HYDROELECTRIC PROJECT EL EDÉN

Document Prepared By KBS Certification Services Pvt. Ltd.

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Summary:

The "KBS Certification Services Pvt. Ltd." has been commissioned by ALLCOT AG to carry out the Verification of the project "HYDROELECTRIC PROJECT EL EDEN" with regard to the requirements of VCS Version 4.1.

The project involves the emission reduction through renewable hydraulic energy in the host country Colombia. Thus, GHG removals are achieved.

The project applies the CDM consolidated methodology ACM0002 – "*Consolidated baseline methodology for grid-connected electricity generation from renewable sources*", Version 13.0.0.

In the course of the VCS Verification, 02 Correction Action Requests (CAR) were raised and successfully closed. No Forward Action Requests (FAR) nor and Clarification Requests (CL) have been raised.

The VCS Verification was based on the draft monitoring report, emission reduction calculation spreadsheet, the monitoring plan as set out in the validated PD and supporting documents made available to the KBS Certification Services Pvt. Ltd by the project participant.

Verification Period: from 16-February-2017 to 31-December-2020 (including both days)

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the registered VCS PD;
- the monitoring plan is in accordance with the applied approved CDM methodology, i.e., ACM0002 version 13.0.0.
- the equipment essential for measuring parameters required for calculating emission reductions are properly maintained;
- the monitoring system is in place and functional. The project has generated GHG emission reductions.

In addition, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. KBS herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

Year (vintage)	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
From 16-February-2017 to 31-December-2017	20,515	0	0	20,515
2018	24,041	0	0	24,041
2019	14,762	0	0	14,762
2020	13,792	0	0	13,792
Total	**73,110**	**0**	**0**	**73,110**

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CONTENTS

1 INTRODUCTION

ALLCOT AG has commissioned the KBS Certification Services Pvt. Ltd. to carry out the 1st Verification of the project: "Hydroelectric project El Edén" with regard to the relevant requirements of the Verified Carbon Standard Version 4.1. The verifier has reviewed the implementation of the monitoring plan (MP) in the VCS project for the monitoring period 16-February-2017 to 31-December-2020 (including both days).

The project applies the CDM approved methodology ACM0002 – "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 13.0.0.

1.1 OBJECTIVE

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

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

1.2 SCOPE AND CRITERIA

The verification scope is defined as an independent and objective review of monitoring report, CDM and VCS project description (VCS PD), including the monitored data, and other relevant documents made available to verifier and information collected through performing interviews during Remote assessment (interviews) of the project activity.

The project is assessed against the requirements of VCS standard version 4.1 and related rules and guidance. KBS has, based on the recommendations in the latest version of Verified Carbon standard, employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

The aspects to be covered under the purview of verification are:

- Ensure that the project activity has been implemented and operated as per the registered VCS PD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place as per the documents provided by the client and during remote audit;
- Ensure that the monitoring report and other supporting documents provided are complete;
- Ensure that the practiced monitoring system and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved CDM methodology, and
- Evaluate the data recorded and stored are as per the monitoring methodology.

1.3 LEVEL OF ASSURANCE

The verification has been planned and organized to achieve a

☒ reasonable level of assurance

☐ limited level of assurance

The verification is based on the registered VCS PD, MR, proof of title, proof of right, additional documents related to baseline and monitoring methodology, the subsequent background investigation, monitoring plan, follow-up interviews and supporting documents made available to the verification team by project proponent. The information in these documents is reviewed against the requirements of VCS Standard Version 4.0. KBS has employed a rule-based approach in the verification, focusing on the fulfillment of the rules determined by the VCS Standard.

The items covered in the verification are described below:

- Criteria of VCS Version 4 (VCS Program guide Version 4 & VCS Standard Version 4.1);
- Criteria of CDM approved methodology, ACM0002- Version 13.0.0;
- VCS Monitoring Report;
- Monitoring Plan;
- Background investigation and follow up interviews;

- Stakeholder feedback;
- Registered VCS PD and Validation Report; and
- Project's compliance with other relevant rules, including the project country (Colombia) legislation and assurance to stakeholders of the quality

Furthermore, the verification team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data available on public domain. A desk review is carried out to assess the following:

- Compliance with relevant law and regulations;
- Stakeholder comments (If any);
- Proof of title;
- Single line diagram and site location map;
- Technical specifications of turbines, meters etc.;
- Power Purchase Agreement;
- Commissioning Certificate;
- Remote auditing for verification;
- Sales Invoices;
- Export/Import data records; and
- Calibration Certificates.

The Verification team has checked all the above-mentioned details and confirms that all the information provided is accurate.

Through the remote interviews, host country rules and regulations related to project activity, Project description, technological measures, Implementation, Operation, Management of project activity and Training of personnel, Baseline and Monitoring plan, Stakeholder consultation etc. has been checked and found appropriate.

KBS applies the rule-based approach aimed at focusing on the fulfillment of the rules determined by the VCS Standard, in order to assure not omitting any part of the mandatory processes. A few discrepancies were found during the verification and the findings were submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions.

Hence the above steps were followed for achieving the level of assurance in verification report. Based on the process and procedures conducted, KBS confirms that the information in the MR:

- is materially correct and is a fair representation of the actual project details, and
- is prepared in accordance with VCS requirements and the applied CDM methodology for information pertaining to GHG qualification, monitoring and reporting.

The verification work is carried out as per this requirement and the verification opinion is assured, provided the credibility of all above. Details are presented in the Verification statement in section 5 below.

1.4 SUMMARY DESCRIPTION OF THE PROJECT

The project activity consists of a run-of -river hydroelectric power plant which utilizes water from the river "La Miel", in the east of the Department of Caldas, Colombia. The project activity consists in the installation and operation of two Pelton turbines with 10.319 MW and two synchronous generators with 11,154 kVA each. The total installed capacity of the plant at the interconnection point is 19.9 MW which is the capacity recognized by the authority. The project activity is not able to generate and supply more than this capacity. This was demonstrated through the document No. 20170230002509, dated on 28-February-2017 as evidence of the fulfilment of the connection code. In this document is stated the recognized capacity of 19.9 MW as stated in the connection contract No. 046 from 2014 (Resolution CREG 025 from 1995).

Therefore:

Definition	Capacity
Project capacity by installed turbines	20,638 MW
Project capacity by installed generators	20,077.2 MW
Project capacity recognized by the connection contract No. 046 from 2014 (Resolution CREG 025 from 1995)	19. 9 MW

The project activity is categorized under scope 1 - Energy (renewable/non-renewable) and it is a single project which is not included in a grouped project. The project proponent is Central Hidroeléctrica El Edén S.A.S E.S.P.

