

GOLD STANDARD FOR THE GLOBAL GOALS (GS4GG) REPORT

- VERIFICATION



Project Title:	300 MW Solar PV Plant at Bhadla, Rajasthan
Monitoring Period:	01/11/2022 to 30/09/2023 (Both days included)
GS project ID:	GS 7726
Internal ID:	TQC 0424
Customer:	Clean Solar Power (Bhadla) Pvt. Ltd.
Date:	11/12/2024
Revision:	1.2

SUMMARY			
Reference No.	Date (first version)	Version No.	Date (last version)
TQC 6623	13/04/2024	1.2	11/12/2024
GS4GG Verification			
GS4GG Certified Product (sought):		GS VER	
GS4GG SDG Impact Statement (sought):		Impact Certification	
General Information			
Client	Clean Solar Power (Bhadla) Pvt. Ltd.		
Project Title	300 MW Solar PV Plant at Bhadla, Rajasthan		
Project Participants	Clean Solar Power (Bhadla) Pvt. Ltd.		
Project Location	Bhadla Village, Jodhpur District, Uttar Pradesh state, India		
Contact Person	Mr. Vijay Anand		
Monitoring Period:	01/11/2022 to 30/09/2023 (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 Current Methodology Version: ACM0002 "Grid-connected electricity generation from renewable sources" Version 21.0		GS4GG Sectoral Scope: 2 UNFCCC CDM Sectoral Scope: 1 Technical Area: 1.2	
Monitoring Report Version: 01 Date: 09/02/2024		Final Monitoring Report Version: 05 Date: 11/12/2024	
Certified Project Design Document Version: Assessment team checked the registered GS4GG PDD version 05 dated 15/01/2022 /03/			
Estimated values for the Monitoring period for all SDG:			
SDG	SDG	Values	
7	Renewable Electricity Generated	678,838.99 MWh for the Monitoring period (334 days)	
8	Trainings provided to O&M staff	01 training per annum	
8	Number of Jobs generated	36 no. of jobs per annum	
13	Emission Reduction	634,442 tCO ₂ e for the monitoring period (334 days)	
Actual values for the Monitoring period for all SDG:			

SUMMARY																				
SDG	SDG	Actual values for this monitoring period																		
7	Renewable Electricity Generated	700,290.44 MWh electricity generation																		
8	Trainings provided to O&M staff	06 Trainings provided to O&M Staff																		
8	Number of Jobs generated	42 no. of jobs generated																		
13	Emission Reduction	654,490 tCO ₂ e																		
Selected Sustainable Development Goals (SDGs): 7; 8; 13																				
Verification Summary																				
<p>LGAI Technological Center, S.A. (hereafter referred to as Applus+ Certification) has been contracted by Clean Solar Power (Bhadla) Pvt. Ltd. to perform the 3rd verification of "300 MW Solar PV Plant at Bhadla, Rajasthan" (Ref. No. GS7726) applying the methodology ACM0002 Version 20.0.</p> <p>The management of Clean Solar Power (Bhadla) Pvt. Ltd. is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions.</p> <p>A desk review and a remote audit has been conducted to verify the data submitted in the monitoring report. Applus+ Certification confirms the following have been reviewed:</p> <ul style="list-style-type: none">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. <p>Clean Solar Power (Bhadla) Pvt. Ltd. is the promoter of the project activity and involves installation of installation of 300 MW solar power project in Rajasthan state, 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 693,327 tCO₂e per year through displacing 741,845 MWh per year 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.</p> <p>The project activity is commissioned phase wise on following dates^{/11/}: -</p> <table><tr><th>S. No</th><th>Project ID</th><th>Project location</th><th>Capacity (MW)</th><th>Commissioning Date</th></tr><tr><td>1</td><td>R1 Plot</td><td rowspan="3">Village –Bhadla, Tehsil-Phalodi, Dist.-Jodhpur</td><td>100 MW</td><td>15/02/2020</td></tr><tr><td>2</td><td>R2 Plot</td><td>100 MW</td><td>28/02/2020</td></tr><tr><td>3</td><td>R3 Plot</td><td>100 MW</td><td>10/12/2019</td></tr></table> <p>The monitoring of emission reduction and sustainable development indicators has been carried out in accordance to respective registered PDD^{/03/}.</p>			S. No	Project ID	Project location	Capacity (MW)	Commissioning Date	1	R1 Plot	Village –Bhadla, Tehsil-Phalodi, Dist.-Jodhpur	100 MW	15/02/2020	2	R2 Plot	100 MW	28/02/2020	3	R3 Plot	100 MW	10/12/2019
S. No	Project ID	Project location	Capacity (MW)	Commissioning Date																
1	R1 Plot	Village –Bhadla, Tehsil-Phalodi, Dist.-Jodhpur	100 MW	15/02/2020																
2	R2 Plot		100 MW	28/02/2020																
3	R3 Plot		100 MW	10/12/2019																

