the source of the electricity value as FSR of the project.
- In the section B.4.3 capacity of turbine has been mentioned as installed capacity and taken for the ER estimation of the project, which is not as per the requirements of SSC_530 Clarification on the maximum output capacity for a project activity applying AMS-I.D.

CAR is open.

CME response

Date: 06/10/2017

- The text of the CPA DD has been changed to read the following: “The turbine installed capacity is 3.276 MW with one Pelton Turbine that will produce an estimated 18,480 MWh annually.”
- Estimated generation of the previous version of the CPA DD was based on the FSR. Mention of the PLF from the section A.3.
- Generator installed capacity has been listed in section B.4.3.

Documentation provided by the CME

Revised CPA DD

DOE assessment

Date: 14/11/2017

Required correction has been made by the CME in the revised CPA DD (submitted with the issuance track PRC request), checked and confirmed by the verification team. Please refer to the PRC validation report for details of assessment on changes.

CL is closed.

CAR ID	02	Section no.	H.1,I.4.2, I.1	Date:	18/08/2017
Description of CAR					
As per section D.7.2 of the CPA DD, “The electricity supplied to the grid by the project activity will be measured by calibrated electricity meters <u>located in the substation.</u> ”					
Verification team however noted that electricity meters were not located at the <u>substation.</u> PP is requested to substantiate how the CPAs were implemented as per the registered specific CPA-DD considering the actual location of the electricity meters.					
CME response					Date: 20/09/2017

The CPA DD and MR has been updated to reflect the location of the meters for the project. The meters are located in the village of El Volcan, as described in the CPA DD, and also are the interconnection point to the electrical grid, but are not located in the substation.

This correction does not affect eligibility under the methodology nor can it be considered a substantial change for the monitoring plan given that it does not affect the accuracy of the measurements. Therefore, we strongly urge that this CPA DD revision to be considered resolved in the issuance track due to following:

Revision of Monitoring Plan as per Project Standard Version 09 (Appendix 1)

- Details regarding location of meters have been corrected*
- Information regarding the frequency of the calibration stipulated in the PPA has been removed. *

*Paragraph 5, section a, c and e is applicable as changes in these matters were beyond the control of the project participant and the CME.

Documentation provided by the CME

Updated MR and CPA DD

DOE assessment

Date: 27/09/2017

Verification team reviewed the revised Monitoring report (version 02 dated 19/09/2017) and noted that changes made in the revised CPA DD is incorrect due to the following reasons:

- The statement in section B.5.2 of the CPA DD "The electricitywhich are located at the project site, in the substation, or in the point of connection to the grid." is misleading as this does provide a correct information on the location of project meters. This also contradicts the meter location as verified during the OSV of the DOE.

CAR is open.

CME response

Date: 06/10/2017

- Section B.5.2. Now reads: "The electricity supplied to the grid by the project activity is measured by calibrated electricity meters which are located at the point of connection to the grid, in the community of "El Volcan", Comayagua."

Documentation provided by the CME

Revised CPA DD

DOE assessment

Date: 14/11/2017

Required correction has been made by the CME in the revised CPA DDs (submitted with the issuance track PRC), checked and confirmed by the verification team. Please refer to the PRC validation report for details of assessment on changes.

CAR is closed.

CAR ID	03	Section no.	I.4.2, I.5	Date:	18/08/2017
Description of CAR					
Under section G.2 for the monitoring parameter "EGy", the details of calibration (dated 25/11/2017) appears to be incorrect as this is a future date. Furthermore, the frequency of calibration and testing is inconsistent between the CPA DD and monitoring report. The Monitoring report under section G.2 states a 3 years calibration frequency (and no information on testing), where as Section D.7.1 of the CPA DD specifies the following:					
<i>"Device calibration will be carried out periodically in accordance with manufacturer specifications where available. The calibration frequency will comply with applicable national regulations and requirements and will not exceed 3 years, as per CDM standards. <u>Meter testing will be carried every 6 months as per the provisions of the PPA, or in case one of the meters is not working properly.</u>"</i>					
PP is requested to further substantiate the calibration frequency while doing so please note the underlined text above and provide documentation of the actual calibration and testing to the verification team for review.					
CME response					Date:
					20/09/2017

The frequency of the calibration has been corrected in the CPA DD and the MR to reflect the national standards of Honduras, which require that the meters be calibrated in case there is a discrepancy of more than 1% in the readings at any given time. The interval between calibrations not to exceed 3 years, as per CDM requirements.