The milestones of the project activity as VCS project are as follow:

- The project activity was registered as a VCS project with the number #1068;
- It is stated in the registered PD, the first crediting period started on 01/09/2015 till 31/08/2025. Nevertheless, as the project activity started operations on a later stage (project starting date 16/02/2017), the actual project activity crediting period is from 16-February-2017 to 15-February-2027.

- The Contract for the supply, assembly, and commissioning of electromechanical equipment was signed on 28-June-2013.
- The Certificate of compliance with the Connection Code (Resolution CREG 025 of 1995) was given on 28-February-2017.
- The project start date was 16-February-2017 which is the date when the project activity started generating electricity. The official information from the Market Administrator XM was checked.

During the remote audit inspection, location (as mentioned in section 1.7 of MR) and all the technical aspects of the project activity (equipment, serial no., type, date of calibration etc.) mentioned in the VCS PD have been verified. The same was also crosschecked during the desk review of supporting documents like technical specifications, single line diagram, PPA and commissioning certificates.

Project entity information as verified is presented below:

Item	Data
Project Entities	Central Hidroeléctrica El Edén S.A.S. E.S.P (Project Owner)
	Allcot AG (Project consultant)

2 VERIFICATION PROCESS

Based on the desk review and site visit the team leader follows the verification protocol to identify and record the findings in the context of the project activity. The findings are communicated to the client in the findings document (Appendix II). The project documentation, including responses to the findings is reviewed by the team leader in consultation with team members, wherever appropriate. The team leader prepares the draft verification report subject to closure or non-closure of the findings.

2.1 METHOD AND CRITERIA

The verification process was carried out in line with the requirements of VCS Version 4. In addition, the verification team followed the guidelines of the CDM Validation and Verification Standard. Standard auditing techniques and KBS's CDM Procedures were also applied during the verification. A rule-based approach was followed to carry out verification and access all the factors and concerns that relate to the issuance of emission reductions from a project activity.
They include:

- Identification of all the sources contributing to the project emissions and emission reductions.
- Authenticity of the provided data is checked.
- A rule-based analysis is carried out to ensure a clear and transparent assessment. The findings identified in this process are mainly with the informational flows and data recording.

KBS follows a rule-based verification approach, wherein a desk review of the project documentation is undertaken, which is followed by a remote discussion/video inspection by the members of verification

team. The verification protocol is filled by the verification team that is based on standard auditing practices and VCS requirements. The verification protocol provides transparent means to record the observations by the verification team members and the non-conformities, if any. The verification protocol is an internal document, and available on request.

Duration of Verification:

Verification Contract	21-May-2021
Remote audit	28-June-2021 (Justification section 2.4 below)
Draft Verification Report	28-June-2021
Final Verification Report	02-December-2021

2.2 DOCUMENT REVIEW

A desk review is undertaken, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

The list of documents reviewed is included in the section 'References'

2.3 INTERVIEWS

Interviews were undertaken by members of verification team, involving but not limited to,

- Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the approved monitoring plan;
- An assessment of the implementation and operation of the proposed VCS project activity as per the registered VCS PD;
- A cross-check between information provided in the monitoring report and data from other sources such as plant log books, inventories, purchase records or similar data sources;
- A check of the monitoring equipment, including calibration performance and observations of monitoring practices against the requirements of the VCS PD and the selected methodology;
- 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.

The interviews for this verification assessment were undertaken by Raul Mitre (Team Leader & Technical Expert for scope 1 and Local Expert). The details are mentioned below;

Reference	Name	Function	Organization
1.	Gina Castillo	Climate change mitigation Consultant	Allcot
2.	Asier Arambaru	Climate change mitigation Consultant	Allcot
3.	Camilo Prada	HSE Engineer	Central Hidroeléctrica El Eden
4.	Esteban Flores	O&M Manager	Central Hidroeléctrica El Eden
5.	Sara Lucia Rivera	Social Manager	Central Hidroeléctrica El Eden
6.	John Freddy Ríos	Environmental Manager	Central Hidroeléctrica El Eden
7.	William Bravo	Generation Leader	Central Hidroeléctrica El Eden
8.	Julian Tangarife	Operator	Central Hidroeléctrica El Eden

2.4 SITE INSPECTIONS

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for VERRA guidance on site visits, notification of COVID-19 Travel Guidance for Projects https://verra.org/covid-19-travel-guidance/ and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit. Further Email from VERRA dated 24/03/2020 from "Andrew Beauchamp" has been referred as per which "*The VCS Program does not explicitly mandate site visits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.1). Therefore, where a VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for an exemption or pre-approval from VERRA is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, please ensure that the applicable section of the validation/verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit*".

Hence, the VVB has used other standard auditing techniques for validation or verification as referred to in VCS Rules/requirements, VCS Validation and Verification Manual version 3.2.

Verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification. Along with desk review, audit team has conducted remote audit interview as follows:

- A complete desk review of the MR, as well as all applicable country legal requirement and supportive evidences have been checked by the verification team.
- Verification team has performed Zoom Application interview with PP on 28-june-2021 in order to check implementation, project boundary, current situation, monitoring and metering equipment, monitoring procedures, calibration etc.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in MR and supporting documents.
- An assessment of the implementation and operation of the VCS project activity as per the registered VCS PD;
- A review of information flows for generating, aggregating and reporting the monitoring parameters;
- A check of the monitoring equipment including performance and observations of monitoring practices against the requirements of the registered VCS DD and the selected methodology.
- A review of calculations and assumptions made in determining the GHG data and emission reductions;
- 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.

2.5 RESOLUTION OF FINDINGS

KBS applies the rule-based approach aimed at focusing on focusing on the fulfillment of the rules determined by the VCS Standard. A few discrepancies were found during the verification and the verification report was submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions. Criteria for judging items as CAR or CL are as follows:

Corrective action request (CAR):

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- The Voluntary Carbon Standard's requirements have not been met, or
- There is a risk that emission reductions cannot be monitored or calculated.

Clarification request (CL):

Information is insufficient or not sufficiently clear to determine whether the applicable VCS requirements have been met.

Forward Action Request (FAR):
FARs is to be raised to highlight issues related to project implementation that require review during the first verification of the project activity. FARs does not relate to VCS requirements for registration.

