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GOLD STANDARD FOR THE GLOBAL GOALS (GS4GG)
REPORT
-
VERIFICATION

Project Title:	120 MW Solar PV Plant by Juniper Green Sigma Private Ltd. in Gujarat
Monitoring Period:	01/07/2022 to 31/12/2022 (Both days included)
GS project ID:	GS 7572
Internal ID:	A+SH_SYST_TQC_GS_VER_6923
Customer:	M/s Juniper Green Sigma Private Limited
Date:	16/08/2023
Revision:	04

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SUMMARY			
Reference No.	**Date** *(first version)*	**Version No.**	**Date** *(last version)*
A+SH_SYST_TQC_GS_VER_6923	11/05/2023	04	16/08/2023

GS4GG Verification	
GS4GG Certified Product *(sought)*:	GS VER
GS4GG SDG Impact Statement *(sought)*:	Impact Certification

General Information	
Client	M/s Juniper Green Sigma Private Ltd.
Project Title	120 MW Solar PV Plant by Juniper Green Sigma Private Ltd. in Gujarat
Project Participants	M/s Juniper Green Sigma Private Ltd.
Project Location	35 MW- Village Babsar, Taluka – Vadali, District Sabarkantha, Gujarat 40 MW- Village Bhordu, Taluka- Tharad, District Banaskantha, Gujarat 45 MW- Village Bilvania and Vatakasuka, Taluka-Dhansura, District Aravali, Gujarat
Contact Person	Mr. Sudesh Pradhan
Monitoring Period:	01/07/2022 to 31/12/2022 (Both days included)

GS4GG Version: GS4GG Principles and Requirements 1.2 **GS4GG Activity Requirements**: RE Activity Requirements, version 1.4 **Applied Methodology Version**: ACM0002 "Grid-connected electricity generation from renewable sources" Version 20.0	**GS4GG Sectoral Scope**: 2 **UNFCCC CDM Sectoral Scope**: 1 **Technical Area**: 1.2
Monitoring Report Version: 01 Date: 03/03/2023	**Final Monitoring Report** Version: 04 Date: 16/08/2023

Certified Project Design Document: Assessment team checked the registered GS4GG PDD Version 06 dated 11/01/2021 /03/

Estimated values for the Monitoring period for all SDG:

SDG	SDG	Values estimated for period
7	Renewable Electricity Generated	150,261 MWh for the Monitoring period (184 days)
8	Trainings provided to O&M staff	01 Trainings/annum provided to O&M Staff
8	Number of Jobs generated	08 employments/annum
13	Emission Reduction	138,783 tCO_2 for the monitoring period (184 days)

Actual values for the Monitoring period for all SDG:

SDG	SDG	Actual values for this monitoring period
7	Renewable Electricity Generated	136,165 MWh electricity generation
8.6.1	Trainings provided to O&M staff	21 Trainings provided to O&M Staff
8.5.1	Number of Jobs generated	02 employments generated during current monitoring period Including 19 old employee, Currently 21 people employed at project site.

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SUMMARY		
8.5	Income Generated (INR)	13,486,667- for all 21 employees 516,750 – For 2 employee
13	Emission Reduction	128,253 tCO_2e

Selected Sustainable Development Goals (SDGs): 7; 8; 13

Verification Summary

LGAI Technological Center, S.A. (hereafter referred to as Applus+ Certification) has been contracted by M/s Juniper Green Sigma Private Limited. to perform the 4th verification of "120 MW Solar PV plant by Juniper Green Sigma Private Ltd. In Gujarat" (Ref. No. GS7572) applying the methodology ACM0002 Version 20.0.

The management of M/s Juniper Green Sigma Private Ltd. is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions.

A desk review and an interview have been conducted to verify the data submitted in the monitoring report. Applus+ Certification confirms the following have been reviewed:

a. The registered GS4GG PDD including the monitoring plan; /03/
b. Monitoring report(s); /01/
c. The applied monitoring methodology; /04/
d. Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board;
e. GS4GG guidelines and related Annexes of GS guidelines;/06/
f. All information and references relevant to the project activity's resulting in emission reductions.

M/s Juniper Green Sigma Private Limited. is the promoter of the project activity and involves installation of 120 MW grid connected solar PV plant in Gujarat, India. Electricity generated from the project activity is sent to Indian grid of India. As per GS4GG registered PDD/03/, the project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 275,305 tCO_2e per annum, & 138,783 tCO_2e for Current M.P. thereon displacing 298,072 MWh/year & 150,261 MWh for current M.P. amount of electricity from the generation-mix of power plants connected to the Indian electricity grid, which is mainly dominated by thermal/ fossil fuel-based power plant. The project activity is commissioned phase wise on following dates/11/: -

S. No	Project location	Capacity (MW)	Commissioning Date	Purpose
1.	Village-Bilvaniya, Vantda Suka, Taluk-Dhansura, District- Aravalli	25 MW_{AC}/36.247 MW_{DC}	17/10/2020	Sale to Grid
2.	Village-Babsar,Taluk-Vadalli, District-Sabarkantha	25 MW_{AC}/36.41 MW_{DC}	19/10/2020	
3.	Village-Babsar,Taluk-Vadalli, District-Sabarkantha	10 MW_{AC}/14.696 MW_{DC}	28/11/2020	
4.	Village-Bilvaniya, Vantda Suka, Gadha Kot,Taluk-Dhansura, District-Aravalli	20 MW_{AC}/29.459 MW_{DC}	28/11/2020	
5.	Village-Bhordu, Taluk-Tharad, District-Banaskantha	25 MW_{AC}/36.541 MW_{DC}	09/12/2020	
6.	Village-Bhordu, Taluk-Tharad, District-Banaskantha	15 MW_{AC}/21.86 MW_{DC}	17/12/2020	

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SUMMARY
The monitoring of emission reduction and sustainable development indicators has been carried out in accordance with respective registered PDD[/03/]. Applus+ Certification confirms that the project is implemented in accordance with the validated and registered GS4GG PDD. The monitoring plan complies with the applied methodology ACM0002 Version 20.0[/04/] and the GS4GG guideline[/06/] the monitoring has been carried out in accordance with the monitoring plan. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information reviewed and evaluated Applus+ Certification confirms that the implementation of the project has resulted in 128,253 tCO_2e emission reductions during period 01/07/2022 to 31/12/2022 (Both days included). During the current monitoring period VVB team has raised 01: CL, 4: CAR, & 1 FAR is raised in this verification.