Given that the meters have been calibrated less than three years ago, are not displaying inconsistencies and are meeting the national requirements, this correction in the calibration frequency can be considered minor and does not affect the ability to accurately monitor the data from the the project meter nor the utility meter. We, therefore, strongly urge that this CPA DD revision to be considered to be resolved in the issuance track since the changes are as below:

Revision of Monitoring Plan as per Project Standard Version 09 (Appendix 1)

- Details regarding location of meters have been corrected*
- Information regarding the frequency of the calibration stipulated in the PPA has been removed.*

*Paragraph 5, section a, c and e is applicable as changes in these matters were beyond the control of the project participant and the CME.

Documentation provided by the CME

Project PPAs, copies of purchase invoices and installation details of meters.

DOE assessment

Date: 27/09/2017

In the revised monitoring (version 02), the date of meter of installation is not matching with the provided evidence. Also, it is unclear how a meter installed on 25/11/2014 would have a validity until 25/11/2014, given the fact the 3 years period completes at 24/11/2017. Date of meter installation is required to be transparently provided in the monitoring report.

CAR is open.

CME response

Date: 06/10/2017

Meter installation date on the MR is now listed as 26/11/2017, as evidenced with the document named "Zinguizapa Meter Installation Certificate". Validity of the calibration is listed as 25/11/2017, which is three years after installation.

Documentation provided by the CME

Revised Monitoring report

DOE assessment

Date: 14/11/2017

CAR is closed based on the review of the revised Monitoring Report and the CPA DD (issuance track PRC being submitted along with the RFI). Please refer to the PRC validation report for details of assessment on changes.

CAR is closed.

CAR- CPA0003 Puringla Sazagua Small Scale Hydropower Project

CAR ID	04	Section no.	H.1, I.1	Date: 18/08/2017
Description of CAR				
As per section A.3 and A.5 of the CPA DD, the CPA has a installed capacity of 9.6 MW.				
The verification team during the OSV however verified that the CPA involves installation of three (03) Francis turbine (of individual capacity 3383 kW) and generator (of 3900 kVA).				
PP is requested to substantiate how the CPAs were implemented as per the specific CPA-DD considering the above discrepancy in installed capacity (actual implementation Vs. capacity as referred in the CPA DD), while doing so please also refer to Small Scale Working group clarification (SSC_530 Clarification on the maximum output capacity for a project activity applying AMS-I.D).				
CME response				Date: 20/09/2017

The information regarding the generator installed capacity has been included in the new CPA DD and in the MR. Data regarding this installed capacity is taken from the plaques of the generators and conforms with CDM requirements as stipulated in the SSC_530 Clarification on the maximum output capacity for a project activity applying AMS-I.D.

The installed capacity of the turbines are 10.149 MW (3.383 * 3).

Given that the difference in the size of the installed capacity of the turbine and the generator is minimal and well within the parameters for small-scale (less than 15MW), this correction does not affect eligibility under the methodology nor does it affect additionality. Therefore, we strongly urge that this CPA DD correction be considered resolved in the issuance track due to following:

Corrections as per Project Standard Version 09.0 (Appendix 1) :

- Information regarding installed capacity of generators has been included.

Documentation provided by the CME

Updated MR and CPA DD. Picture from the generator plaque that states its installed capacity in kVA and conversion factor to KW.

DOE assessment

Date: 27/09/2017

Verification team reviewed the revised Monitoring report (version 02) and noted that changes made in the revised CPA DD as incomplete (and also incorrect) due to the following reasons:

- It is unclear to the verification team how the revised installed capacity (i.e. based on generators capacity of 3.315 individual capacity totaling to 9.45) yields the same electricity generation as was previously provided in the CPA DD (based on 3.383 MW individual turbine capacity totaling to 10.149 MW).
- In the section B.4.3, the capacity of turbine has been mentioned as installed capacity and taken for the ER estimation of the project, which is not as per the requirements of SSC_530 Clarification on the maximum output capacity for a project activity applying AMS-I.D.