CARs and CLs are to be resolved or closed out if the PP modifies the project description, rectifies the MR or provides adequate additional explanations or evidence that satisfies the concerns. If this is not completed, the project activity cannot be recommended for issuance under VCS registry.

The monitoring report was revised addressing the CARs & CLs issued by KBS. After reviewing the revised and resubmitted MR; resolving the CARs & CLs raised and outstanding concerns, KBS issues this final verification report and opinion.

The list of CARs/CLs raised and the response provided, the means of verification, reasons for their closure and references to correction in the MR are provided in appendix 2 of this report. The revised MR with changes incorporated as per the issues raised were rechecked with the documentary evidences and found to be inline.

A summary of all raised findings is provided below:

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	--	CAR 01	--
Compliance of the project implementation and operation with the registered PD	--	--	--
Deviations	--	--	--
Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines	--	--	--
Compliance of monitoring activities with the registered monitoring plan	--	--	--
Compliance with the calibration frequency requirements for measuring instruments	--	--	--
Assessment of data and calculation of emission reductions or net removals	--	CAR 02	--
No net harm and Local stakeholder consultation	--	--	--
AFOLU -Specific Safeguards	--	--	--
Total	**0**	**02**	**0**

2.5.1 FORWARD ACTION REQUESTS

No FAR has been raised during validation stage and during the current verification.

2.6 ELIGIBILITY FOR VALIDATION ACTIVITIES

KBS Certification Services Private Limited is accredited for validation and verification for sectoral scope 1 under the VCS scheme.

3 VALIDATION FINDINGS

No validation activities have been performed during the current monitoring period.

3.1 PARTICIPATION UNDER OTHER GHG PROGRAMS

There is no evidence that the project activity is participating under other GHG Programs. The PP has declared that this project will not claim any carbon credit in any other mechanism.

3.2 METHODOLOGY DEVIATIONS

The verification team confirms that the registered VCS PD complies with the requirements in the applied monitoring methodology ACM0002 version 13.0.0. As a result of the documental review it is concluded that there are no methodology or project description deviations.

3.3 PROJECT DESCRIPTION DEVIATIONS

The following project description deviations have been identified:

a) **Change in the project start date and crediting period**: It is stated in the registered PD, the first crediting period started on 01/09/2015 till 31/08/2025. Nevertheless, as the project activity started operations on a later stage (project starting date 16/02/2017), the actual project activity crediting period is from 16-February-2017 to 15-February-2027.

b) **Change in the installed capacity due to changes in the equipment configuration:** It is described in the registered VCS PD: "The installed capacity of the plant at the interconnection point is 19.5 MW (this is based on the design and can vary slightly at real conditions)". The verification team has checked the name plates of the installed turbines and the rated power output turbine is 10319 kW (i. e. 10.319 MW) per equipment. This means a total power capacity of 20.638 MW based on the installed turbines. The installed generators capacity is 20.077 MW (10.0386 MW each). Therefore, there is a slight difference of 1.138 MW (5.83%) between the installed capacity described in the registered VCS PD (19.5 MW) and the actual installed capacity (20.638 MW).

Final Assessment

According to the MR, there were some difficulties during the construction phase, mainly on the excavation and underground activities, causing a delay on the starting operation day. The End of Commissioning Certificate was signed on the 28/February/2017. However, according to the SIN administrator, XM, the project Hydroelectric El Edén has been verting electricity to the SIN, on the 16-February-2017. The verification team checked the XM website directly to assess this information. It was confirmed that the recognized and official start day of electricity supplying to the grid was on 16-February-2017, according to the official web site of XM which is the National Interconnected System (SIN) administrator. Therefore the change in the start day and crediting period length is acceptable.

Regarding the project capacity of 19.9 MW is recognized by the connection contract No. 046 from 2014 (Resolution CREG 025 from 1995). This means that the generation capacity recognized by the Administrator is 19.9 MW and the power plant is configured to supply to the national grid only 19.9 MW. The project activity is not able to generate and supply more than this capacity. Therefore, it is acceptable by the verification team to recognized as project capacity 19.9 MW, based on connection contract.

It is concluded that project description deviation will not affect the applicability of the methodology, additionality and the appropriateness of the baseline scenario and hence it is valid and accepted.

3.4 GROUPED PROJECT

The project activity is not a part of a grouped project. Therefore, this section is not applicable.

4 VERIFICATION FINDINGS

4.1 PROJECT IMPLEMENTATION STATUS

The project activity is in operation stage as evidenced by the remote inspection of the site. All the physical components and project boundary are in conformity with the description in registered VCS PD. The capacity of project equipment's have been confirmed during the remote inspection, also through the technical specifications and found in-compliance with the registered VCS PD. All equipment of the project activity has been commissioned as commissioning certificates.

On the basis of the remote inspection and the reviewed project documentation like the technical specification, photographs of meters and equipment nameplates, single line diagram, operational procedures and logbooks, operational license and permits, commissioning certificates, calibration certificates of energy meters and invoices, etc. the verification team confirms that the project was implemented and operated as described in the registered VCS PD. Further, the verification team confirms that:

- There is no any material discrepancy between project implementation and the project description in the registered VCS PD.

- The monitoring plan is completely implemented and is suitable with actual monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters).
- There is no methodology deviation applied to this project.

The project activity consists in the installation and operation of two Pelton turbines with 10.319 MW and two synchronous generators with 11,154 kVA each. The total installed capacity of the plant at the interconnection point is 19.9 MW, which was verified during the remote audit.

Further it was noticed that during the monitoring period the project activity operated under normal conditions and no significant event that may have impact on monitoring of GHG emission reductions was observed. Same has been checked from the operational data during remote auditing.

Ownership and other programs:

PP has declared that the project activity is not registered under other GHG programs such as CDM or Gold Standard. Thus, emission reductions generated by project will be solely claimed by PP and PP has the right of use, which is acceptable.

PP will not claim any other the environmental/carbon credits under any other GHG emission reduction scheme for the crediting period under VCS and PP has provided declaration on the same during the validation. Hence, there is no possibility of double counting.

Sustainable Development Contributions:

As confirmed during the remote audit, the project displaces electricity produced in fossil fuel based power plants, by using clean renewable source to generate electricity and thereby contributes to sustainable development through reduction in greenhouse gas (GHG) emissions. It has also been confirmed that the project implementation has led in significant environmental and socio-economic benefits (as stated in the submitted MR) and contributes to the social, economic, technological and environmental well-being. The project supplies clean, affordable and renewable energy without reliance on fossil fuels for generation of electricity to meet the growing demands in the region. Also, the implementation of project is providing employment to locals with a decent and secure work environment by reducing emissions otherwise generated by the operation of fossil fuel-based power plants and would lead to promotion of hydro based power generation and to encourage other entrepreneurs to participate in similar projects as well.