ASSESSMENT TEAM		
Team Members	**Type of Resource[1]**	**Organization** *(for OEs)*
Lead Auditor: Dr. Atul Takarkhede	☐ IR ☐ EI ☒ OE	M/s True Quality Certifications Private Limited
Technical Expert: Dr. Atul Takarkhede	☐ IR ☐ EI ☒ OE	M/s True Quality Certifications Private Limited
Observer: Mr. Khagesh Sharma Ms. Ritu Singh	☐ IR ☐ EI ☒ OE	M/s True Quality Certifications Private Limited
Technical Reviewer: Mr. Denny Xue	☐ IR ☒ EI ☐ OE	Applus+ Certification

Note: *In line with the GS Rule Update RU 2020 PR – PR V1.2 dated on 02/04/2020, the VVB hereby discloses that the VVB has performed Validation of this project with different team members than in this verification. During Validation of project activity Mr. Pankaj Kumar (Team leader) was the member of assessment team.*

[1] IR (Internal Resource); EI (External Individual); OE (Outsourced Entity)

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ABBREVIATIONS	
ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Small Scale Methodology
Applus+ LGAI / Applus+	LGAI Technological Center, S.A. (Applus+ Certification)
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CDM VVS version 03	CDM validation and verification standard for project activities, Version 03.0
CEA	Central Electricity Authority
CERs	Certified Emission Reductions
CL / CR	Clarification Request
CM	Combined Margin
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
DNA	Designated National Authority
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAR	Forward Action Request
GETCO	Gujarat Electricity Transmission Corporation Limited
GHG	Greenhouse Gas(es)
GS4GG (or GS)	Gold Standard for Global Goals
GUVNL	Gujarat Urja Vikas Nigam Limited
INR	Indian Rupees
IPCC	Intergovernmental Panel on Climate Change
JGSPL	Juniper Green Sigma Private Limited
JMR	Joint Metering Reports
KP	Kyoto Protocol
kV	Kilo Volt
MP	Monitoring Plan
MR	Monitoring Report
MW/MWh	Mega Watt / Mega Watt Hour
N/A	Not Available
NGO	Non-Governmental Organization
O&M	Operation and Maintenance

OM	Operational Margin
PDD	Project Design Document
PP	Project Participant
PV	Photo Voltaic
QA/QC	Quality Assurance / Quality Control
SDG	Sustainable Development Goal
SEB	State Electricity Board
TAC	Gold Standard Technical Advisory Committee
tCO2e	Tonnes of Carbon Di Oxide equivalent
UNFCCC	United Nations Framework Convention for Climate Change
VER	Verified Emission Reductions
VVB	Validation and Verification Body
VVS	Validation and Verification Standard

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1. INTRODUCTION

1.1 Objective

LGAI Technological Center, S.A. (hereafter referred to as **Applus+ Certification**) has been contracted by M/s Juniper Green Sigma Private Limited to perform the 4th verification of "120 MW Solar PV Plant by Juniper Green Sigma Private Ltd., in Gujarat" applying the methodology ACM0002 Version 20.0/04/ and GS4GG guideline/06/. Gold Standard projects must undergo periodic audits and verification of emission reductions as the basis for issuance of Gold Standard VERs.

The objective of the verification work is to assess the compliance with the requirements of paragraph 62 of the CDM Modalities and Procedures as well as the GS4GG guidelines/06/ and relevant Principles and Requirements. According to this assessment Applus+ Certification shall:

- Ensure that the project activity has been implemented and operated as per the registered PDD and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place;
- Ensure that the published MR and other supporting documents provided are complete, verifiable and in accordance with applicable CDM validation and verification standard for project activities, Version 03.0/05/ and Gold Standard/06/ (i.e., applicable GS4GG requirements);
- Ensure that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology/04/;
- Evaluate the data recorded and stored as per the ACM0002 Version 20.0/04/.

1.2 Scope

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the VVB. The verification is based on the submitted monitoring report, registered PDD/03/ as well as its validation report, the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the EB, GS4GG guideline and any other information and references relevant to the project activity's resulting emission reductions. These documents are reviewed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures, GS4GG guideline/06/ and relevant Principles and Requirements, as well as their related rules and guidance.

Based on the requirements in the CDM validation and verification standard for project activities, Version 03.0 for the project activities as well as the GS4GG guidelines, Applus+ Certification has applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion.

The verification considers both quantitative and qualitative information on emission reductions. The verification also considers the monitoring of SDG goals as per the requirement of GS4GG guideline/06/.

The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

1.3 Description of the project activity

M/s Juniper Green Sigma Private Limited. is the promoter of the project activity and involves installation of installation of 120 MW solar PV plant in Gujarat. Electricity generated from the project activity is sent to Indian grid of India. As per GS4GG PDD/03/, the project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 275,305 tCO_2e per annum & estimated 138,783 tCO_2e for current monitoring period, thereon displacing 298,072 MWh/year & 150,261 MWh in current M.P., amount of electricity from the generation-mix of power plants connected to the Indian electricity grid, which is mainly dominated by thermal/ fossil fuel-based power plant.

The monitoring of emission reduction and sustainable development indicators has been carried out in accordance to respective registered GS4GG PDD/03/.

2. METHODOLOGY

Applus+ Certification approach to the verification is a two-stage process. In the 1st stage, Applus+ Certification completed a strategic review and risk assessment of the project's activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

Applus+ Certification used a periodical Verification Checklist which, based on the risk-based assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

In the 2nd stage, using the Verification Checklist, Applus+ Certification verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a Onsite Audit/14/and a desk review of the Monitoring Report. This Verification Report describes the findings of this assessment.

2.1 Appointment of the assessment team

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. (Applus+ Certification) has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center, S.A. (Applus+ Certification).

The composition of audit team shall be approved by the LGAI Technological Center, S.A. (Applus+ Certification) ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Dr. Atul Takarkhede	LA/TE	YES	YES	NA	YES
Mr. Khagesh Sharma	OBS	No	No	NA	YES
Ms. Ritu Singh	OBS	No	No	NA	YES
Mr. Denny Xue	TR	YES	YES	NA	NA

The complete list of CVs is included as Appendix 3 of this report.

2.2 Document review

The Monitoring Report version 01 was submitted to VVB before the verification activities started. The MR was assessed based on all the relevant documents. The aim of the assessment in the desk review was to:

- Verify the completeness of the data and the information presented in the MR;
- Check the compliance of the MR with respect to the monitoring plan depicted in the registered GS4GG PDD, verify that the applied methodology was carried out. Particular attention to the frequency of measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures of the power plant was checked by the assessment team.
- Evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.
- Please check reference 4 of this report for detail of the documents checked.