CL is open.

CME response

Date: 06/10/2017

- Electrical generation estimates are based on FSR values.
- The generator installed capacity is now listed in section B.4.3. of the CPA DD

Documentation provided by the CME

Revised CPA DD

DOE assessment

Date: 14/11/2017

Required correction has been made by the CME in the revised CPA-DD (submitted with the issuance track PRC), checked and confirmed by the verification team.

CAR is closed.

CAR ID	05	Section no.	H.1, I.4.2, I.1	Date:	18/08/2017
Description of CAR					
As per section D.7.2 of the CPA DD, "The electricity supplied to the grid by the project activity will be measured by calibrated electricity meters <u>located in the substation.</u> "					
Verification team however noted that electricity meters were not located at the <u>substation</u> (rather it was <u>located at hydro power site</u>). PP is requested to substantiate how the CPAs were implemented as per the registered specific CPA-DD considering the actual location of the electricity meters.					
CME response					Date: 20/09/2017

<p>The CPA DD and MR has been updated to reflect the location of the meters for the project. The meters are located next to the powerhouse and to the substation which are both located at the hydropower site.</p> <p>This correction does not affect eligibility under the methodology nor can it be considered a substantial change for the monitoring plan given that it does not affect the accuracy of the measurements. We, therefore, strongly urge that this CPA DD revision to be considered to be resolved in the issuance track since the changes are as below:</p> <p>Revision of Monitoring Plan as per Project Standard Version 09 (Appendix 1)</p> <ul style="list-style-type: none"> • Details regarding location of meters have been corrected* • Information regarding the frequency of the calibration stipulated in the PPA has been removed.* <p>*Paragraph 5, section a, c and e is applicable as changes in these matters were beyond the control of the project participant and the CME.</p>	
Documentation provided by the CME	
Updated MR and CPA DD	
DOE assessment	Date: 27/09/2017
<p>Verification team reviewed the revised Monitoring report (version 02) and noted that changes made in the revised CPA DD is incorrect due to the following reasons:</p> <ul style="list-style-type: none"> ○ The statement in section B.5.2 of the CPA DD "The electricitylocated at the <u>project site, in the substation, or in the point of connection</u> to the grid." Is misleading as this does provide a correct information on the location of project meters. This also contradicts the meter location as verified during the OSV of the DOE. <p>CAR is open.</p>	
CME response	Date: 06/10/2017
<p>This section of the CPA DD now reads: "The electricity supplied to the grid by the project activity will be measured by calibrated electricity meters which are located in the point of connection to the grid, which in this case is outside the powerhouse, next to the substation, which is located in the same building as the powerhouse."</p>	
Documentation provided by the CME	
revised CPA DD	
DOE assessment	Date: 14/11/2017
<p>Required correction has been made by the CME in the revised CPA DD (submitted with the issuance track PRC), checked and confirmed by the verification team.</p> <p>CAR is closed.</p>	

CAR ID	06	Section no.	I.4.2, I.5	Date: 18/08/2017
Description of CAR				
<p>Under section G.2 for the monitoring parameter "EGy", PP is requested to provide the details of calibration. Furthermore, the frequency of calibration and testing is inconsistent between the CPA DD and monitoring report. The Monitoring report under section G.2 states a 3 years calibration frequency (and no information on testing), where as Section D.7.1 of the CPA DD specifies the following;</p> <p><i>"Device calibration will be carried out periodically in accordance with manufacturer specifications where available. The calibration frequency will comply with applicable national regulations and requirements and will not exceed 3 years, as per CDM standards. <u>Meter testing will be carried every 6 months as per the provisions of the PPA, or in case one of the meters is not working properly.</u>"</i></p> <p>PP is requested to further substantiate the calibration frequency while doing so please note the underlined text above and provide documentation of the actual calibration and testing to the verification team for review.</p>				
CME response				Date: 20/09/2017

The frequency of the calibration has been corrected in the CPA DD and the MR to reflect the national standards of Honduras, which require that the meters be calibrated in case there is a discrepancy of more than 1% in the readings at any given time. The interval between calibrations not to exceed 3 years, as per CDM requirements.