SUMMARY

During the course of verification, 06 nos. of clarification requests were raised and no corrective action was raised. All the clarification requests are successfully closed. No forward action request was raised during the current verification.

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 guidelines^{/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 654,490 tCO₂e emission reductions during period 01/11/2022 to 30/09/2023 (Both days included).

ASSESSMENT TEAM

Team Members	Type of Resource ¹	Organization (for OEs)
Lead Auditor and Technical expert: Deepak Pundlik	<input type="checkbox"/> IR <input type="checkbox"/> EI <input checked="" type="checkbox"/> OE	M/s True Quality Certifications Private Limited
Technical Reviewer: Dr. N. Premjit Singh	<input checked="" type="checkbox"/> IR <input type="checkbox"/> EI <input type="checkbox"/> OE	LGAI Technological Center S. A. (Applus+ Certification)

Note: In line with the GS4GG VVS version 1.0 paragraph 6.8.1 b. , the VVB hereby discloses that the same VVB has performed validation of this project with team members as Mr. Sukanta Das, Mr. Pankaj Kumar and Mr. Denny Xue (Technical Reviewer) the member of assessment team.

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

ABBREVIATIONS	
ACM	Approved Consolidated Methodology
AM	Approved 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	CDM validation and verification standard for project activities
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
GHG	Greenhouse Gas(es)
GS4GG (or GS)	Gold Standard for Global Goals
IPCC	Intergovernmental Panel on Climate Change
KP	Kyoto Protocol
MP	Monitoring Plan
MR	Monitoring Report
NGO	Non-Governmental Organization
OM	Operational Margin
PDD	Project Design Document
PP	Project Participant
SDG	Sustainable Development Goal
SECI	Solar Energy Corporation of India Limited
TAC	Gold Standard Technical Advisory Committee
UNFCCC	United Nations Framework Convention for Climate Change
VVB	Validation and Verification Body
VVS	Validation and Verification Standard

Contents

1.	INTRODUCTION	7
1.1	Objective	7
1.2	Scope	7
1.3	Description of the project activity	8
2.	METHODOLOGY.....	8
2.1	Appointment of the assessment team.....	8
2.2	Document review.....	9
2.3	On site assessment and follow up interviews.....	9
2.4	Quality of evidences	10
2.5	Reporting of findings	10
2.6	Internal Quality Control	11
3.	VERIFICATION FINDINGS.....	11
3.1	FARs from Validation / Previous Verification.....	11
3.2	Project Implementation in accordance with the registered Project Design Document	11
3.3	Compliance of the Monitoring Plan with the Monitoring Methodology	16
3.4	Completeness of Monitoring	16
3.5	SDG Outcomes Monitoring.....	21
3.6	Assessment of Data and Calculation of Greenhouse Gas Emission Reductions..	23
3.7	Management and Operational System	24
4.	REFERENCE	26
5.	FINAL VERIFICATION STATEMENT	27
	Appendix 1: Corrective Action Request/Clarification Request/Forward Action Request resolution table	30
	Appendix 2: Calibration details of monitoring meters	36
	Appendix 3: Audit Team CVs.....	37

1. INTRODUCTION

1.1 Objective

LGAI Technological Center, S.A. (hereafter referred to as Applus+ Certification) has been contracted by Clean Solar Power (Bhadla) Pvt. Ltd. to perform the 3rd verification of "300 MW Solar PV Plant at Bhadla, Rajasthan" applying the methodology ACM0002 Version 20.0^{/04/} and GS4GG guidelines^{/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 GS 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 Validation and verification standard, version 1.0^{/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, monitoring reports and verifications reports for earlier monitoring periods, the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the EB, GS4GG guidelines 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 guidelines^{/06/} and relevant Principles and Requirements, as well as their related rules and guidance.