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2.3 Onsite assessment and follow up interview

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1	Pradhan	Mr. Sudesh	PP representative	26/03/2023, 27/03/2023	Project implementation,	Dr. Atul Takarkhede & Mr. Khagesh Sharma, Ms. Ritu Singh
2	Goswami	Mr. Amrutgiri Goswami	Plant Head (120 MW)		Baseline emissions, ER calculations, Sustainable monitoring,	
3	Mishra	Ms. Dhriti	Asst. Manager, Infinite Solutions		Stakeholder meeting- Employment opportunities, Standard of Livings etc.	
4	Sanghavi	Mr. Jayesh	Local stakeholder (Sabarkantha)			
5	Parekh	Mr. Bhavesh	Local stakeholder (Banaskantha)			
6	Ahir	Mr. Rakesh	Local stakeholder (Aravali) GJ			

The objective of the on-site assessment is to:

- Confirm the implementation and operation of the project;
- Review the data flow for generating, aggregating and reporting the monitoring parameters;
- Confirm the correct implementation of procedures for operations and data collection;
- Cross-check the information provided in the MR documentation with other sources;
- Check the monitoring equipment against the requirements of the PDD, PDD and the approved methodology, including calibrations, maintenance, etc.;
- Review the calculations and assumptions used to obtain the GHG data and ER;
- Identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.
- Confirm the SDG goals/ Sustainable monitoring parameter as per the registered PDD
- To understand grievance (if any) from the villagers during the monitoring period.
- Local stakeholder meeting details:

Name of the stakeholder	Mr. Jayesh Sanghavi
Occupation	Villager Bilvaniya
VVB QUESTION: Did PP/vendors have employed locals in the operation and maintenance of the project activity? Answer: Yes. PP as well as vendors have given preference to the local peoples residing in the vicinity of the area for various employment.	

Assessment team noted that locals were employed for the project activity and same is verified from the list of local employees submitted by PP. VVB also during the interviews with site incharge noted that that local people were employed for security and operation related work like vegetation improvement and other unskilled work and operation and electrical work. VVB QUESTION: Please provide the details of Hazardous waste/waste oil generated, disposed, any spillages and Leakage of any diesel or waste oil during the period 01/07/2022 to 31/12/2022 Answer: No such waste generation or leakage occurred during the period. Please refer the HSE records submitted. VVB also verified HSE records submitted and confirmed that no Hazardous waste/waste oil generated, disposed, any spillages and Leakage of any diesel or waste oil during the monitoring period.

Name of the stakeholder	Mr. Bhavesh Parekh
Occupation	Local stakeholder Panchayat Member:- village - Bhordu
VVB QUESTION: In which area you belong to? Answer: Residing in the village near to the plant substation. VVB questions: In which department you are working? Answer: Working as office staff. VVB question: Did company pays salary regularly? Answer: Yes. PP paying salary regularly. VVB interviewed stakeholder on CSR activities by company, employment for locals, grievance filing & redressal mechanism of company, bird deaths due to WTGs & other SDG parameters. Assessment team verified grievance register, HSE records submitted and confirmed that no Hazardous waste/waste oil generated, disposed, any spillages and Leakage of any diesel or waste oil during the monitoring period.	

Name of the stakeholder	Mr. Rakesh Ahir
Occupation	Local stakeholder village:- Babsar
VVB QUESTION: In which area you belong to? Answer: Residing in the village near to the plant substation. VVB questions: In which department you are working? Answer: Working as office staff. VVB question: Did company pays salary regularly? Answer: Yes. PP paying salary regularly. VVB interviewed stakeholder on CSR activities by company, employment for locals, grievance filing & redressal mechanism of company, bird deaths due to WTGs & other SDG parameters. Assessment team verified grievance register, HSE records submitted and confirmed that no Hazardous waste/waste oil generated, disposed, any spillages and Leakage of any diesel or waste oil during the monitoring period.	

Name of the stakeholder	Mr. Bharat Gadhvi

Occupation	Panchayat Member: Babsar village
VVB QUESTION: Have you seen any changes in the economic or social aspects of the village since the project was implemented? Answer: Yes, employment is generated and the locals are given priority. Assessment team noted that locals were employed for the project activity for the current monitoring period. VVB also like to conclude that during the site visit it was observed that local people were employed for security and operation related work like vegetation improvement and other unskilled work. VVB also found that skilled local persons were also employed by the organization for the operation and maintenance of the power plant.	

Name of the stakeholder	Mr. Jayanti Bhai
Occupation	Panchayat Member: Bilvaniya
VVB QUESTION: Are you satisfied with the way the project was implemented into the village? Answer: Yes, We all are satisfied with the way the project was implemented into the village. VVB also like to verify about reality check of satisfaction due to project activity into the village through conversation.	

2.4 Quality of evidences

Sufficient evidence covering the full verification period in the required frequency is available to verify the figures stated in the final MR Version 03/01/. Specific cross-checks have been done in cases that further sources were available. The monitoring report's figures were checked by the assessment team against the raw data. The data collection system meets the requirements of the monitoring plan as per the methodology.

2.5 Reporting of findings

As an outcome of the verification process, the assessment team can raise different types of findings.

Where a non-conformance arises the assessment team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;

- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

The assessment team shall raise a Clarification Request (CR) if information is insufficient or not clear enough to determine whether the applicable CDM/GS requirements have been met.

All CARs /CRs/ FARs raised during verification shall be resolved prior to submitting a request for issuance.

Forward Action Requests (FARs) may be raised during verification for actions where the monitoring and reporting require attention and/or adjustment for the next verification period.

Please refer Appendix 1 of this report. Total numbers of CARs: 04, CLs: 01, FARs: 01 (from performance review) FARs: 01 (during this verification)

2.6 Internal Quality Control

As a final step of verification, the final documentation including the verification report has to undergo an internal quality control by the Technical Reviewer. Each report has to be finally approved either by the VVB's Technical Manager or the Deputy. This approval process also includes another quality assurance check in terms of Administrative Review. In case one of these two persons is part of the assessment team, the final approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the Request for Issuance is submitted to the GS Registry along with the relevant documents.

3. VERIFICATION FINDINGS

3.1 FARs from Validation / Previous Verification

This is the 4th verification for the project activity and 01 FAR was raised during Design certification by Sustain Cert during design review of the project activity and successfully closed.. Detailed information mentioned in Appendix 1 below.

3.2 Project Implementation in accordance with the registered Project Design Document

The project activity was fully implemented according to the description presented in the registered GS4GG PDD/03/. The assessment team confirms, through the interview with the PP representative during onsite audit and document review that all physical features of the project activity including data collecting systems and storage have been implemented in accordance with the registered GS4GG PDD/03/.

The technical features of the equipment's have been verified by the assessment team by reviewing following documentation:

- Interviews of onsite personnel's during onsite audit/14/.
- Technical detail analysis (operational manual document) of the power plant from the documents submitted by the manufacturer/19/
- Commissioning certificates of the plant/11/
- PPA for the project activity/17/

M/s Juniper Green Sigma Private Limited. has installed Solar PV project at, Sabarkantha, Banaskantha and Aravalli districts in Gujarat State, India with capacity of 120 MW.