Given that the meters have been calibrated less than three years ago, are not displaying inconsistencies and are meeting the national requirements, this correction in the calibration frequency can be considered minor and does not affect the ability to accurately monitor the data from the project meter nor the utility meter. We, therefore, strongly urge that this CPA DD revision to be considered to be resolved in the issuance track since the changes are as below:

Revision of Monitoring Plan as per Project Standard Version 09 (Appendix 1)

- Details regarding location of meters have been corrected*
- Information regarding the frequency of the calibration stipulated in the PPA has been removed.*

*Paragraph 5, section a, c and e is applicable as changes in these matters were beyond the control of the project participant and the CME.

Documentation provided by the CME

Project PPAs, copies of purchase invoices and installation details of meters.

DOE assessment

Date: 27/09/2017

Verification team reviewed the revised Monitoring report (version 02) and noted that changes made in the revised CPA DD is incorrect and not matching with response provided, please refer below the specific observation:

- As per the response above, "The frequency of the calibration has been corrected in the CPA DD and the MR to reflect the national standards of Honduras, which require that the meters be calibrated in case there is a discrepancy of more than 1% in the readings at any given time... The section B.5.1 of the revised CPA DD however provides a generic statement that « a calibration is to take place in case one of the meters is not functioning properly ».

In the revised monitoring (version 02), the date meter of installation is not provided. Date of meter installation and last calibration is required to be transparently provided in the monitoring report.

CAR is open.

CME response

Date: 06/10/2017

- Section B.5.1. Now reads: "Device calibration is carried out periodically in accordance with manufacturer specifications where available. A calibration is to take place in case one of the meters is not functioning properly, which is deemed the case if there is more than a 1% difference in readings between the project meter and the utility meter. Calibration interval will not exceed 3 years, as per CDM standards. "
- New version of the PoA MR (v4) now lists the installation date of the meters of the project activity for CPA 003. Evidence of purchase of new meters has been provided and the date of installation can be considered as date when initial calibration took place, since these were brand new meters at the time of installation.

Documentation provided by the CME

revised CPA DD and monitoring report

DOE assessment

Date: 14/11/2017

CAR is closed based on review of revised Monitoring Report and CPA DD(issuance track PRC being submitted along with the RFI). Please refer to the PRC validation report for details of assessment on changes.

CAR is closed.

CAR ID	07	Section no.	I.6.1, I.6.4	Date: 18/08/2017
Description of CAR				
Verification team during the OSV cross checked the data of monitoring parameter "EGy" with generation reports and invoices raised by the PP. This check during the OSV reveals that value of electricity export and import as reported in the work sheet "8950-0003" of emission reduction spread sheet is incorrect and not matching with the original records (generation reports and invoices) for each month of the monitoring period.				
CME response				Date: 20/09/2017

<i>The information in the ER sheet has been updated with the information in the energy sales invoices. All the inconsistencies have been rectified.</i>	
Documentation provided by the CME	
<i>Updated ER calculation sheet and energy sales invoices.</i>	
DOE assessment	Date: 27/09/2017
Verification team based on review of revised monitoring report, emission reduction calculation sheet and provided electricity invoices (and those which were reviewed during the OSV) confirms that CME has corrected the value of electricity export and import in the work sheet "8950-0003" of emission reduction spread sheet.	
CAR is closed.	

Common for CPA 002 & CPA 003:

CAR ID	08	Section no.	--	Date: 17/11/2017 (during internal technical review process)
Description of CAR				
<ol style="list-style-type: none"> 1. The latest version of the form CDM-CPA-DD-FORM (version 8.1) have not been used for the reporting. Also, the font has been altered from the template. 2. The names of the host countries are inconsistent on the UN interface and the MR cover page. Please, use the same names consistently across all the documents. 3. The milestone dates for CPA003 have changed from the registered CPA-DD in the MR and the revised CPA-DD. Justify the reason for the change and justify why it is not required to be classified as a post registration change. 4. The geographical coordinates of the project location in section D.2 of the MR and A.2 of the CPA-DD have been provided in different formats. Kindly provide the location in the decimal format as required in the CDM interface. 5. In the section D.7.1 of the registered CPA-DD, it is stated that "<i>A high level of accuracy of the measurements will be achieved due to the use of high-precision equipment of at least 0.15 (extended range) for P (electric power) and Q (reactive power) and in compliance with the ANSI requirements.</i>" However, the accuracy class of the installed electricity meter is 0.2 as per section G.2 of the MR. It needs to be clarified how the accuracy class requirement is being met by the installed meter. 6. In section H.5 of the MR, the calculation for estimated value of the ERs has not been provided. The values must be calculated based on the number of the days in the monitoring period. Please show the calculations to demonstrate the value have been calculated correctly. 7. CPA title as provided on the cover page does not match with the CDM interface. Generic CPA title on the cover page of the CPA-DDs does not match with the MR section A.1.1 of the MR. 8. In section F of the CPA-DD changes have been done to the eligibility criteria. Please clarify if this would require no changes in the PoA-DD? 				
CME response				Date: 20/01/2018
<ol style="list-style-type: none"> 1. CPA DDs have been updated to 8.1 and the font is in the original format. 2. Names of the host countries are now consistent throughout all documents. 3. Dates in the CPA 003 DD have been corrected and are now consistent with those of the registered CPA DD. 4. MR and CPA DD geographical coordinates have been updated to decimal format. 5. The meters installed are of class 0.1 accuracy, which is more accurate than what is described in the PPA or in the CPA DD (i.e. 0.15). MRs have been modified to mention the classification of the meters as 0.1, as opposed to 0.2. 6. Values in the section H.5 of the MR have been updated with the ER calculation based on the # of days in the monitoring period. 7. CPA titles are consistent throughout all documents. 8. Eligibility criteria remains the same between the PoA DD and the CPA DDs. Any changes are due to the new format of the CPA DD, but eligibility criteria remains the same. 				
Documentation provided by the CME				
<i>Updated Monitoring Report & CPA DD</i>				
DOE assessment				Date: 30/01/2018
All required corrections/revisions have been done by the CME in the MR and the CPA DDs along with any justification (where required).				
CAR is closed.				

Table 2. FAR from this verification

FAR ID	xx	Section No.		Date: DD/MM/YYYY
Description of FAR				
CME response				Date: DD/MM/YYYY
Documentation provided by the CME				
DOE assessment				Date: DD/MM/YYYY

Appendix 5. PoA/CPA Implementation and Operation Status

As part of the site visit, the verification team was able to confirm that implementation of Programme of Activity (PoA) and the Component Project Activities (CPAs) is in accordance with the project description contained in the CPA-DDs /22/, /B04/. The verification took cognizance of § 239 to § 242 of CDM Project Standard, version 09.0 and § 373 b (i), § 383, § 384 and § 385 of VVS version 09.0.