Based on the requirements of GS4GG validation and verification standard, version 1.0 and 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 guidelines^{/06/}.

The verification is not meant to provide any consultancy towards the project developer. 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

"Clean Solar Power (Bhadla) Pvt. Ltd." is the promoter of the project activity and involves installation of 300 MW solar power project in Rajasthan. Electricity generated from the project activity is dispatched to Indian electricity grid. As per GS4GG PDD^{03/}, the project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 693,327 tCO₂e per annum, thereon displacing 741,845 MWh/year 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.

In the 2nd stage, 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 remote audit and a desk review of the monitoring report. This verification report describes the findings and its closure for 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 following qualification levels for team members, in particular to this project, that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA)
- Technical Expert (TE)
- Auditor in Training (AiT)
- Observer (OBS)
- Technical Reviewer (TR)
- Any of the above roles in training (iT)

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
Mr. Deepak Pundlik	LA and TE	YES	YES	NA	YES
Dr. N. Premjit Singh	TR	YES	YES	NA	YES

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.

2.3 On site assessment and follow up interviews

In the context of verification, GS4GG Site Visit and Remote Audit Requirements and Procedures – V2.0 section 31. requires VVB to conduct an on-site visit within two years of project start date and once within every three years after the first physical site visit.

This is 3rd verification for the project and during 2nd verification which was conducted in the last calendar year, an onsite visit was conducted on 22/03/2023 and hence for the current verification, VVB has conducted remote audit. During remote audit, PP representatives and stakeholders were interviewed. The local stakeholders were interviewed to sought inputs and was confirmed that they are not directly linked / employed for the project tasks. Their perspectives were notably

more accurate and unbiased, as they were not subject to the same pressure or influences typically encountered within the project environment.

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Mr. Buri	Manish	Site incharge	15/02/2024	Project implementation, , operational issues, ongoing, stakeholder consultation, SDG goals etc.	Mr. Deepak Pundlik
2.	Mr. Pandey	Manish Kumar	Senior manager – O & M		Employment opportunities, Trainings, Salaries etc.	
3.	Mr. Singh	Ravindra	Engineer HSE		Project details, oprational issues if any, ongoing, stakeholder consultation, Employment opportunities, Standard of Livings etc.	
4.	Mr. Vhora	Jignesh	Local stakeholder		MR, Baseline emissions, ER calculations etc.	
5.	Mr. Muleek	Rajaram	Local stakeholder			
6.	Ms. Patil	Sheetal	EKI Energy Services Ltd.			

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 05^{01/}. Specific cross-checks have been carried out in cases where 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: 00, CLs: 06, FARs: 01.

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 final set of documents are shared with the PP. PP then submits Request for Issuance to the GS Registry along with the relevant documents.

3. VERIFICATION FINDINGS

3.1 FARs from Validation / Previous Verification

This is 4th verification for the project activity and a FAR was raised during the previous verification as a part of performance review. Same is now addressed in appendix 1 below.

3.2 Project Implementation in accordance with the registered Project Design Document

The project activity is fully implemented according to the description presented in the registered GS4GG PDD^{/03/}. The assessment team confirms, through the site visit 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 site visit.
- Technical detail analysis of the equipments from the documents submitted by the manufacturer.
- Commissioning certificates of the plant
- PPA for the project activity
- Clean Solar Power (Bhadla) Pvt. Ltd. has installed solar power project at Bhadla Village, Jodhpur District, Rajasthan State, India with capacity of 300 MW.

