



VERIFICATION REPORT



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Summary:

Genneia Solar Projects in Argentina consists of three solar farms located in the province of San Juan in Argentina. The technologies include PV solar panels that convert solar energy into electricity. The electricity generated is delivered to the Argentina's national electricity grid system (SADI) and the project activity results in the reduction of greenhouse gases (GHG) through displacement of carbon dioxide (CO₂) emissions from fossil fuel combustion for electricity generation.

In March 2021, Genneia S.A. (Project Proponent) through Swiss Carbon Value contracted Ruby Canyon Environmental (RCE) to perform the verification of the reporting period December 1, 2018 – December 31, 2020. The current verification included a detailed document review of relevant Project information.

The purpose of the verification is to ensure that the emission reduction assertion submitted by Project Proponent is materially correct and free of errors and omissions, and that the Project meets all criteria requirements. Specifically, the Project was assessed against the requirements of the Clean Development Mechanism methodology ACM0002 (version 19.0), Verified Carbon Standard (Version 4.0), and the validated VCS Project Description (dated December 26, 2019). The project's Monitoring Report dated June 25, 2021, version 03 (Monitoring Report), including the Project's monitoring plan, was assessed in light of the above criteria documents.

During the verification process, RCE completed a desktop review of the Monitoring Report and associated documents to confirm that the project activity was implemented as stated in the VCS Project Description including a review of data and information control systems, interviews with key personnel, and visual inspection of monitoring equipment. RCE issued corrective action requests, additional documentation requests, and clarification requests as necessary. During the course of verification activities, Genneia provided adequate responses to one material finding and three non-material findings. All of them were addressed.

RCE concludes, to a reasonable level of assurance, that the Project's greenhouse gas (GHG) assertion of 185,243 metric tonnes of CO₂ equivalent emissions for the period of 1 December 2018 – 31 December 2020 is fairly stated.

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1 INTRODUCTION

1.1 Objective

The objective of the verification is to ensure that the greenhouse gas (GHG) emission assertion made by the Project Proponent is materially correct and that data provided is accurate, complete, and transparent. Additionally, RCE ensured that the Project is in conformance with the criteria as stated in Section 1.2

1.2 Scope and Criteria

The scope of the Project includes the organizational boundaries of three photovoltaic plants located in San Juan, Argentina. The baseline scenario are the emissions that would otherwise have been generated for fuel-use electric power plants. The GHG types include in the scope of the project are CO₂.

RCE conducted the verification based upon the following criteria:

- Verified Carbon Standard (VCS) version 4.0 (19 September 2019).
- Clean Development Mechanism (CDM) methodology ACM0002 — “Grid-connected electricity generation from renewable sources” (version 19.0 sectoral scope: 01) (and all associated methodology tools).
- VCS Validation and Verification Manual version 3.2 (October 19, 2016).
- Validated Project Description (PD) (26 December 2019)
- ISO 14064-3:2006 “Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions”

Additionally, RCE reviewed the Project’s monitoring period-specific Monitoring Report Version 03 dated 25 June 2021, including the monitoring plan, during verification activities.

RCE employed a risk-based approach throughout the verification process when reviewing the completeness, conservativeness, and accuracy of the data and evidence provided by the Project Proponent. The results of the verification activities provided the necessary input for the verification opinion, which was completed according to the VCS Program Guide v4.0, VCS Standard v4.0, and ISO 14064-3:2006.

1.3 Level of Assurance

RCE conducted the verification to a reasonable level of assurance. The VCS Standard defines materiality as errors, omissions, or discrepancies resulting in misstatement of greater than five percent of the Project's GHG assertion. Additionally, qualitative non-conformances with criteria requirements were also considered material during the verification process.

1.4 Summary Description of the Project

The Project consists of three solar farms: ULLUM I, II, III with a total installed capacity of 82 MW. The three farms are in the province of San Juan, Argentina. Genneia S.A. holds the Right of Use of Project Activity and has sole ownership of the solar power plant, equipment, and systems.

According to the PDD, project start date is Dec 19, 2018. However, energy generation data showed that the project started to generate emissions reductions on December 1, 2018. A deviation to the PDD was included to show the real start date and crediting period. The monitoring period under verification is 1 December 2018 to 31 December 2020.