Management and operational system:

Verification team was able to verify that authorities and responsibilities for monitoring and reporting of all data related to the emission reductions were clearly defined for the related monitoring period.

The allocation of the responsibilities is documented in a written form and is followed as described in the registered VCS PD. Routines for the archiving of data are defined and documented.

The monitoring plan described in section 4.3 of the MR is confirmed to be correct. All the parameters of the monitoring plan are monitored using appropriate metering system.

The verification team has interviewed the plant personnel who is involved in the monitoring of the parameters that are used to determine the emission reductions of the project. It is confirmed based on

the interviews that the plant's team is competent enough to monitor the parameters as described in the monitoring plan.

As discussed above, the verification team concludes that management and operational system of the project is implemented and operated well. Thus, it ensures the quality of data which is required in calculating the emission reductions.

Implementation status of the monitoring plan:

Verification team confirms through remote inspection and from the document review (See Appendix I) the actual monitoring system complies with the monitoring plan mentioned in the registered VCS PD and there is no deviation in monitoring plan and procedures.

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

Therefore, from the document review and remote inspection, it is confirmed that all the parameters were monitored in accordance with the registered monitoring plan during the monitoring period. Following are the details of monitoring in accordance with the monitoring plan of the registered VCS PD:

Data - Parameter	$EG_{facility,y}$
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data	Electricity meter(s)
Description of measurement methods and procedures to be applied	According to the registered VCS PD, the following parameters will be measured: *"The meters installed will be bi-directional, taking into account both the quantity of electricity supplied by the project plant to the grid and the quantity of electricity delivered to the project plant from the grid. In this case the individual values are not required".*
Frequency of monitoring-recording	According to the registered VCS PD, "*Continuous measurement and at least monthly recording. Typically, the measured data is read once every 24 hours using tele-metetering technology (remotely) and reported to XM (grid operator and administrator)*".

<table>
<tr><td>Value monitored</td><td>The value monitored for the monitoring period is as follow:
<table><tr><th>Year</th><th>$EG_{facility,y}$ (MWh)</th></tr><tr><td>2017</td><td>66,783.62</td></tr><tr><td>2018</td><td>78,259.22</td></tr><tr><td>2019</td><td>48,055.58</td></tr><tr><td>2020</td><td>44,898.41</td></tr><tr><td>Total</td><td>237,996.83</td></tr></table></td></tr>
<tr><td>Monitoring equipment</td><td>During the remote inspection and through document review, it has been confirmed that the data has been monitored continuously by bidirectional meters as follows:
<table><tr><th>Description</th><th>Main Meter</th><th>Back-Up Meter</th></tr><tr><td>Serial Num.</td><td>MW-1509A351-02</td><td>MW-1509A352-02</td></tr><tr><td>Manufacturer</td><td>Schneider Electric</td><td>Schneider Electric</td></tr><tr><td>Type</td><td>ION 8650</td><td>ION 8650</td></tr><tr><td>Accuracy Class</td><td>0.2S</td><td>0.2S</td></tr><tr><td>Calibration date</td><td>16-December-2016</td><td>16-December-2016</td></tr><tr><td>Validity</td><td>15-December -2019</td><td>15-December -2019</td></tr><tr><td>Calibration date</td><td>15-September-2018</td><td>15-September-2018</td></tr><tr><td>Validity</td><td>14-September-2021</td><td>14-September-2021</td></tr></table>
Monthly joint meter readings of the main and back-up meters located at project activity sub-station feeders are taken by the designated officials of the company and state electricity utility as confirmed from the remote inspection. The summation of all connected meters reading is used for billing and emission reduction calculation purpose.</td></tr>
<tr><td>QA-QC procedures to be applied</td><td>According to the registered VCS PD, ’The meters will be calibrated every three years based on national standards’.

Calibration dates of the energy meters are as follow:
<table><tr><th>Description</th><th>Main Meter</th><th>Back-Up Meter</th></tr></table></td></tr>
</table>

	<table><tr><td>Serial Num.</td><td>MW-1509A351-02</td><td>MW-1509A352-02</td></tr><tr><td>Calibration date</td><td>16-December-2016</td><td>16-December-2016</td></tr><tr><td>Validity</td><td>15-December -2019</td><td>15-December -2019</td></tr><tr><td>Calibration date</td><td>15-September-2018</td><td>15-September-2018</td></tr><tr><td>Validity</td><td>14-September-2021</td><td>14-September-2021</td></tr></table> As per registered VCS PD, the meters are calibrated on a three-year basis based on national standards. Calibration certificates were checked, and it is found to be in line with the registered VCS PD. Both the meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period.
Purpose of the data	Calculation of Baseline emissions
Calculation method	During the remote inspection and through document review, it has been confirmed that the net electricity supplied to grid was calculated as the difference of the measured values of “export” and “import” of electricity through the energy meters installed at the delivery point (i.e. the connected substation). Monthly meter readings are taken from the main and back-up meters installed at the project activity substation. Further, the metering readings are used for emission reduction calculation purpose.
Comments	As confirmed during the remote inspection, all data collected as part of the monitoring process is archived electronically and kept at least for two years after the end of the last crediting period, which is in line with the registered VCS PD.

Ex-ante parameters

The following are the ex-ante parameters used in the ER calculation which are in compliance with registered VCS PD:

Parameter	***Description***	***Source/Justification***
$EF_{grid,CM,y}$ tCO_2/MWh	This is the combined margin emission factor of the national grid of Colombia	Combined margin emission factor has been calculated in accordance with “Tool to calculate the emission factor for an electricity system”, version 3.0.0.

		The value 0.3072 tCO_2e/MWh is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD.

Findings: Please refer to CAR 01 and CAR 02.

Final Assessment

The verification team confirms that:

- The project activity has been implemented and operated as per the registered VCS PD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place, as per the documents provided by the PP and remote audit;
- The project activity is operational, and no major breakdowns have happened since start up;
- The proof of title of the project activity was checked through the Record of the Inscription to the Public Services Unique Register, which confirm that the project participant as stated in the MR is correct. It is confirmed that the PP has not been changed.
- The monitoring complies with the requirement of the applied methodology;
- The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included above under each parameter and confirms to the requirement of the registered VCS PD;
- The values included in the monitoring report and corresponding emission reduction sheets are verified and included under each monitoring parameter.
- As per MR, the baseline emission is given through the quantity of net electricity generation supplied by the project plant/unit to the grid in year y. The project emission and leakage is considered zero '0' according to the applied methodology.
- There is no evidence of double counting as the project is not registered in other carbon program. Furthermore, the project has not participated or being rejected under other Carbon program. This has been declared by the PP in the MR.
- The implementation of the project is in accordance with the VCS PD and is confirmed by the verification team.