Project promoter	Clean Solar Power (Bhadla) Pvt. Ltd.
Title of project activity	300 MW Solar PV Plant at Bhadla, Rajasthan
GS Registration No.	GS 7726
GS Version applied	The project has been submitted to GS4GG as per the guidelines of Gold Standard for Global Goals "Principles & Requirements" Version 1.2. Hence the current verification of the project activity has followed the GS4GG version of the Gold Standard.
Baseline and monitoring methodology	ACM0002, version 20.0/5/ - Grid connected renewable electricity generation
Project type	The purpose of the project activity is to generate electricity through Solar Power Plant and inject the same to national electricity grid of India
Project scale	Large
Location of the project activity	Bhadla, Jodhpur, Rajasthan, India 27° 28' 20.7336" (N) , 72° 0' 13.572" (E)
Project's crediting period	10/12/2019 to 09/12/2024
Period verified in this verification	01/11/2022 to 30/09/2023 (Inclusive of both days)

Technical details of the plant are as follows:

Item	Description
Plant Capacity	300 MW
Solar PV Module	433 MWp
Module Type	Polycrystalline
Capacity of each Module proposed	335 Wp/325 Wp/315Wp
Inverter Capacity	2500 kWac
Solar Inverter	Central

Technical specifications of the Solar PV module are provided in the section B.1 of the MR^{/01/}. Same are confirmed during the interviews with PP and Specification document^{/19/}, commissioning certificates^{/11/} & validation report^{/03/} found correct. The single line diagram provided in section B.1 of MR was checked and found to be depicting actual monitoring system at the site.

The project activity was commissioned in phased manner as confirmed based on interviews and same was verified from the commissioning certificates issued by SECI^{/11/}.

The project activity was in the normal operation during the current monitoring period and the same has been confirmed during interviews with project stakeholders and crosschecked from review of DSA (Deviation Settlement Account)^{/09/} & breakdown records^{/12/} submitted by PP. Solar power plant was working throughout the monitoring period and same has been confirmed from DSA (Deviation Settlement Account) values. No unusual activates observed during the monitoring period and plant had 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 DSA (Deviation Settlement Account).

The verification team has reviewed the commissioning certificates^{/11/} & PPA^{/17/} to conclude that the capacity of the project is same as mentioned in the registered GS4GG PDD and confirmed during interviews with PP representatives. The capacity of the project activity has not changed after the registration of the project activity and same have been confirmed from the commission certificate, PPA and DSA Reports issued by Northern Regional Power Committee and Invoices raised by the PP towards SECI.

Also, from review of other documents such as Commissioning certificate^{/11/}, PPA^{/17/} & DSA Report^{/09/}, it was observed that the rated capacity of the project is 300 MW. The capacity of the project is more than 15 MW and thus the same qualifies as large-scale project activity.

The solar plant is located at R1, R2 and R3 plot- Bhadla phase III Solar Park, Village – Bhadla, Tehsil: Phalodi District Jodhpur, Rajasthan state of India. Assessment team cross-checked the location of the project activity from the registered GS4GG PDD, validation report and geo-tagged photographs provided. Thus, location provided in MR was found in line with registered documents of the project activity.

The timeline of the project 's implementation is as follows:

Milestone of the project activity	Timeline	Assessment by the verification team
Power Purchase Agreement with SECI	27/04/2018	Copy of PPA submitted was checked to confirm the same
EPC contract for the project activity	19/02/2019	Copy of EPC purchase order submitted was checked to confirm the same
Stakeholder Feedback Round (SFR)	26/07/2020	Copy of SFR was submitted which was checked to confirm the same.
Registration of the project activity under GS4GG Principles and Requirements version 1.2	27/09/2021	The project webpage was checked to confirm the same ²
Commissioning of the PV plants	10/12/2019 (100 MW) – R3 15/02/2020 (100 MW) – R1	Copy of commissioning certificates were checked to confirm the same.

² <https://registry.goldstandard.org/projects/details/2571>

	28/02/2020 (100 MW) – R2	
Crediting period		
1 st crediting period	10/12/2019 to 09/12/2024	This is 1 st crediting period
1 st monitoring period	10/12/2019 to 31/07/2021	This is 1 st monitoring period which is within the first crediting period
2 nd monitoring period	01/08/2021 to 31/10/2022	This is 2 nd monitoring period which is within the first crediting period

The project activity is injecting the generated electricity to Indian Electricity Grid^{17/} and the same is confirmed by the assessment team based on the review of commissioning certificate^{11/}, PPA^{17/} and interviews with the site personnel. 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 SECI^{17/}.

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 3.16%^{02/} higher than the estimated value in the GS4GG PDD^{03/}. The monitoring period is of 334 days i. e. less than a year and hence VVB accepted that this higher generation could be due to the higher sunny days during the monitoring period, which is not in control of PP, thus accepted.