The project achieves emission reductions through the replacement of electricity into the SADI grid that otherwise would have been produced by fossil fuel combustion or a mix of fossil fuel and renewable electricity generation. The Project reduces the quantity of CO₂ released to the atmosphere by generating electricity using a zero-emission source. In the absence of the Project, the majority of electricity produced would be from coal or natural gas.

2 VERIFICATION PROCESS

As part of the Verification activities, the verification team conducted a revision of the energy generation records from the meters and energy generation records from CAMMESA. The verification team reviewed the calculation and the Monitoring Report.

2.1 Method and Criteria

The verification process involved the following independent and objective activities:

- Select a Verification Team;
- Perform a Conflict of Interest Review;

- Conduct a kick-off meeting with Project Proponent;
- Review the validated Project Description;
- Review the Validation Report;
- Review the current Monitoring Report;
- Develop a verification plan and risk-based sampling plan;
- Review the project information control systems and quality control procedures;
- Review the Project's emission reduction calculations;
- Issue corrective action requests, additional documentation requests, and clarification requests as necessary;
- Issue a verification report; and
- Conduct an exit meeting with Project Proponent.

The verification team was selected according to RCE's GHG Verification Policies & Procedures to ensure team members are qualified to perform verification activities pertaining to the Project. The Verification team consisted of the following individuals:

Lead Verifier: Diana Xareni González Cuevas

Senior Internal Reviewer: Jessica Stavole

Team members: Paulina Fernández, Nina Pinette, Michael Coté, Minerva López

Prior to verification project activities, RCE performed a Conflict-of-Interest Assessment to determine whether any potential conflicts exist with the project developer. No issues were discovered that would affect the impartiality or independence of the verification team.

A kick-off conference call was held with Project Proponent on March 3, 2021. The purpose of the kick-off conference call was to introduce the Project Proponent personnel and the RCE verification team, review the verification objectives, process, and VCS requirements, and to confirm the verification schedule.

RCE used a risk-based assessment approach for the verification process to develop the verification sampling plan. The verification plan and sampling plan were used throughout the verification of the Project. The sampling plan was created after reviewing the Project Monitoring Report, validated Project Description, and the VCS Standard (Version 4.0). A risk-assessment was performed based upon the criteria listed above and evidence provided to RCE by Project Proponent that pertained to the current reporting period. RCE used the verification plan throughout the verification as a basis for assessing the completeness, consistency, accuracy, and transparency of the Project's GHG emission reductions.

2.2 Document Review

RCE performed a risk-based analysis of the Project and document sampling in order to verify that the Project proponent is in conformance with all criteria requirements and that the stated emission reductions are materially correct. The verification team requested and reviewed evidence throughout the verification process to verify that data and information in the monitoring report was complete, that the project operated and reported consistent with the validated Project Description including the monitoring plan, and that emission reduction calculations could be traced to source data. The team conducted conference calls with the project proponent to review raw data and perform real-time cross-checks of energy generation data. In addition, RCE reviewed independent generation data published by CAMMESA to cross-check and compare to the documents provided by the Project Proponent.

During the verification process, RCE reviewed documents including (but not limited to):

- Validated Project Description
- Project's validation report
- Emission reduction calculation spreadsheets
- Monitoring report and underlying raw data (CAMMESA reports)
- Meter calibration reports dated 12 October 2018
- Hourly energy generation readings of the meters
- Ownership documentation "Genneia Prospecto"

2.3 Interviews

As part of the verification activities, RCE completed interviews with Santiago González, Project Manager of Swiss Carbon Value. Santiago described the project activity, technology used, activity data and data management system related to the GHG calculation. These interviews were conducted by Diana González in a series of teleconferences held on 3 June 2021 and 23 June 2021.

2.4 Site Inspections

There were no inspections on site.

2.5 Resolution of Findings

During the verification process, RCE issued one round of findings that included corrective action and clarification requests. Specifically, there was one Corrective Action Request (CAR) and three Clarification Requests (CL). These requests were documented in RCE's list of findings. The Project Proponent sufficiently addressed all requests as highlighted below.