4.2 SAFEGUARDS

4.2.1 NO NET HARM

No potential negative environmental and socio-economic impacts have been identified by the project proponent. The project activity fulfills all legal requirements with respect to operational and environmental perspective.

All permits and environmental licenses were checked and are valid and on place. The verification has checked the following documents:

a) Environmental Impact Assessment (EIA) No. Inf-023-GP-Plan-Contingencia, November 2010.
b) Environmental Management Plan (EMP), No. Inf-023-GP-Plan-Manejo-Ambiental, November 2010.
c) Follow up and Monitoring Plan.
d) Environmental License dated on 04-May-2011 (Resolution 173, 04-May-2011).
e) Environmental License dated on 04-May-2011 (Resolution 279, 05-August-2013).
f) Environmental Compliance Reports (ICA) covering the monitoring period.

According to Resolution 173, 04-May-2011, the environmental license is valid through the whole useful life of the project activity (article eight).

The verification team has collected and reviewed the relevant information and interviewed employees of the hydroelectric project to assess that no potential negative environmental and socio-economic impacts to the project location has been identified.

Final Assessment

During verification process the VVB has not identified any potential negative environmental and socio-economic impacts to the project location.

4.2.2 LOCAL STAKEHOLDER CONSULTATION

The local stakeholder consultation was part of the Environmental Impact Assessment (EIA) process, including the Environmental Management Plan (EMP), and Operation and Maintenance Plan (O&MP). This fulfills the Colombian regulation.

Environmental Compliance Reports include the six social programs stated in the Environmental Management Plan (EMP) and in the Operation and Maintenance Plan (O&MP):

1. **PMA-MS-01.** Community and institutional information and participation.
2. **PMA-MS-02.** Information and training for personnel linked to the project.
3. **PMA-MS-03.** Support to the institutional management capacity.

4. **PMA-MS-04.** Information and sensibilization of the project to the local community.
5. **PMA-MS-05.** Local labor hiring program.
6. **PMA-MS-06.** Impact on third parties.

The environmental compliance reports have been assessed by the verification team.

The PP has reported the communications during the MP including the responses provided. The project participant has permanent communication with community in the direct influence area. The main stakeholders are employees and inhabitants of the communities.

Interviews with several employees were held to confirm the LSC communication ways and to confirm whether issued happened during the MP.

No negative comment or complain has been received during the MP.

Final Assessment

No relevant comments were identified. Interviews with employees confirmed the same.

4.3 AFOLU-SPECIFIC SAFEGUARDS

Not applicable as the project activity is not an AFOLU project.

4.4 ACCURACY OF GHG EMISSION REDUCTION AND REMOVAL CALCULATIONS

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

All the monitored parameters are described above in section 4.1. All the ex-ante parameters which are used in the calculation of emission reduction are presented in section 4.1 of the MR transparently. It is confirmed that all the ex-ante parameters have been correctly used in the emission reduction calculation.

Baseline emissions:

The calculation of the actual net GHG removals by sinks is calculated in line with the ACM0002, version 13.0.0 as follows:

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

Where:

BE_y	=	Baseline emissions in year y (tCO_2/yr)
$EG_{PJ,y}$	=	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)
$EF_{grid,CM,y}$	=	Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh)

For the Quantity of net electricity generation, as the project activity is a green-field project, $EG_{PJ,y}$ *is the same as* $EG_{facility,y}$. This is according to Eq. number 7 of the ACM0002, version 13.0.0:

For the Combined margin CO_2 emission factor ($EF_{grid,CM,y}$), it is calculated ex-ante according to the Tool to calculate the emission factor for an electricity system" (version 3.0.0). The value applied for the entire Monitoring Period is 0.3072 tCO_2e/MWh.

Project Emissions:

No project emissions are considered for the project activity as the project activity has no reservoir. Furthermore, no leakage is also considered according to the applied methodology. All arrangements described in the Monitoring Plan have been checked. No deviations have been identified.

Leakage:

As per the methodology ACM0002, version 13.0.0 and as defined in the registered VCS PD, no leakage is considered in the project activity and the same is followed in this monitoring period also. Thus, it is in compliance with the registered VCS PD.

Final Assessment

The verification team confirms that:

- According to the applied methodology, the conservativeness of the achieved emission reduction was checked, and the detailed emission reduction calculation has been transparently provided in the ER sheet, which provides sufficient information to allow the reader to reproduce the calculation.
- Information regarding the difference between the ex-ante estimation of ERRs presented in the project description and the ex-post calculations presented in the monitoring report, has been provided in section 5.4 of the updated MR. The ex-ante estimation of ERRs for the applicable monitoring period are 124,450 tCO2e and the ex-post estimation of ERRs for the applicable monitoring period are 73,110 tCO2e. there is a difference of 51,340 tCO2e, which represents around 41% of lower ERs. The PP has justified this fact based on the following declarations:
  - Estimation of electricity generation at a validation stage of a green-field plant are usually based on historical flow rates that don't necessarily represent reality;
  - Even though there have been no mayor breakdowns during the operation of the hydroelectric

project, electricity generation has been affected during periods of electrical storms or mechanical issues that have caused some short stops during the operation;
- There were also, some short periods when the river flow was too low, thus reducing the electricity generation or in some cases, causing short stops.
- Other partial but longer stops of the equipment have taken place for routine maintenance or issues related to the electrical equipment that have been quickly addressed and operation restored

It is the Verification Team experience that renewal energy projects could be unpredictable as they depend on natural resources which can vary and cannot be totally controlled. Assessment during validation stage is based on studies which can be slightly different from the reality. Hydrological studies which are used to calculate the estimated energy generation, represents a theorical approximation of the quantity of energy the project activity can achieve. Therefore, hydrological conditions can vary from year to year and the PP does not have any control on it. Renewal energy projects are unpredictable, and it is normal that during the crediting period, different results (energy generation) can be found. Weather conditions are changing, and it is normal to see projects activities that generates less or more energy than expected. It is Verification Team opinion that this situation is not in the control of the project activity owner and cannot be modified as the hydrological conditions can vary from year to year. Furthermore, operation issues can also appear, mainly in the first years of operation of any electricity generating project. This fact can also affect the capacity of the power plant to work continuously. At the end, the emission reductions achieved are not higher than the estimations ex-ante. Therefore, the verification team concludes that justification provided by the PP is plausible and it is accepted.