- Technical details are as follows:

Technical specifications of the equipment installed at project activity are provided in the section B.1 of the MR/01/. Same are confirmed during the onsite visit & interviews with PP and Specification document/19/, commissioning certificates/11/ & validation report/03/ found correct.
The project activity was commissioned as stated in table above and same was verified from the commissioning certificate issued by Gujarat Energy Development Agency/11/.
The project activity was in normal operational during the monitoring period and the same has been confirmed during interviews with PP and crosschecked from review of Invoices/09/ raised by JGSPL to GUVNL submitted by PP. Power plant was working throughout the monitoring period and same have been confirmed from Plant Log Book records relevant to the monitoring period. No unusual activities were observed during the monitoring period and the plant was undergone scheduled as well as emergency maintenance as per the recommendation of the manufacturers. No forced breakdown observed and the same is confirmed by the assessment team with the plant log details and invoices raised to GUVNL.

The verification team has reviewed the commissioning certificates/11/ & PPA/17/ to conclude that the name plate capacity of the project activity is 120 MW. Moreover, during the onsiteaudit, assessment team checked the technical details as part of the JGSPL operational manual and found that the rated capacity of the project is 120 MW_{AC} (25 MW_{AC} + 25 MW_{AC} + 10 MW_{AC} + 20 MW_{AC} +25 MW_{AC} + 15 MW_{AC}). Also, the name plate capacity of the project is checked during the verification, which was again checked during siteaudit which also confirms the rated capacity to be 120 MWe. Thus, accepted by VVB.

During onsite visit VVB team observed that the actual capacity of the project is 120 MW. The capacity of the project is more than 15 MW and thus the same qualifies as large-scale project activity.

The plant is located in Gujarat state of India. Assessment team also checked the locations of the project activity in the registered GS4GG PDD, validation report as well as through google maps tool to check the coordinates. Thus, location provided in MR are found in line with registered documents of the project activity and are as stated in table above.
The project is connected to Indian grid/17/ (as per the grid structure of India) and the same is found correct by the assessment team during the review of commissioning certificate/11/, PPA/17/ and interviews with PP. The grid structure as mentioned in the GS4GG PDD/03/ is still applicable for the project and ex-ante emission factor as proposed in the GS4GG PDD/03/ is used for emission reduction calculation. Assessment team noted that the project activity has entered a power purchase agreement with the Gujarat Urja Vikas Nigam Limited. /17/. The electricity is fed in the Integrated Indian grid.
Thus, assessment team confirms that the project is implemented as per the registered GS4GG PDD/03/ and no change in project design is envisaged for the present monitoring period.

The amount of GS-VERs achieved during the present monitoring period are 8%/02/ lower than the estimated value in the GS4GG PDD/03/. This is due to the season of solar radiation availability during the monitoring period.

Assessment team also checked the metering details of the connected Solar PV plant and found the same to be appropriate. The meters placed at sub stations were confirmed from the interviews with PP during onsite audit., and commissioning certificate submitted by PP.

Assessment team also checked that the project is not registered under the REC mechanism of India and the same can be cross-checked at https://recregistryindia.nic.in. Also, International REC (I-REC) registry (https://evident.services/device-register) is cross-checked and found that this project is not under I-REC as well. Thus, double counting for the current monitoring period is ruled out.

Assessment team also checked the other registries like UNFCCC and VCS and found that project is not registered with VCS. However, project activity has submitted prior consideration of CDM to UNFCCC on 09/08/2019 The PP further provided a declaration/21/ stating that PP will not be claiming the credits accrued from this monitoring period into other registries.

The assessment team independently checked the claims by logging into CDM UNFCCC site for any project with the same capacity under the same PP. No such projects were shown in the website; hence the claims of the PP were accepted regarding the ERs generated from this monitoring period being used only under GS4GG.

Grievance Mechanism:

During the interviews with PP, the verification team confirmed that there is a grievance book/form with GS contact information at the project site office and are accessible to local stakeholders. By checking grievance book submitted by PP, it was able to confirm there are no comments received from the local residents for the present monitoring period towards project activity. Local residents are happy with the implementation of the project activity as it entrusts employment and improve living standard of local residents and villagers.

Materiality adopted in Verification:

Consideration of materiality in planning the verification

No.	Risk that would lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk levels	Justification	
1	Human errors: Readings from Meters (if not automatic)	LOW	Human error is likely to occur if the monitoring personnel are not trained well or inexperienced in data recording procedures and monitoring processes.	All the personal are well trained to monitor and collect data and thus risk associated with Human error is minimized. Assessment team checked the training records to confirm that all the personal are well trained to handle the activities related to monitoring. Assessment

No.	Risk that would lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk levels	Justification	
				team checked the training records for the complete monitoring period and confirm that the personal are well trained to monitor and collect data for the project activity.
2	Human error: Quantification of emission reduction	LOW	Use of spread sheets without adequate data control, changes/updates, version tracking, traceability and security	All the energy statement i.e., invoices as well as JMR for the complete monitoring period are checked and thus the assessment team confirms that the ER value is conservative and correct.

Consideration of materiality in conducting the verification

In line with Guidelines for Application of materiality Version 02 in verifications, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. It follows the paper trail back to the raw data such as meter reading records and invoices. There are no material errors, overestimation of ER, omission or misstatement.

3.3 Compliance of the Monitoring Plan with the Monitoring Methodology

The verification team is able to confirm that the monitoring plan is in accordance with the approved methodology ACM0002 Version 20.0/04/, applied by the GS project activity. No deviation, correction or permanent change to the monitoring plan has been requested or observed.

3.4 Completeness of Monitoring

The monitoring has been carried out in accordance with the monitoring plan contained in the GS4GG PDD. All parameters were monitored and determined as per the monitoring plan of the GS4GG PDD as follows:

a. Data and parameters fixed ex ante or at renewable of crediting period

$EF_{OM,y}$, $EF_{BM,y}$ & **$EF_{CM,y}$** was mentioned as ex-ante fixed parameter.

The values considered ex-ante for this monitoring period were cross-checked with registered GS4GG PDD/1/ and their respective sources. The summary of all the ex-ante parameters has been given below:

Parameter/ Description	Value applied	MoV
SDG 13: Climate Action **$EF_{OM,y}$** Operating Margin CO_2 emission factor in year y	0.9622 tCO_2/MWh	The value of the parameter was checked from registered GS4GG PDD[1]. The value of the parameter was sourced from CEA database version 15[3].
SDG 13: Climate Action **$EF_{BM,y}$** Build Margin CO_2 emission factor in year y	0.8811 tCO_2/MWh	The value of the parameter was checked from registered GS4GG PDD[1]. The value of the parameter was sourced from CEA database version 15[3].
SDG 13: Climate Action **$EF_{CM,y}$** Combined Margin CO_2 emission factor in year y	0.9419 tCO_2/MWh	The value of the parameter was checked from registered GS4GG PDD[1]. The value of the parameter was calculated using CEA database version 15[3].