Corrective Action Requests (CARs), Additional Documentation Requests (ADRs), and Clarification Requests (CLs)		
ID #	Action Item	Resolution
CAR 1	Project Start Date. According to the daily databases from Genneia, the started operation day is December 1 st , 2018. This is not consistent with project start date defined in MR secc. 1.5 (Dec 19, 2018).	06/25/2021: South Pole provided the MR updated adding two deviations to the PDD: project start date and crediting period. The dates established are according to the energy generation data.
CL 1	A difference in ULLUM1 2020 Energy Generation report on Energía Renovables - Base de Datos 2021.xlsx (63,690.06 MWh) and daily evidence (63,713.60 MWh) was found. This difference represents -0.04% of total EG. Please explain this difference.	5/8/2021. As a conservative approach Genneia used the data source with the lowest amount of reported generation (Cammesa). The monitoring report was updated according to this.
CL 2	A difference in ULLUM2 2020 Energy Generation report on Energía Renovables - Base de Datos 2021.xlsx (63,211.31 MWh) and daily evidence (63,198.34 MWh) was found. This difference represents 0.02% of total EG. Please explain this difference.	5/8/2021. As a conservative approach Genneia used the data source with the lowest amount of reported generation (Cammesa). The monitoring report was updated according to this.
CL 3	A difference in ULLUM3 2020 Energy Generation report on Energía Renovables - Base de Datos 2021.xlsx (82,776.06 MWh) and daily evidence (82,751.71 MWh) was found. This difference represents 0.03% of total EG. Please explain this difference.	5/8/2021. As a conservative approach Genneia used the data source with the lowest amount of reported generation (Cammesa). The monitoring report was updated according to this.

2.5.1 Forward Action Requests

None.

2.6 Eligibility for Validation Activities

None.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

As noted in the project description, the Project has not sought or received any other form of GHG environmental credits under any other GHG Programs.

3.2 Methodology Deviations

There were no methodology deviations for this monitoring period.

3.3 Project Description Deviations

Genneia identified two project description deviations in the Monitoring Report that apply to the current monitoring period:

1) The validated Project Description identifies the Project start date as 19 December 2018; however, the operation date was 1 December 2018. The Project start date had been selected according to the permit to deliver energy to the grid, however, energy generation started prior to this date during the testing phase.

2) As a result of the change in Project start date, the crediting period begins on 01 December 2018 and ends on 30 November 2028.

The verification team assessed if the deviations described in Section 2.3.2 of the MR had any impact in the applicability of the methodology, additionality, and the appropriateness of the baseline scenario. As a result, the verification team concluded that the change in the project start date did not cause any impacts. Both deviations are well described and justified in the MR, and the project remains in compliance with the VCS. Hence, the verification team found the deviations as valid.

3.4 Grouped Project

The project is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The Project start date is 1 December 2018, the date upon which testing and operations began. The crediting period is for ten years ending on 30 November 2028. RCE found that the Project was implemented in conformance with the validated Project Description with two deviations as described in Section 3.3. RCE also confirmed that the Project continues to meet the requirements of the VCS Standard version 4.0.

Genneia is identified as the Project Proponent in the Monitoring Report. During verification activities, RCE confirmed that Genneia is the Project owner and operator and thus has rights to all emission reduction credits generated by the Project. Genneia confirmed that the Project has not participated in or been rejected under any other GHG programs since validation or the previous verification, has not sought any other form of environmental credit, and that the GHG emission reductions generated by the Project have not become included in any other mechanism that includes GHG allowance trading. Overall, RCE concludes that the Project has been implemented in accordance with the project description.

The data parameters that are recorded to calculate emission reductions are included and described in the monitoring report and monitoring plan. The project followed the monitoring and measurement methods found in the validated PD. Throughout verification activities, RCE did not find evidence of material discrepancies between the actual monitoring system and the monitoring plan set out in the project description and the applied methodology.

During the desktop review the verification team confirmed that during the reporting period the project contributed to sustainable development by decreasing emissions of sulphur oxides, nitrogen oxides, carbon monoxide, particular matter, other pollutants, as well as carbon dioxide associated with the combustion of fossil fuels and reduced the dependency on fossil fuels.

4.2 Safeguards

4.2.1 No Net Harm

The project developer did not identify any negative environmental and socio-economic impacts in the development of the Project. The verification team reviewed the Environmental Impact Assessment developed before the project was constructed. This document describes that there are no relevant environmental or socioeconomic negative impacts caused by the project during construction and operation phase.