<p>Project features (technology, project equipment, monitoring and metering equipment)</p>	<p><u>Verified Project Description of CPA 002:</u></p> <p>As verified during the on-site inspection, the CPA is a run of river hydropower plant; it involves the construction of the intake structure, the water conveyance system and the power house. Verification team based on review of CPA DD /22/, /B04/ and on-site inspection confirms that the project is a run-of-the-river because it does not have a reservoir to store water and thus relies on the natural water flow of the river.</p> <p>Based on review of provided evidence /04/ and on site physical inspection, verification team confirms that the turbine installed is of 3.276 MW and the installed capacity of the generator is of 3222 KVA. During the on site inspection, the assessment team has verified the actual installed capacity of the turbine generator as 3222 KVA i.e. $3222 \times 0.9 = 2899 \text{ KW} = 2.899 \text{ MW}$, where 3222KVA is the alternator capacity in KVA ratings & 0.9 is the power factor of the generator. It is verified that a transmission line is connected the power house to a substation located in the community of El Volcan, in the Department of Comayagua. Based on review of provided evidence /06/, /07/ /09/, it is confirmed that the electricity generated from the project has been supplied to ENEE (Honduran National Electricity Company) during the reported monitoring period. And this the project displace electricity that is otherwise produced by coal and fossil fuels.</p> <p>Verification team based on site inspection confirms that following component of the project:</p> <ul style="list-style-type: none"> • a bypass dam, • conduction and pressure pipelines, • a power house with a control room, and • transmission line that leads to the substation which then feeds electricity to the “Sistema Interconectado Nacional” of Honduras, (National Interconnected System) which is operated by ENEE. <p>Verification team during the on-site inspection noted that the water discharged from the powerhouse re-entering the river through an energy dissipation system. All of the electricity produced is measured on site with SCADA equipment and at the substation. As per the CPA DD /22/, /B04/, the operational lifetime is expected to be of 30 years.</p> <p>Verification team during on site inspection confirms that the electricity supplied to the grid by the project activity is measured by calibrated electricity meters which are located at the point of connection to the grid, in the community of “El Volcan”, Comayagua.</p> <p>The component project activity was implemented and equipment installed as described in the revised CPA-DDs /22/.</p> <p>It was confirmed during OSV that Anaconda Carbon S.A. is the Co-ordinating/Managing Entity for the PoA. The actual project activity is in line with the revised CPA-DD /22/. G.A. Energy S.A. de C.V. is the CPA implementer/ programme activity implementer for CPA002 included in the PoA.</p> <p><u>The actual operation of the CDM project activity</u></p> <p>The starting date of the CPA002 is 27/10/2011 as per the CPA-DDs /22/, /B04/ and the commercial operation of the project started on 01/04/2015 as verified</p>
---	---

from the commissioning certificate /04/. During the reported monitoring period, the CPA has supplied 14,572.35 MWh /06/, /07/ of electricity to the ENEE and thus displaces 9,068 tCO_{2e} of emission reduction during the period. The measurement of supplied electricity is being carried out by electricity meters /08/ as per the provision delineated in the Power Purchase Agreement signed /05/ between the CPA Implementer & ENEE. Verification team confirms that project has obtained all statutory clearances /10/ as required for its implementation and operation.

Carbon Check's verification team confirms that the CPAs are implemented within the boundary of the PoA as described in the registered PoA-DD/B04/ and the implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PoA-DD/B04/ and revised CPA-DDs /22/.

Verified Project Description of CPA 003:

As verified during the on-site inspection, the CPA is a run of river hydropower plant and it involves the construction of the intake structure, the water conveyance system and the power house. Verification team based on review of CPA DD /22/, /B04/ and on-site inspection confirms that the project is a run-of-the-river because it does not have a reservoir to store water and thus relies on the natural water flow of the river. Verification team during on site inspection noted that the water is diverted from the Puringla and Sazagua rivers, it goes through three vertical axis Francis turbines and is subsequently discharged to the Puringla river, which later connects to the Sazagua river.

Verification team based on review of provided evidence /14/ and on-site inspection confirms that the project consists of three Francis turbines with individual capacity of 3.383 MW and three generators of 3900 KVA. During the on site inspection, the assessment team has verified the actual installed capacity of the turbine generator as 3900KVA i.e. $3900 \times 0.85 = 3,315 \text{ KW} = 3.315 \text{ MW}$, where 3900KVA is the alternator capacity in KVA ratings & 0.85 is the power factor of the generator. The total verified installed capacity of the project based on generator capacity is 9.945 MW (3 multiplied by 3.315) . Based on review of provided evidence /06/, /07/, it is confirmed that the electricity is supplied to ENEE (Honduran National Electricity Company) and displace electricity that is otherwise produced by coal and fossil fuels. This electricity is supplied to the Honduran national grid via a 10-km long transmission line that is located near the city of Siguatepeque.

Verification team based on site inspection confirms that following component of the project:

- a bypass dam,
- conduction and
- pressure pipelines,
- a power house with a control room,
- and transmission line.

As per the CPA DD /22/, /B04/, the operational lifetime is expected to be of 30 years.

Verification team during on site inspection confirms that the electricity supplied to the grid by the project activity is being measured by calibrated electricity meters which are located in the point of connection to the grid, which in this case is outside the powerhouse, next to the substation, which is located in the same building as the powerhouse.