The value mentioned in the Monitoring Report and Emission Reduction Spreadsheet are consistent with the registered GS4GG PDD. The applied value is correct and justified.

b. Data and parameters monitored

As per the registered monitoring plan and requirement of the registered methodology following parameters needs to be monitored:

Relevant SDG indicators = 7.2.1 Affordable and Clean Energy

1. **$EG_{facility,y}$:** Quantity of net electricity supplied to the grid (MWh/y), total 136,165 MWh of energy supplied to the grid during the current monitoring period.

The parameter is calculated using the difference of export and import value measured from the tri-vector meter and recorded net generation values in state energy account on monthly basis by GETCO SLDC. The parameter also forms the part of invoices raised by JGSPL to GUVNL and is in line with the registered PDD. Assessment team checked the value of Net electricity exported calculated from State Electricity Account (SEA) records and found the same to be correct. The Net electricity supplied to the grid was consistent with the invoice statements and found correct. Thus, it is confirmed that the values are correct. Assessment team thus confirm that the value of 136,165 MWh as mentioned in the MR version 03 and emission sheet is correct and the same is in compliance with the requirement of Para 364 and 395 (e) of "CDM validation and verification standard for project activities, Version 03.0".

The Assessment team performed analysis of the JMR's issued by the State Utility. The Assessment team also cross-verified the Power Exported values with the help of invoices raised by PP and found to be consistent as per the JMR issued. Calibration of the meter is carried out once in 3 years, and the calibration from last verification is still applicable. Thus, calibration is in line with para 369 & 370 of the "CDM validation and verification standard for project activities, Version 03.0". Detail of installed monitoring meters are provided in appendix 3 of the verification report, Kindly review it.

Relevant SDG indicators = 13: Take urgent action to combat climate change and its impact consumption

2. **Air Quality:** Reduction in CO_2 emission reduction due to implementation of project activity (tCO_2e)

   The parameter is calculated using product of electrical energy baseline $EG_{facility,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor. Same is demonstrated in Emission reduction sheet and achieved a value of emission reduction for the current monitoring period is 128,253 tCO_2e. The same is thus acceptable to the assessment team and thus emission reduction calculation is correct.

   Relevant SDG indicators = 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities

3. **Quantitative employment & Income generation**: Number of project employees with Number of male/female, permanent/temporary, age and person with disabilities & Salary given to the employees of the project.

   The parameter is taken as the total number of people employed directly due to the project activity and better salary given and salary from the O&M contract during current monitoring period. Same is found as 21 employees employed in this monitoring period, 2 new employment created in the current monitoring period, 19 old employee, and 13,486,667 INR salary given to them. The same is thus acceptable to the assessment team and verified using Salary slips submitted.

   Relevant SDG indicators = 8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training

4. **Quality of Employment:** Number of Trainings provided to employees & O&M staff

   The parameter is taken as the total number of trainings conducted during the current monitoring period for the employees. Same is found as 21 trainings.

   Details of training provided during current monitoring period mentioned in appendix 02 of final monitoring report version 03, same is thus acceptable to the assessment team and verified using training records submitted.

5. **Safeguarding principal 4.3.5:** Hazardous and Non-hazardous Waste.

   The Parameter is referred as the monitoring of the manufacture, trade, release, and use of hazardous and non-hazardous chemicals and/or materials. VVB team verified that, no Hazardous waste/waste oil generated, disposed, any spillages and Leakage of any diesel or waste oil during the monitoring period. Same has been verified. The value for this parameter is taken from Plant records, HR and PP declaration. Verification team interviewed employee during the onsite audit..

c. Implementation of sampling plan

PP did not apply sampling plan to determine data and parameters monitored during this monitoring period. The verification team has checked all the documents such as JMR statement issued by GETCO / Invoices raised to JGSPL. etc. and hence sampling plan was not required. The verification team hereby confirms that has checked all the documents.

d. Compliance with the calibration frequency requirements for measuring instruments

The calibration details such as make, accuracy class serial number is as per the meter available onsite and checked during onsite verification . The Calibration details[10] are presented in section

3.4 (b) of this report. Calibration[10] of meters carried out by a M/s Hi-Tech Meter Laboratory, Ahmedabad (NABL Certified TC-5914) to carry out calibration.

Assessment team checked the same and found that the calibration done during commissioning is valid for the present monitoring period and traceability is ensured. The meters were calibrated as per the norms of NABL and the meters are within the permissible error limit.

3.5 SDG Outcomes Monitoring

In the Registered GS4GG PDD indicators are chosen for the monitoring of sustainable monitoring:

Meth/tool	Relevant SDG indicator	GS PDD	MR	Compliance
Quantity of net electricity supplied to the grid	SDG 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh	Yes
• Number of employment generation and better salary, • Quality of employment	8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities SDG 8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training Quality of Employment	• Training of Staff • Number of employment generation and better salary	• Training of Staff • Number of employment generation and better salary	Yes
Take urgent action to combat climate change and its impacts	SDG 13: Take urgent action to combat climate change and its impacts	Emission reductions achieved per year	Emission reductions achieved per year	Yes

The verification of the parameters required by the monitoring plan is provided in section 3.4 (b) above

Relevant SDG outcome has been included in ER sheet and have been found correct.

During the interviews with PP, the verification team confirmed that there is a grievance book[15] at project site. Every stakeholder has access to the grievance register and can lodge grievance any time. If any grievance was observed or received is resolved as per the standard operating procedures of the company. By checking grievance book[15] submitted by PP, the assessment team was able to confirm that there are no negative comments received from the local residents for the present monitoring period. Staff complaints/grievances were addressed as per the company polices. Local residents are happy with the implementation of the project activity as it entrusts employment and improve living standard of local residents and villagers.

Assessment team also checked the Indian domestic REC web site (https://recregistryindia.nic.in/) & International REC device registry (https://evident.services/device-register) and confirms that

the project VVBs not benefit from REC mechanism nor intends to take it in near future.

Assessment team also checked the other registries like UNFCCC and VCS and found that project is not registered with both mechanisms.

Applus+ Certification conducted an interview with the project owner and local stakeholders please find the summary of the interview as below:

Sections	Debriefing
Trainings & salaries of the employees	During verification process Mr. Sudesh Pradhan, PP representative team was interviewed. It was noted that regular technical & nontechnical trainings were conducted and the salaries are in line with the industry standard.