4.2.2 Local Stakeholder Consultation

Genneia established a method of ongoing communication with stakeholders including email communication, mailboxes at the facilities, a book of complaints, and brochures and bulletins sent periodically to the interested parties.

4.3 AFOLU-Specific Safeguards

The Project is non-AFOLU and as such, AFOLU-specific safeguards do not apply.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The Project Proponent calculates the Project's emission reductions in accordance with the equations described in ACM0002 and the validated PD. RCE sampled the publicly available records published by CAMMESA and project data collection spreadsheets during the reporting period to ensure the accuracy of reported data and that there were no material transcription errors between data sets. All generation data for the reporting period is available in internal reports and in the CAMMESA reports and thus the quantity of data is appropriate and sufficient to calculate emission reductions. RCE reviewed the Project Proponent GHG assertion spreadsheet to ensure the accuracy of the formulas, emission factors applied, and functionality of the spreadsheet. RCE found the GHG emission reduction calculations to be in conformance with ACM0002 and the validated PD, and free of material misstatement.

Genneia calculates baseline emissions from solar power generation by multiplying the quantity of net electricity produced and supplied to the grid by the combined margin CO₂ emission factor for grid connected power generation (0.4884 tCO₂/MWh). RCE reviewed the calculation of the combined margin factor that Genneia calculated in accordance with the CDM methodological tool 07 "Tool to calculate the emission factor for an electricity system" Version 06.0 using a weighted average of the operating and build margin emission factors. The weighted operating margin and build margin values were consistent with the CDM methodological tool 07 default values. Per the validated Project Description, both the build margin (0.3282 tCO₂/MWh) and simple operating margin (0.4885 tCO₂/MWh) are calculated ex-ante and are fixed for the Project's crediting period. RCE verified that Genneia correctly applied all factors in the calculation of emission reductions for this monitoring period.

As described in the PD, the only parameter monitored is Electricity Generation (EG). During the verification process, RCE confirmed that it is measured using a bi-directional meter and a backup meter in each of the solar farms.

The EF was calculated using the Tool to calculate the emission factor for an electricity system Version 6.0. The value was fixed for the crediting period. RCE reviewed that the fixed EF was used for the reporting period.

RCE concludes the project GHG emission reductions and removal have been quantified correctly in accordance with ACM0002 and the validated PD and that the evidence used by the Project Proponent is sufficient and appropriate to determine the GHG emissions reductions and removals.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The Project Proponent provided adequate documentation for the emission reduction calculations as well as its information control systems and data management processes. RCE reviewed the Project's Monitoring Report, electronic raw data from CAMMESA portal, instrumentation calibration reports, raw data from internal meters and all emission reduction calculations.

As described in section 4.2, RCE performed sample recalculations of emission reductions from raw data, checked all functionality of the Project workbooks, and cross-checked generation data. RCE found the information provided to be transparently documented and in accordance with the validated PD and requirements of the CDM methodology ACM0002.

RCE concluded that the Project data used to determine the GHG reductions and removals to be of sufficient quantity and appropriateness of quality in all instances.

4.6 Non-Permanence Risk Analysis

The project has no risk of non-permanence as it is a grid-connected renewable energy project and can be categorized under Sectoral Scope Number 1: Energy (renewable/non-renewable sources).

5 VERIFICATION CONCLUSION

RCE conducted a risk-based analysis of Genneia Solar Projects in Argentina including a strategic review of the Project data, documentation, and emission reduction calculations. RCE concludes to a reasonable level of assurance that the GHG assertion is free of material misstatement. The emission reductions resulting from avoided emissions that would have been generated in the absence of the project for the reporting period 1 December 2018 to 31 December 2020 can be considered in conformance with the:

- Verified Carbon Standard version 4.0 (19 September 2019),
- Clean Development Mechanism methodology ACM0002, “Grid-connected electricity generation from renewable sources” (version 19.0), and
- Validated VCS Project Description, 26 December 2019.

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
18 Dec 2018 – 31 Dec 2018	4,797	0	0	4,797
2019	86,444	0	0	86,444
2020	94,003	0	0	94,003
Total	185,244	0	0	185,244