- All the formulae and the calculation procedure were checked by the verification team.
- In the opinion of verification team, the assumptions, emission factors and default values that were applied in the calculations have been justified. Also, the verification team confirms that there were no manual transposition errors between the data sets in the ER Sheet during the current monitoring period.
- It is confirmed that the data has been measured directly from meters and it was cross checked from the credits notes and the invoices raised to state electricity utility and was able to verify the same.
- All the formulae have been found to be correctly applied in the GHG emission removals calculations.
- The excel sheets were cross checked with the archived monitored data and no discrepancies were found
- After revision of the MR and calculation spreadsheets, it is concluded that the GHG emission removals and reductions spreadsheets are transparent and clearly referenced.
- Thus, the verification team is confident that the GHG calculation is correct, accurate, traceable and conservative.

4.5 QUALITY OF EVIDENCE TO DETERMINE GHG EMISSION REDUCTIONS AND REMOVALS

For the evidence assessment the following activities have been performed:

- Assessment of all calibration certificates of the main and backup meters;
- Assessment of all installed meters to confirm that they are state of the art and bidirectional.
- Review of the energy generation directly from the SCADA system to cross check the information;
- Review of all energy generation data;
- Cross check the sales invoices

Calibration frequency is determined by the Legal Resolution 038 by the CRE. in its article 28th where it is established that the requirement of calibration frequency is four (4) years. Nevertheless, according to the registered VCS PD section 4.2, the meters will be calibrated maximum in every three years, which is conservative. This is because at the time of project registration, such regulation 038 was not available. Calibration details are shown in section 4.1.

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

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant lack of evidence and missing data were detected during remote audit discussion and video inspection. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures. The monitoring parameters have been measured / determined without material misstatements and is in line with all applicable standards and relevant requirements. The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included in section 4.1 under each parameter and confirms to the requirement of the registered VCS PD. The export and import data is measured by the electricity meters, recorded continuously and the invoices are generated monthly. The data is then reported annually on the VCS Monitoring Report as verified by the verification team through remote assessment.

It was also verified through remote audit inspection that the plant's team involved in the monitoring of project activity is well experienced. Hence, the verification team concludes that competent staff is employed by the project proponent to carry out the relevant tasks with sufficient accuracy. Furthermore, it was confirmed during remote audit discussion that internal training program for the monitoring staff is conducted on regular basis.

All documents were verified through remote visit interviews and cross check of the information between the different data sources. The verification team finds to be sufficiency of quantity, and appropriateness of quality, of the evidence used to determine the GHG reductions and removals. The verification team finds the quality to be of adequate level to assure confidence in the accurate quantification of the emission removals and reductions.

Final Assessment

Documents used as evidences for input values of GHG calculation were assessed and found to be reliable and authentic. The verification team concludes that the evidence and the data have an acceptable level of quality. All input parameters and monitoring methods can be confirmed as per best forest praxis.

4.6. NON-PERMANENCE RISK ANALYSIS

The verification team has assessed the risks of the verification which could lead to misstatements, omissions, mistakes, material errors, etc. The most important risks identified related to the project activity are listed below:

- Differences between the raw data source and the data reported in the calculation spread sheets;
- Difference between the data reported in the calculation spread sheets and the sales invoices;
- Delayed calibration of the energy meters;
- Missing or wrong data extracted from the measurement equipment;
- Wrong calculation of gross energy and energy consumption;
- Wrong calculation of net energy generated and the combined emission factor; and
- Omissions, mistakes and misstatements in any data transfer and reporting.

The actions taken by the verification team to address the identified risks are as follow:

- Interviews with key employees to cross check the information;
- Cross check data of energy generation against the commercial invoices and cross check, if possible, against public official and available information;
- Revision of operational and troubleshooting procedures;
- Visual inspection of the measurement equipment (main and back up meters), especially with regard to the serial number, accuracy, manufacturer, type and physical conditions of the installed equipment; and
- Revision of the calibration certificates and cross check against physical identification and label of the measurement equipment.

Final Assessment:

The team leader has collected and reviewed all information used to prepare this risk analysis. The risk level seems to be adequate to the project management and setting. Also, by means of the audit techniques, the risk level has not been changed, due to good management, clear land titles and stable external conditions. All identified risks have been properly addressed and adequate actions have taken place.

5. VERIFICATION CONCLUSION

KBS Certification Services Pvt. Ltd. has commissioned by ALLCOT AG to carry out the Verification of the project "HYDROELECTRIC PROJECT EL EDEN" with regard to the requirements of VCS Version 4.1.

The project involves the emission reduction through renewable hydraulic energy in the host country Colombia.

The project applies the CDM consolidated methodology ACM0002 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 13.0.0.

In the course of the VCS Verification, 02 Correction Action Requests (CAR) were raised and successfully closed. No Forward Action Requests (FAR) nor Clarification Requests (CL) have been raised.

The VCS Verification was based on the draft monitoring report, emission reduction calculation spread sheet, the monitoring plan as set out in the registered VCS PD and supporting documents made available to the KBS Certification Services Pvt. Ltd. by the project participant.

Verification Period: from 16-February-2017 to 31-December-2020 (including both days)

As a result of this verification, the verifier confirms that:

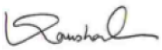
- All operations of the project are implemented and installed as planned and described in the registered VCS PD;
- The monitoring plan is in accordance with the applied approved CDM methodology, i.e., ACM0002 version 13.0.0.
- The equipment essential for measuring parameters required for calculating emission reductions are properly maintained;
- The monitoring system is in place and functional. The project has generated GHG emission reductions.

In addition, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. KBS herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
From 16-February-2017 to 31-December--2017	20,515	0	0	20,515
2018	24,041	0	0	24,041
2019	14,762	0	0	14,762
2020	13,792	0	0	13,792
Total	**73,110**	**0**	**0**	**73,110**

Location: Faridabad

Date: 02-December-2021



Authorized Signatory: Kaushal Goyal

Designation: Managing Director

KBS Certification Services Pvt. Ltd.