In short, it is Applus+ Certification's opinion that the monitoring of the project owner with respect to sustainability parameters are in line with requirement of the GS4GG guideline.

Summary of ex-post values of each SDG outcome for the current monitoring period

Item	Baseline estimate	Project estimate	Net benefit
SDG 7: Affordable and Clean Energy	0 MWh	136,165 MWh	136,165 MWh
SDG 8: Decent Work and Economic Growth	0 Training provided to O&M Staff 0 employments	21 Employees, 21 training conducted. Salary provided to 02 employees hired during current Monitoring Period & 19 old employee– 13,486,667 INR/year.	No. of trainings conducted: 21 Trainings No. of employment opportunities created: 2 employments created during current M.P. & 19 old employee INR 13,486,667 for 21 employee INR 516,750 for 2 employee
SDG 13: Climate Action	128,253 tCO_2e	0 tCO_2e	128,253 tCO_2e

Comparison of actual value of outcomes with estimates in approved GS4GG PDD

Item	Values estimated in ex ante calculation of approved PDD	Actual values achieved during this monitoring period
SDG 7: Affordable and Clean Energy	298,072 MWh/year 150,261 MWh for current MP	136,165 MWh
SDG 8: Decent Work and Economic Growth	01 trainings provided to O&M Staff 15 employment generation	21 Trainings provided to O&M Staff 2 employments generation INR 516,750
SDG 13: Climate Action	275,305 tCO_2e/year 138,783 tCO_2e for current MP	128,253 tCO_2e

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3.6 Assessment of Data and Calculation of Greenhouse Gas Emission Reductions

As a result of verification of the ER calculation process, the assessment team confirmed that all the parameters required for the determination of the emission reductions have been included in the Monitoring Report Version 01[/01/], Version 03[/01/] and corresponding ER calculation spread-sheets and are consistent with the applied methodology ACM0002 Version 20.0 and the monitoring plan contained in the registered GS4GG PDD. The parameters are complete in this monitoring period.

After verifying the reported figures with the raw data or primary sources, it's confirmed that the values of the parameters from the raw data sources/primary sources are consistent with those quoted in the Monitoring Report Version 01[/01/], Version 03[/01/], and corresponding ER calculation spread-sheets. The verification assessment and the means of verification for the same has been stated unambiguously in the relevant sections of the report above. See below for the detailed data:

Baseline Emissions for the amount of electricity supplied by project activity, BE_y is calculated as:

The baseline emission is using equation below:

$$\mathbf{BE_y = EG_{PJ,y} \times EF_{grid,CM.y}} \quad ;$$

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

BE_y = 136,165 x 0.9419
= 128,253 tCO_2e (round down figure)

Thus, the baseline value of each SDG outcome is summarised as follows;

Item	**Baseline value**
SDG 7: Affordable and Clean Energy	No Activities in the baseline
SDG 8: Decent Work and Economic Growth	No Activities in the baseline
SDG 13: Climate Action	128,253 tCO_2e

Project emissions:

The project is a Solar PV project, no fossil fuel is be consumed according to the methodology ACM0002 Version 20.0 & according to registered GS4GG PDD, PE_y = 0 tCO_2e

Leakage:

As per ACM0002 Version 20.0, No leakage emission needs to be considered.

Emission reductions:

Thus, the emission reductions are:

$ER_y = BE_y - PE_y$

= 128,253 – 0

= 128,253 tCO_2e

The amount of GS-VERs achieved (128,253 tCO_2e) during the present monitoring period are 8%/02/ lower than the estimated value (138,783 tCO_2e) for the current monitoring period as per the PDD/03/. This is due to the change in season of solar radiation availability during the monitoring period. VVB team verified that, Same is not in control of project proponent.

3.7 Management and Operational System

The responsibilities of data measurement, collection, verifying, archiving etc. have been clearly defined in the registered GS4GG PDD. The same practice is followed onsite and it is confirmed by the assessment team during the interviews with PP. The data related to ER calculation/02/ as well as data monitoring, collection process etc. have been internally reviewed by the management of the Monitoring team regularly. The responsibility of each function is consistent with the monitoring plan in the registered GS4GG PDD/03/.

The information flow of each parameter has been verified by the assessment team via interviewing with responsible personnel.

It's verified during the interviews with PP & through document review, that the monitoring procedure as well as the internal quality management and control procedures are stipulated in the GS4GG PDD/03/. The monitoring personnel have been interviewed by the assessment team and it's confirmed that the monitoring is implemented as per the procedure. Also, the training record has been checked by the assessment team and it is confirmed that the monitoring personnel are get sufficient train to perform the monitoring.

All the data and documents, either hard copies or soft copies, is kept for two years after the end of the last crediting period or the last issuance of GS VERs for this Project, whichever occurs later.

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4. REFERENCE

LIST OF DOCUMENTS	
S. No.	**Document/Evidence/Reference/Web link, Version, Date**
1.	Monitoring Report Version 01 dated 03/03/2023, Monitoring report version 03 dated 01/06/2023, Final Monitoring Report 04 dated 16/08/2023
2.	ER sheets Version 01 dated 03/03/2023 ER Sheets version 02 dated 09/05/2023 ER Sheets version 2.2 dated 01/06/2023 Final ER Sheet version 2.3 dated 16/08/2023
3.	Registered GS4GG PDD Version 06 dated 11/01/2021 Final GS Validation report version 02 dated 11/09/2020 GS Design review documents
4.	ACM0002: Grid-connected electricity generation from renewable sources, Version 20.0
5.	CDM validation and verification standard for project activities, Version 03.0
6.	GS4GG guideline
7.	Training records of the employees (both skilled/non-skilled)
8.	O & M policy
9.	Monthly reports issued by state utility and invoices raised by PP for the complete monitoring period
10.	Calibration certificates of the complete monitoring period
11.	Commissioning certificate of Solar PV Power plant issued by Gujarat Energy Development Agency with ref. No. GEDA/SOL-26414/2020/OW/9405, Dated 28/10/2020
12.	Log book records for scheduled maintenance of the power plant for the complete monitoring period
13.	Sample work contract for both skilled and non-skilled manpower
14.	Onsite audit
15.	Grievance register
16.	HSE procedures
17.	Power purchase agreement
18.	O&M agreement
19.	Technical manual from the Manufacturer
20.	Employment records
21.	No Double Counting Declaration by PP dated 23/01/2023

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5. FINAL VERIFICATION STATEMENT

Applus+ Certification has been engaged by M/s Juniper Green Sigma Private Limited. to perform the 4th verification of the "120 MW Solar PV Plant by Juniper Green Sigma Private Ltd. in Gujarat" (GS Ref. No. GS7572).

The management of M/s Juniper Green Sigma Private Limited. is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project's Monitoring Plan in the registered GS4GG PDD and the applied methodology ACM0002 Version 20.0.