It was confirmed during OSV that Anaconda Carbon S.A. is the Co-ordinating/Managing Entity for the PoA. The actual project activity is in line with the revised CPA-DD /22/. Compañía Eléctrica Centroamericana S.A. de C.V. is the CPA implementer/ programme activity implementer for CPA003 included in the PoA.

	<p><u>The actual operation of the CDM project activity</u></p> <p>The starting date of the CPA003 is 28/09/2012 as per the CPA-DDs /22/, /B04/ and the commercial operation of the project started on 01/04/2015 as verified from the commissioning certificate /13/. During the reported monitoring period, the CPA has supplied 22,519.56 MWh /16/,/17/ of electricity to the ENEE and thus displaces 14,013 tCO₂ of emission reduction during the period. The measurement of supplied electricity is being carried out by electricity meters /18/ as per the provision delineated in the Power Purchase Agreement signed /15/ between the CPA Implementer & ENEE. Verification team confirms that project has obtained all statutory clearances /20/ as required for its implementation and operation.</p> <p>Carbon Check's verification team confirms that the CPAs are implemented within the boundary of the PoA as described in the registered PoA-DD /B04/ and the implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PoA-DD/B04/ and revised CPA-DDs /22/.</p> <p>Verification team further confirms that no other emission source (which is not covered by the revised CPA DD /22/ and the applied methodology) were found at both the CPA sites, as verified during the on-site inspection. Furthermore, the calculation of power density is not applicable for both the CPAs as it is run of river project and does not involve construction of any reservoir, the same was verified during the on-site inspection. In summary, the monitoring period is reasonable and the operation of the CPAs is in accordance with the revised CPA DD/s /22/. The verification took cognizance of § 317 of VVS version 09.0 and has assessed the project in order to check any proposed or actual changes to the project design. Carbon Check's verification team confirms that the CPAs are implemented within the boundary of the PoA as described in the registered PoA-DD and the implementation and operation of the project activity has been conducted in accordance with the description contained in the registered PoA-DD and the revised CPA-DDs /22/.</p>	
<p>Any Project Design Change been sought and approved by EB for the CPA? {compliance of § 330 (f) of VVS}</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Yes, the project is requesting issuance track post registration change which is being submitted along with this issuance request.</p>

The information (including data and variables) provided in the MR /01-(d)/ is in line with the details provided in the revised CPA-DD /22/.

Verification Team summarizes *major* changes for the CPA/s between webhosted Monitoring Report and final version of Monitoring Report for submission as follows:

Subject	Webhosted Monitoring Report (MR) /01/	Verified Monitoring Report /02/
Changes		
CER calculations (amount of emission reduction)	23,085	23,081

Carbon Check's verification team considers the CPA description of the project contained in the revised CPA-DDs /22/ to be complete and accurate. The CPA-DDs /22/ comply with the relevant methodology, tools, forms and guidance at the time of CPA-DD submission for registration/inclusion.

Appendix 6. Data and parameters fixed ex ante

CPA 002 and CPA 003

Parameter	Emission factor of the grid where the hydropower is exporting the electricity to.
Data unit:	tCO ₂ e/MWh
Default values used:	0.6223
Purpose of data	Baseline emissions calculation
Source and Verification of the source	The value of this parameter is fixed ex-ante and used for ex-ante calculations. The value is based on Data officially approved by the Host country DNA /B04/.

Parameter	Installed capacity of the hydro power plant before the implementation of the project activity. For new hydro power plants, this value is zero.
Data unit:	W
Default values used:	0
Purpose of data	To calculate the power density
Source and Verification of the source	Only applicable when the CPA involves reservoirs. For new hydro power plants, this value is zero. The value of this parameter is fixed ex-ante.

Parameter	Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m ²). For new reservoirs, this value is zero
Data unit:	m ²
Default values used:	0
Purpose of data	To calculate the power density
Source and Verification of the source	Only applicable when the CPA involves reservoirs. The value of this parameter is fixed ex-ante .