APPENDIX I: REFERENCES

PP Documents

Reference	Document
1.	Monitoring Report of the current Monitoring Period: • Version 1, 04-May-2021 • Version 2, 29-June-2021 • Version 3, 30-June-2021 • Version 4, 14-July-2021 • Version 5, 16-July-2021 • Version 6, 22-July-2021 • Version 7, 04-August-2021 • Version 8, 30-November-2021
2.	Emission reduction spreadsheet: • El Edén_ER Calculation Verification (version 01) • El Edén_ER Calculation Verification_v2 (version 02) • El Edén_ER Calculation Verification_v3 (version 03) • El Edén_ER Calculation Verification_v4 (version 04) • El Edén_ER Calculation Verification_v5 (version 05)
3.	Project Start date evidence: http://portalbissrs.xm.com.co/oferta/Paginas/Despacho/genrealporage.aspx
4.	Proof of title evidence: 1. Energy purchase contract No. ED 01-12 to supply energy in the period between 01-September-2015 to 31-August-2025, between Central Hidroeléctrica El Eden SAS ESP and GENERARCO S.A. E.S.P.
5.	Environmental evidence: 1. Environmental Impact Assessment (EIA) No. Inf-023-GP-Plan-Contingencia, November 2010. 2. Environmental Management Plan (EMP), No. Inf-023-GP-Plan-Manejo-Ambiental, November 2010 3. Follow up and Monitoring Plan. 4. Environmental License dated on 04-May-2011 (Resolution 173, 04-May-2011) 5. Environmental License dated on 04-May-2011 (Resolution 279, 05-August-2013) 6. Environmental Compliance Reports (ICA) covering the monitoring period.
6.	1. Energy generation data extracted from XM 2. Sales invoices to Generarco S.AS. ESP

Reference	Document
7.	Evidence of fulfilment of legislation: 1. Official doc. No. 20170230002509, dated on 28-February-2017 as evidence of the fulfilment of the connection contract code. 2. Record of the inscription to the Public Services Unique Register No. 20165290757612, 04-November-2016. 3. End of commissioning Certificate No. SPECMSe 5009, 28-February-2017.
8.	Technical documents of the project activity: 1. Single Line diagram No. HC4113-PEL-70-001 by Andritz Hydro. 2. Technical Diagrams of the project activity by Andritz Hydro. 3. Nameplates of the installed turbines, generators and transformers. 4. ION 8650 technical data sheet by Schneider Electric. 5. Procedures for maintenance of energy meters. 6. Generators maintenance and operation manuals C.H. El Eden by Indar. 7. Use Manual Pelton Turbines No. OM-P-13H001-ES by Andritz. 8. Installation acts of the measurement's equipment. 9. Photos of the installed measurement equipment. 10. Maintenance Program and maintenance guidance. 11. Operational Logbook covering the monitoring period.
9.	Calibration certificates: Main Meter: 1. Calibration Certificate No. ME-1612-20142 of the meter ION 8650, SN: MW-1509A351-02. Calibration date 16-December-2016 (Valid till 15-December -2019). 2. Calibration Certificate No. ME 1809-22785 of the meter ION 8650, SN: MW-1509A351-02. Calibration date 15-September-2018 (Valid till 14-September-2021). Backup Meter: 3. Calibration Certificate No. ME-1809-22787 of the meter ION 8650, SN: MW-1509A352-02. Calibration date 16-December-2016 (Valid till 15- December-2019). 4. Calibration Certificate No. ME-1809-22787 of the meter ION 8650, SN: MW-1509A352-02. Calibration date 15-September-2018 (Valid till 14-September-2021).

Documents searched by VVB

Reference	Document
1.	ACM0002 Version 13.0.0 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources"
2.	Monitoring Report Form VCS, Version 4.0
3.	• Tool for the demonstration and assessment of additionality, version 7.0.0. • Tool to calculate the emission factor for an electricity system, version 3.0.0. • Guidelines on the assessment of investment analysis, version 5. • Guidelines on common practice, version 02.0.
4.	• Verified Carbon Standard Ver. 4.1 • VCS Validation and Verification Manual ver. 3.2 • Registration and issuance Process v 4.0 • VCS Program Guide ver. 4.0 • VCS program Definitions ver. 4.1
5.	Validation Report of Hydroelectric Project El Edén No. VCS-VA-13-002, 23-September-2013.
6.	IPCC publications www.ipcc-nggip.iges.or.jp
7.	UNFCCC http://cdm.unfccc.int
8.	VERRA https://www.vcsprojectdatabase.org/#/home
9.	• Resolution No. 038, dated on 20-March-2014, which modifies the network code from the regulatory commission of Energy and Gas. • Resolution CREG 038 of year 2014. • Unique Regulatory Environmental Decree Num. 1076 of year 2015.

APPENDIX II: FINDINGS

CAR ID	01	Section no.	Several	Date: 28/06/2021
Description of CAR				
Please correct the following in the MR: 1. *Section 1.5: Please correct the date of the project start date (shall be 16-February-2017) and provide reference in the MR.* 2. *Section 4.2: Please correct the calibration dates as it is 16-December-2016 and 15-September-2018. Please also include the validity and accuracy class.* 3. *Section 4.2: Please include the total net energy value.*				
Project participant response				**Date:** 29/06/2021
1. *Corrected. Evidence available in the folder: 3. Evidences for monitored parameters\c. Evidences of monitored parameters\Datos XM* 2. *Calibration dates corrected. Also, validity and accuracy included.* 3. *Total net energy included*				
Documentation provided by project participant				
- *Monitoring Report V2* - *Evidence for the project start date in folder: 3. Evidences for monitored parameters\c. Evidences of monitored parameters\Datos XM*				
DOE assessment				**Date:** 29/06/2021
1. The correct date of the project s*tart date (16-February-2017) and proper reference have been provided in the MR.* 2. *Section 4.2: The missing dates have been included. Nevertheless, the calibration dated on 27-October-2015 is not necessary as the monitoring period starts on 16-February-2017 and another calibration took place on 16-December-2016.* 3. *Total Energy value has been included and assessed by the verification team as correct.* **CAR remains open.**				
Project participant response				**Date:** 30/06/2021
Calibration dated on 27/10/2015 has been eliminated				
Documentation provided by project participant				
Monitoring Report V3				
DOE assessment				**Date:** 30/06/2021

Unnecessary calibration dates were excluded. All calibration certificates are within the monitoring period. No further discrepancies were identified.