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board and Gold Standard. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. A reasonable level of assurance has been achieved during this verification. The verification can confirm that:

- the project is operated as planned and described in the project design document and GS4GG PDD approved by the EB and GS;
- the monitoring plan is as per the applied methodology;
- the monitoring in Monitoring Report is as per the GS4GG PDD and the monitoring plan approved by the EB and GS;
- the development and maintenance of records and reporting procedures are in accordance with the registered monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.

In our opinion, the GHG emission reductions for "**120 MW Solar PV plant by Juniper Green Sigma Private Limited in Gujarat**" for the monitoring period 01/07/2022 to 31/12/2022 (Both days included) as reported in Monitoring Report, prepared on the basis of the project's Monitoring Plan are fairly stated.

Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period:	01/07/2022 to 31/12/2022 (Both days included)

Verified emissions in the above reporting period:

Leakage emissions	0 tCO_2e equivalents
Project emissions	0 tCO_2e equivalents
Baseline emissions	128,253 tCO_2e equivalents
Emission reductions	128,253 tCO_2e equivalents

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Month wise breakup of the verified emission reduction is given below:

Year	**Baseline emission (tCO_2)**	**Project Emission (tCO_2)**	**Emission Reduction (tCO_2)**
01/07/2022 to 31/12/2022	128,253	0	128,253
Total	**128,253**	**0**	**128,253**

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Date: 16/08/2023

Lead Auditor: Dr. Atul Takarkhede
Tech. Expert: Dr. Atul Takarkhede
Observer: Mr. Khagesh Sharma
Ms. Ritu Singh

Tech. Reviewer: Mr. Denny Xue

Approver *(Applus+ Certification VVB Technical Manager)*
Mr. Agustín Calle de Miguel

ASSESSMENT TEAM	
Lead Auditor: Dr. Atul Takarkhede	**Technical Reviewer:** Mr. Denny Xue
Signature: 	Signature: 
Approver: Mr. Agustín Calle de Miguel	
Signature: 	

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Appendix 1: Corrective Action Request/Clarification Request/Forward Action Request resolution table

Type:	☐ CAR ☐ CL/CR ☒ FAR	Number:	01
Raised by:	Sustain-cert	Ref. to checklist in above tables:	N/A
Description of the audit finding		Date:	11/05/2023
1. All stakeholders invited to participate in the first consultation should be invited to the Stakeholder Feedback Round.' This requirement is not met during stakeholder feedback round. VVB shall interview local villagers, panchayat members and landowners in next verification and check whether there is any feedback/comments on the project activity.			
Project Participant's response		Date:	11/05/2023
A remote audit was conducted on 21/11/2022. During the remote audit, the VVB team interviewed the panchayat members of all districts and local villagers who reside near the project location. VVB verified that, during the interview, no negative comment/ feedback was received regarding the project activity			
Documentation provided as evidence by Project Participant			
-			
Auditor's assessment comment		Date:	11/05/2023
VVB team verified that, for the current monitoring verification, VVB team has conducted the onsite visit at every location of the project activity, Moreover, VVB team interviewed the panchayat members of all districts and local villagers who reside near the project location, and ask them about the feedback if they have any issue or problem, after interviewing them it was found that, there is no negative comments received from the stakeholder of all three location. Thus, this FAR is closed.			

Type:	☐ CAR ☒ CL/CR ☐ FAR	Number:	01
Raised by:	Dr. Atul Takarkhede	Ref. to checklist in above tables:	N/A
Description of the audit finding		Date:	03/05/2023
1. In order verify any comment raised by sustaincert during previous verification, PP request to submit the performance review report to the VVB team.			
Project Participant's response		Date:	09/05/2023
One FAR was raised by sustaincert during previous verification, performance review report is submitted with the responses to verify the same.			
Documentation provided as evidence by Project Participant			
Performance review report.			
Auditor's assessment comment		Date:	10/05/2023
VVB team verified that, PP has submitted the previous performance review report, and 1 FAR was raised by sustain-cert which is address above. **CL is closed.**			

Type:	☒ CAR ☐ CL/CR ☐ FAR	Number:	01
Raised by:	Dr. Atul Takarkhede	Ref. to checklist in above tables:	3.2
Description of the audit finding		Date:	03/05/2023

1. As per MR GS4GG template guideline V1.1, the product requirements applied in key information is found inconsistent, as the project activity is renewable energy. Corrective action sough. 2. VVB team found that, PP has not provided the details about breakdown during current monitoring period. However, to verify the same breakdown log sheet is not submitted. 3. PP request to submit the PPA and commissioning certificate to the VVB team.

Project Participant's response	Date:	09/05/2023
1. As per MR GS4GG template guideline V1.1, the product requirements GHG Emissions Reduction & Sequestration has been checked because it is for required to issue VERs/PERs and label CERs whereas Renewable Energy Label required to label Renewable Energy Certificates therefore GHG Emissions Reduction & Sequestration is checked. 2. There is no breakdown during the current monitoring period. 3. PPA and commissioning certificate are submitted with responses.		
Documentation provided as evidence by Project Participant		
1. PPA 2. Commissioning certificate		
Auditor's assessment comment	Date:	10/05/2023
1. VVB team observed that, PP has updated the monitoring report and Emissions Reduction & Sequestration is checked, GHG Emissions Reduction & Sequestration is for required to issue VERs/PERs. Which is accepted by VVB. 2. During the site visit it was found that, there were no major breakdown during the current monitoring period. Same was verified through monthly generation report. 3. Project proponent has submitted the power purchase agreement and commissioning certificate to the VVB team. **Thus, all CAR is closed in this section.**		

Type:	☒ CAR ☐ CL/CR ☐ FAR	Number:	02
Raised by:	Dr. Atul Takarkhede	Ref. to checklist in above tables:	NA
Description of the audit finding		Date:	03/05/2023
Following observation is made by the assessment team regarding monitoring parameter; **For SDGs 7:** 1. VVB team observed that, PP has not submitted the Monthly meter reading for complete monitoring period, moreover to crosscheck the same invoice is also found missing. Correction sought. **For SDG 8.5:** Decent work and Economic Growth; 1. VVB team found that, PP has not submitted the employment generation records for current monitoring period. 2. Employment contract and Salary slips are missing. 3. In-order to verify the total income of the employee, PP needs to submit the supporting documents. 4. PP needs to bifurcate the training details in monitoring report. Moreover, to verify the same PP needs to submit training records for complete monitoring period. Thus, Corrective Action Sought			

Type:	☒ CAR ☐ CL/CR ☐ FAR	Number:	02
Raised by:	Dr. Atul Takarkhede	Ref. to checklist in above tables:	NA
Project Participant's response		Date:	09/05/2023

For SDGs 7:

1. The JMRs and invoices are resubmitted with the responses for complete monitoring period.

For SDG 8.5:

1. Employment generation records (Offer letters) for current monitoring period are submitted with the responses.
2. Employment records and salary slips are submitted with the responses.
3. O&M declaration is submitted with the with the responses in order to for show the total income of the employees.
4. The training details bifurcated and added in section D.2 Data and parameters monitored of monitoring report and Training details for current monitoring period are also submitted with the responses.