Assessment team also checked the metering details of the connected solar plant and found the same to be appropriate. Feeder details were confirmed from the interviews with site personnel, and commissioning certificate submitted.

As per the registered PDD, the technical lifetime of the project activity is 25 years. The commissioning certificate has confirmed that project was commissioned in December, 2019 (1*100 MW) and February, 2020 (2*100 MW). Thus, the remaining lifetime of the project activity is more than 20 years.

Assessment team based on submitted documents such as commissioning certificate, energy generation records and plant breakdown/shutdown records confirm that during current monitoring period, the project was implemented and fully operational.

Assessment team has checked the copy of PPA submitted and confirmed that GHG emissions reductions from the project activity are not accounted for within the relevant system of the host country/ regulator. The PPA does not have any clause which mandates that the generated RE power will be used as RPO for the concerned DISCOM which was confirmed through interview with PP representatives.

Assessment team has checked host country's national climate action plan³ and confirmed that the GS VERs generated from the current monitoring period will not have double counting with national climate policy as the said project is not part of REC mechanism⁴.

³ <https://static.pib.gov.in/WriteReadData/specificdocs/documents/2021/dec/doc202112101.pdf>

⁴ https://www.recregistryindia.nic.in/index.php/publics/accredited_regens

Assessment team has checked other compliance or voluntary market-based mechanisms such as Clean Development Mechanism (CDM), Voluntary Carbon Standard (VCS), Global Carbon Council (GCC), I-REC and Indian REC and confirmed that the project is not registered with any of the same. Hence the submitted declaration with regard to the same is found acceptable.

Assessment team further checked and confirmed that the GHG emissions reductions from the current project activity are not accounted for within the relevant system of the host country/regional regulator or voluntary mechanism i.e. Indian REC mechanism or VCS/GCC registries. PD has also confirmed that VERs for the current monitoring vintage will not be claimed in another standard other than GS.

Assessment team further noted that there is no evidence to confirm that the current project is a part of existing NDC target by the host country. Hence the submitted declaration with regard to the same is found acceptable.

Grievance Mechanism:

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

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 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.

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	
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., DSA Report and the invoices 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

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.

CL 01, 02, 03 and 06 were raised and closed successfully. Refer appendix 1 for more information.

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 GS PDD^{1/}. During the course of verification, all relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement / determination method and applied QA/QC procedures. It is confirmed that the monitoring parameters have been measured / determined without material misstatements.

The verification team reviewed the actual monitoring during the site visit and from document review and compared it against the requirements of the monitoring plan in the GS PDD and found in line. This also confirmed that simplified single line diagram presented in section B.1 of MR is appropriate.

VVB noted that for the current monitoring period, the project activity had scheduled maintenance and no major breakdowns were observed. PD has submitted records of project activity downtime for the current monitoring period which was checked and confirmed by VVB based on the copy of register maintained at the project site.

The verification team assessed the monitoring techniques and each monitoring value in the monitoring report; and provided a short summary on the verification of every parameter listed in the monitoring plan and used for calculation of emission reductions.

Data and parameters fixed ex ante:

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

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	Method of Verification
SDG 13: Climate Action $EF_{OM,y}$ Operating Margin CO ₂ emission factor in year y	0.9568 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 16 ^{3/} .
SDG 13: Climate Action EF_{BM} Build Margin CO ₂ emission factor in year y	0.8682 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 16 ^{3/} .
SDG 13: Climate Action $EF_{CM,y}$ Combined Margin CO ₂ emission factor in year y	0.9346 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 16 ^{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.

Data and parameters monitored (ex-post):

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

The verification of the parameters required by the monitoring plan is provided as follows:

Relevant SDG Indicator	SDG 7.2.1: Renewable energy share in the total final energy consumption	
Data/parameter:	$EG_{facility,y}$	
Unit	MWh	
Description	Total Net electricity exported to the grid	
Source of data checked by the assessment team	REA data from Northern Regional Power committee ^{09/}	
Value(s) of monitored parameter	700,290.44 MWh	
	Year	$EG_{facility,y}$
	2022 (01/11/2022 to 31/12/222)	113,250.18
	2023 (01/01/2023 to 30/09/2023)	587,040.27