Nevertheless, during technical review stage the following have been identified:

1. Correct font size to 12 as per MR template ver 4.0.
2. Complete all items in the box on the title page using Century Gothic 10.5 point, black, regular (non-italic)' font as per MR template ver 4.0.
3. Please follow formatting of VCS MR template v 4.0 throughout the whole document.
4. Please use *DD-Month-YYYY format throughout the monitoring report as per VCS the guidelines.*
5. In footnotes throughout the document, please remove document link/list/reference which are not accessible by a third party. Please keep only web links which are accessible.
6. Section 1.5: Project start date is different in section 3.1 and 3.2.2. Please correct contradictory dates and confirm the correct Project Start Date in the MR.
7. Section 2.3: Please add justification, why this section is not applicable to the project.
8. Section 3.1: please refer the MR filling guideline, please report how the guidance complied:

   "A summary description of the implementation status of the technologies/ measures (e.g., plant, equipment, process, or management or conservation measure) included in the project.

   The relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods). The total GHG emission reductions or removals generated in this monitoring period".
9. Section 3.2.1: Please add justification, why this section is not applicable to the project.
10. Section 3.3: Please add justification, why this section is not relevant to the project.
11. Section 4.2:
    a) Please correct "value monitored" as per excel spread sheet.
    b) Monitoring equipment: Please provide other details such as accuracy class, date of calibration and due date of calibration for both the meters in this section or, separately as an Appendix at the end of the report. Please also clarify how 3 years calibration frequency is compiled if you have only reported the calibration of 16-Dec-2016?
    c) Please note that monitoring period is ending on 31st Dec 2020?
12. Please other comments directly in the MR and excel spread sheet.

CAR remains open.

Project participant response	**Date:** 14/07/2021

1. *Font size adjusted.*
2. *Format on all items in the box adjusted.*
3. *VCS MR template v 4.0 followed throughout the whole document.*
4. *Date format (DD-Month-YYYY) applied throughout the document.*
5. *Footnotes throughout the document adjusted.*
6. *Project start date has been adjusted in section 3.1 and 3.2.2. The project has been verting electricity to the National Interconnected System since the 16-February-2017. Therefore, the correct Project Start Date is 16-February-2017.*
7. *Justification included.*
8. *Section 3.1, completed.*
9. *Section 3.2.1: Justification included.*
10. *Section 3.3: Justification included.*
11. *Section 4.2:*
    a) *Corrected*
    b) *Meters details provided.*

       About the compliance of the 3 years calibration frequency: another calibration was reported on the 15-September-2018. Thus, the frequency has been complied.
    c) *Yes, monitoring period is ending on 31st Dec 2020.*
12. *Other comments directly in the MR and excel spread sheet, corrected.*

Documentation provided by project participant	
- Monitoring Report V4 *- El Edén_ER Calculation Verification_v3*	
DOE assessment	**Date:** 15/07/2021

1. Font size was changed.
2. All items in the box has been updated.
3. The template has been updated and now fulfils the requirements.
4. All dates have been updated accordingly.
5. The whole footnotes have been reviewed.
6. Project start date has been updated and now corresponds to the real evidence.
7. Clarification has been provided in section 2.3.
8. Justification was provided. Nevertheless, some information was wrongly included in this section.
9. Justification was provided in section 3.3.
10. Still the values included in "value monitored" are different from the excel spread sheet. Check years 2018, 2019 and 2020. Please include calibration dates in section "QA/QC procedures". Furthermore, the validity of the calibration dated on 16-December-2016 is incorrect as the calibration frequency is every 3 years. It shall be 15-December -2019.
11. All other comments have been correctly addressed.

CAR remains open.

Project participant response	**Date:** 16/07/2021

8. Corrected

11. Values included in "value monitored" corrected as in the excel spread sheet. "QA/QC procedures" information provided.

Documentation provided by project participant
- Monitoring Report V5

DOE assessment	**Date:** 17/07/2021

8.Informtion wrongly provided was corrected. The MR complies with the template.

10. Values monitored was corrected and now complies with the information from the excel spread sheet. Furthermore, calibration dates are now included in section "QA/QC procedures". Calibration validity was also corrected. No further discrepancies were identified.

CAR is closed.

CAR ID	02	**Section no.**	Excel	**Date:** 28/06/2021
Description of CAR				

Please correct the following in the excel spread sheet: 1. *Please eliminate generation data of year 2021 as it was wrongly taken for ER calculation.* 2. *All information shall be in English* 3. *Please correct version number of the applied methodology*	
Project participant response	**Date:** 29/06/2021
1. *Data of year 2021 eliminated. However, the total energy value for each year does not change since the formula only summed values from years 2017 to 2020.* 2. *Corrected* 3. *Corrected*	
Documentation provided by project participant	
El Edén_ER Calculation Verification_v2	
DOE assessment	**Date:** 29/06/2021
1. Data of energy generated in year 2021 was correctly eliminated. 2. All information is now in English. 3. Version number of the applied meth. Has been corrected. **CAR is closed.**	

APPENDIX III: ABBREVIATIONS

BAU	Business as usual
CL	Clarification request
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
CL	Clarification Request
DNA	Designated National Authority
EB	CDM Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAR	Forward Action Request
FSC	Forest Stewardship Council
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MR	Monitoring Report
PP	Project Proponent
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCS - PD	VCS - Project Description
VCU	Verified Carbon Unit
VT	Verification team
VVB	Validation/Verification Body
XLS	Emission Reduction Calculation Spread Sheet

APPENDIX IV: COMPETENCE OF TEAM MEMBERS

Personnel Name:		Raúl González Mitre	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (Colombia)	☒
Area(s) of Technical Expertise			
Sectoral Scope	**Technical Area**		
SS 01: Energy Industries (renewable/non-renewable sources)	TA 1.1		
SS 01: Energy Industries (renewable/non-renewable sources)	TA 1.2		
SS 03: Energy demand	TA 3.1		
SS 04: Manufacturing	TA 4.1		
SS 07: Transport	TA 7.1		
SS 13: Waste Handling and Disposal	TA 13.1		
SS 14: Afforestation and Reforestation	TA 14.1		
Approved by	Sanjay Kandari		
Approval date:	04/02/2021		

Personnel Name:		Sanjay Kandari	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	**Technical Area**		
Energy Industries (renewable/non-renewable sources)	TA 1.1:		
Energy industries (renewable/non-renewable sources)	TA 1.2:		
Energy demand	TA 3.1.		
Waste Handling and Disposal	TA 13.1 TA 13.2		
Approved by (Manager C & T)	Akhilesh Joshi		
Approval date:	11/12/2015		