Appendix 7. Data and parameters monitored

CPA 002 & CPA 003:

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Data / Parameter: (as in monitoring plan of CPA-DD):	Quantity of net electricity supplied to the grid in year y (EG _y)
Measuring frequency/Time Interval:	Measured continuously and recorded monthly
Reporting frequency:	Monthly recording.
Unit:	MWh/y
Reported value:	8950-0002: 14,572.35 MWh 8950-0003: 22,519.56 MWh
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Details of monitoring equipment:	<p><u>8950-0002 verified by reviewing /08/, /09-d/, /23/:</u> Main meter (ENEE) Schneider Electric ION 8650 Serial Number MW-1406A496-01 Class /23/:0.1</p> <p>Backup meter (Zinguizapa HPP) Schneider Electric ION 8650 Serial Number MW-1409A770-01 Class /23/:0.1</p> <p><u>8950-0003 verified by reviewing /18/ /19-c/, /23/:</u> Main meter (ENEE) Schneider Electric ION 8650 Serial Number MW-1409A771-01 Class /23/ :0.1</p> <p>Backup meter (Puringla Sazagua HPP) Schneider Electric ION 8650 Serial Number MW-1206A274-01 Class /23/:0.1</p>
Is accuracy of the monitoring equipment as stated in the CPA-DD? If the CPA-DD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Yes
Calibration frequency /interval: Is it monitoring methodology /CDM EB guidance / local or national standards / manufacturers specification	As per the revised CPA DD /22/, "Device calibration is carried out periodically in accordance with manufacturer specifications where available. A calibration is to take place in case one of the meters is not functioning properly, which is deemed the case if there is more than a 1% difference in readings between the project meter and the utility meter. Calibration interval will not exceed 3 years, as per CDM standards." Verification team confirms that the calibration has been carried out in accordance with the manufacturer specifications /23/ and the revised CPA-DDs /22/.
Is the calibration interval in line with the monitoring plan of the CPA-DD? If the CPA-DD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Yes

Company performing the calibration(internal or external calibration):	N/A for this monitoring period as the installation of the meters are within 3 years as thus calibration is not due. It is worth to mention here that during on site inspection of the meters of both CPAs it is confirmed that pre-calibrated meters were installed and the same was verified during the on-site inspection /08/, /18/, /09-d/, /19-c/. It is further verified /06/ /16/ by the verification team that the average difference of the reading of both the meters (of CPA 002 & CPA 003) are well within 1 % during all the months of the monitoring period and thus the provision (which required meters to undergo to calibration immediately in case the difference of reading between two meters are more than 1 %) are not required to be adopted by the CPA implementers during the reported monitoring period.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A
Is (are) calibration(s) valid for the whole reporting period?	<p>Yes, as the installation of the meters /09-d/, /19-c/ are within 3 years as verified from the records /08/, /18/ and thus calibration is not due. please refer to the details below:</p> <p>8950-0002: Main meter (ENEE) Schneider Electric ION 8650 Serial Number MW-1406A496-01 New Device installed on :26/11/2014 Calibration valid till: 25/11/2017</p> <p>Backup meter (Zinguizapa HPP) Schneider Electric ION 8650 Serial Number MW-1409A770-01 New Device installed on:26/11/2014 Calibration valid till: 25/11/2017</p> <p>8950-0003: Main meter (ENEE) Schneider Electric ION 8650 Serial Number MW-1409A771-01 New Device installed on:12/11/2014 Calibration valid till:11/11/2017</p> <p>Backup meter (Puringla Sazagua HPP) Schneider Electric ION 8650 Serial Number MW-1206A274-01 New Device installed on:15/11/2014 Calibration valid till:14/11/2017</p>
If applicable, has the reported data been cross-checked with other available data?	Yes, the data of parameter EGy as reported in the Emission reduction spread sheet /02/ has been checked with monthly generation report /06/, /16/ and further cross checked with invoices /07/, /17/ of sold electricity.
How were the values in the monitoring report verified?	The values in the monitoring report were compared against the values in ER sheet/02/ and has been checked with monthly generation report /06/, /16/ and further cross checked with invoices /07/, /17/ of sold electricity.
Does the data management (from data generation 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 all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in	NA.

accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	
--	--