Means of verification:	<p>The parameter $EG_{\text{facility},y}$ is taken from REA (Regional Energy Accounting) data under DSA (Deviation Account Settlement) sheet^{/09/} issued by Northern Regional Power Committee (NRPC) of India which provides the values of week wise Net export. The same is thus used for emission reduction calculations by project developer which is found acceptable. The project activity includes metering at the substations managed by SECI. The DSA is uploaded on weekly basis and given in LU and will be converted into MWh. The electricity exported & imported are measured by Energy meters (main meter) installed at each line in substation. The reading is recorded and the difference from last month reading gives the number of units imported/exported. Meters are of 0.2s accuracy class. The export and import reading are continuous and recording frequency is monthly by PD. The QA/QC procedure is as per the requirement of the registered GS4GG PDD^{/03/}. The assessment team confirmed the same during the on-site visit.</p> <p>Assessment team checked all the values of calculated Net electricity supplied to the grid from the DSA Report (provides the value of net export) issued by NRPC. Moreover, as per the requirement of the approved methodology and registered GS4GG PDD, assessment team cross checked the net electricity value as presented in the DSA report with the invoices raised to SECI and found the values match with each other. The same is thus acceptable to the assessment team and thus emission reduction calculation is found to be correct.</p>
Cross check mechanism	The DSA Report is cross-checked with the invoice copies. Emission reduction calculated in thus correct and accurate. The cross-check mechanism is presented in the emission reduction calculation sheet and the same is found correct.

Relevant SDG Indicator	SDG 13.2.1: Total greenhouse gas emissions per year							
Data/parameter:	ER _y							
Unit	tCO ₂ e							
Description	CO ₂ emission reduction due to implementation of project activity							
Source of data checked by the assessment team	Emission reduction sheet ^{/02/}							
Value(s) of monitored parameter	<div>654,490</div> <table><tr><td>Year</td><td>ER_y</td></tr><tr><td>2022 (01/11/2022 to 31/12/222)</td><td>105,843</td></tr><tr><td>2023 (01/01/2023 to 30/09/2023)</td><td>548,647</td></tr></table>		Year	ER _y	2022 (01/11/2022 to 31/12/222)	105,843	2023 (01/01/2023 to 30/09/2023)	548,647
Year	ER _y							
2022 (01/11/2022 to 31/12/222)	105,843							
2023 (01/01/2023 to 30/09/2023)	548,647							
Means of verification:	Assessment team checked that the parameter is calculated as per the applied methodology and registered GS PDD. The electricity exported & imported is measured by Energy meter installed at substation. The DSA Report is cross-checked with the invoice copies. The net electricity is multiplied by emission factor to arrive at the emission reductions and the calculation was checked and found correct.							
Cross check mechanism	All the formulae are applied in line with the registered GS4GG PDD							