Documentation provided as evidence by Project Participant

1. JMRs.
2. Invoices.
3. Employment records and Offer letters.
4. Salary slips.
5. Training records.
6. O&M declaration.

Auditor's assessment comment	Date:	10/05/2023

For SDGs 7:

1. Monthly joint meter reading for complete month has been submitted to the VVB team, the net generation value in emission reduction sheet is found consistent with monthly JMR, moreover to verify the same PP has submitted the invoice. No error has been observed in this section.

For SDG 8.5:

VVB team verified that, PP has submitted following document.

1. Employment generation records for current monitoring period.
2. Employment contract and Salary slips for current monitoring period.
3. Salary slip has been submitted to verify income of the employee.
4. Training details is now bifurcated in revised monitoring report. Same has been verified through , training records for complete monitoring period.

Thus, CAR is closed in this section.

Type:	☒ CAR ☐ CL/CR ☐ FAR	Number:	03
Raised by:	Dr. Atul Takarkhede	Ref. to checklist in above tables:	
Description of the audit finding		Date:	03/05/2023
PP requested to submit; no double accounting declaration for current monitoring period to the VVB team.			
Project Participant's response		Date:	09/05/2023

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No double accounting declaration for current monitoring period is submitted with the responses.		
Documentation provided as evidence by Project Participant		
No double accounting declaration		
Auditor's assessment comment	Date:	10/05/2023
VVB team has verified that, PP has submitted the No double accounting declaration dated 23/01/2023 which is accepted by VVB team. **Thus, CAR is closed.**		

Type:	☒ CAR ☐ CL/CR ☐ FAR	Number:	04
Raised by:	Atul Takarkhede	Ref. to checklist in above tables:	3.4
Description of the audit finding		Date:	03/05/2023
1. The details of monitoring meters and calibration dates is provided in Monitoring report. Moreover, to verify the same kindly submit the calibration certificate.			
Project Participant's response		Date:	09/05/2023
1. Calibration certificates are submitted with the responses to verify the details of monitoring meters and calibration dates is provided in the Monitoring report (Appendix – 1).			
Documentation provided as evidence by Project Participant			
1. Calibration certificates 2. Updated MR			
Auditor's assessment comment		Date:	10/05/2023
VVB team verified that, submitted details of the meter calibration is found consistent and no delay is observed in calibration period. Which is verified through the submitted copy of the calibration certificate. **Thus, CAR is closed.**			

Appendix 2: Audit Team CVs

Name	SHORT CV. BACKGROUND INFORMATION
Dr. Atul Takarkhede	**Dr. Atul Takarkhede** is Ph.D. (Environmental Sciences) from Institute of Science, RTM Nagpur University, Nagpur, and he has already published different technical papers related to environmental sciences. He counts with more than 11 years of experience in field of Environmental Auditing, consulting and accreditation. He is an expert in ISO 9001-14001, CO2/GHG Reporting, Carbon Foot Print, Energy, Water and Waste Management reporting for organizations' environmental performance. His professional portfolio is mainly related with carrying out EIA, conducting QA/QC of EIA Reports; conducting environmental/water audits; NABET requirements appliance, functional area expert in Water Pollution & Solid & Hazardous Waste management among others. Furthermore, he counts with solid experience on CDM-VCS-GS consultancy and auditing. Currently he is associated with True Quality Certifications Private Limited and empanelled with Applus+ Certification to carry out GHG audits in the aforementioned schemes.
Mr. Khagesh Sharma	Mr. Khagesh Sharma, has done bachelor of engineering in Electronic and Communication Engineering from Rajiv Gandhi Proudyogiki Vishwavidyalaya, (Bhopal), India. He has 3 years of experience as Engineer, involve in the solar project design & consulting, Operation and maintenance activities. Currently, he is working in True Quality Certifications Pvt. Ltd. (An outsource entity for LGAI Technological Center, S.A. (Spain) "Applus+ Certification") since 2022 and has been involved in supporting Audit teams for Verifications of Project Activities (Renewable and non-Renewable projects) under CDM/VCS/GS4GG programs.
Ms. Ritu Singh	Ms. Ritu Singh has done Masters in Environmental Science from Central University of South Bihar, Gaya and bachelor of Science in Zoology from Magadh Mahila College, Patna University, India. She has done Masters' research focused on solid waste management during and post covid-19 pandemic and conducted a survey in Medical Colleges of Bihar to study the trends of waste management. Currently, She is working in True Quality Certifications Pvt. Ltd. (An outsource entity for LGAI Technological Center, S.A. (Spain) "Applus+ Certification") since 2021 and has been involved in supporting Audit teams for Verifications of Project Activities (Renewable and non-Renewable projects) under CDM/VCS/GS4GG programs.
Mr. Denny Xue	**Mr. Denny Xue** (Master's Degree in Environmental Engineering, Bachelor's Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and technical review with Applus+. Before he joined Applus+ LGAI, he has been working for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development. Mr. Denny Xue is based in Shanghai, China.

Appendix 3: Meter Calibration:

For 35 MW solar plant connected to Babsar Substation:

S.No.	Meter Number	Type	Make	Accuracy class	Date of calibration	Due date
1	GJ4583A	Main meter	Secure	0.2s	26/06/2020	25/06/2023
2	GJ4584A	Check meter	Secure	0.2s	26/06/2020	25/06/2023
2	GJ4585A	Standby meter	Secure	0.2s	26/06/2020	25/06/2023

For 40 MW solar plant connected to Bhordu Substation:

S.No.	Meter Number	Type	Make	Accuracy class	Date of calibration	Due date
1	GJ4603A	Main meter	Secure	0.2s	21/07/2020	20/07/2023
2	GJ4604A	Check meter	Secure	0.2s	21/07/2020	20/07/2023
2	GJ4605A	Standby meter	Secure	0.2s	21/07/2020	20/07/2023

For 45 MW solar plant connected to Khadol Substation:

S.No.	Meter Number	Type	Make	Accuracy class	Date of calibration	Due date
1	GJ4606A	Main meter	Secure	0.2s	18/08/2020	17/08/2023
2	GJ4607A	Check meter	Secure	0.2s	18/08/2020	17/08/2023
2	GJ4608A	Standby meter	Secure	0.2s	18/08/2020	17/08/2023