Relevant SDG Indicator	SDG 8.6.1: Proportion of youth (aged 15–24 years) not in education, employment or training																																										
Data/parameter:	Quality of employment																																										
Unit	Numbers																																										
Description	Number of Trainings provided to employees ^{/07/}																																										
Source of data checked by the assessment team	Plant records or the training records ^{/07/} for all the employees/VVB interview with employees, local stakeholders etc.																																										
Value(s) of monitored parameter	Assessment team checked Number of Trainings provided to employees & O&M staffs. A total of 06 training programmes ^{/7/} were conducted for the employees and O&M staff. The training records for the monitoring period is checked by the assessment team and found correct.																																										
	<table><tr><td>Year</td><td colspan="2">Number of Trainings</td></tr><tr><td>2022 (01/11/2022 to 31/12/222)</td><td colspan="2">3</td></tr><tr><td>2023 (01/01/2023 to 30/09/2023)</td><td colspan="2">3</td></tr></table>			Year	Number of Trainings		2022 (01/11/2022 to 31/12/222)	3		2023 (01/01/2023 to 30/09/2023)	3																																
	Year	Number of Trainings																																									
	2022 (01/11/2022 to 31/12/222)	3																																									
	2023 (01/01/2023 to 30/09/2023)	3																																									
	The details of the trainings as confirmed from the training records is as below:																																										
	<table><tr><td>Sr. no.</td><td>Topic</td><td>Date</td><td>No. of participants</td></tr><tr><td colspan="4">R1</td></tr><tr><td>1</td><td>First -Aid or Emergency preparedness plan at site</td><td>21/11/2022</td><td>06</td></tr><tr><td>2</td><td>Height work training</td><td>14/02/2023</td><td>10</td></tr><tr><td colspan="4">R2</td></tr><tr><td>1</td><td>Safe material Handling</td><td>03/12/2022</td><td>07</td></tr><tr><td>2</td><td>First -aid</td><td>30/08/2023</td><td>25</td></tr><tr><td colspan="4">R3</td></tr><tr><td>1</td><td>First-aid, CPR, emergency preparation</td><td>22/11/2022</td><td>31</td></tr><tr><td>2</td><td>Height work training</td><td>14/02/2023</td><td>31</td></tr></table>			Sr. no.	Topic	Date	No. of participants	R1				1	First -Aid or Emergency preparedness plan at site	21/11/2022	06	2	Height work training	14/02/2023	10	R2				1	Safe material Handling	03/12/2022	07	2	First -aid	30/08/2023	25	R3				1	First-aid, CPR, emergency preparation	22/11/2022	31	2	Height work training	14/02/2023	31
	Sr. no.	Topic	Date	No. of participants																																							
	R1																																										
	1	First -Aid or Emergency preparedness plan at site	21/11/2022	06																																							
2	Height work training	14/02/2023	10																																								
R2																																											
1	Safe material Handling	03/12/2022	07																																								
2	First -aid	30/08/2023	25																																								
R3																																											
1	First-aid, CPR, emergency preparation	22/11/2022	31																																								
2	Height work training	14/02/2023	31																																								
Means of verification:	The value for this parameter is taken from Plant records. Verification team interviewed some employees & local stakeholders.																																										
Cross check mechanism	Not applicable																																										

Relevant SDG Indicator	SDG 8.5.1: Average hourly earnings of female and male employees, by occupation, age and persons with disabilities
Data/parameter:	Quantitative employment
Unit	Number (employees)
Description	Number of project employees with Number of male/female, permanent/temporary, age and person with disabilities.
Source of data checked by the assessment team	Employment records ^{/20/} for project activity/ Letter from O&M contractor ^{/13/} for employment generation/VVB interview with employees, local stakeholders etc
Value(s) of monitored parameter	<p>Assessment team checked that for Quantity of employment. Employment is given in office work, O&M, Security etc.</p> <p>For the current monitoring period total 42 people were employed as confirmed based on the employment records.</p>

	<p>PD has provided declaration that all the employees were paid more than the minimum wages as confirmed based on sample employment records and according with the minimum wages as per state government regulation.</p> <p>Moreover, Assessment team verified through salary slips that no discrimination made against female workers and same pay-out has been to both male and female as per their pay scale.</p> <p>The breakup of the employees is as below as confirmed during the onsite visit and submitted documents,</p>																
	<table><tr><th>Year</th><th>Skilled</th><th>Unskilled</th><th>Total</th></tr><tr><td>2022</td><td>05</td><td>02</td><td>07</td></tr><tr><td>2023</td><td>32</td><td>03</td><td>35</td></tr><tr><td>Total</td><td>37</td><td>05</td><td>42</td></tr></table>	Year	Skilled	Unskilled	Total	2022	05	02	07	2023	32	03	35	Total	37	05	42
	Year	Skilled	Unskilled	Total													
	2022	05	02	07													
	2023	32	03	35													
	Total	37	05	42													
	<table><tr><th>Year</th><th>Male</th><th>Female</th><th>Total</th></tr><tr><td>2022</td><td>07</td><td>0</td><td>07</td></tr><tr><td>2023</td><td>30</td><td>05</td><td>35</td></tr><tr><td>Total</td><td>37</td><td>05</td><td>42</td></tr></table>	Year	Male	Female	Total	2022	07	0	07	2023	30	05	35	Total	37	05	42
	Year	Male	Female	Total													
	2022	07	0	07													
	2023	30	05	35													
	Total	37	05	42													
	<table><tr><th>Year</th><th>Local</th><th>Non-local</th><th>Total</th></tr><tr><td>2022</td><td>05</td><td>02</td><td>07</td></tr><tr><td>2023</td><td>28</td><td>07</td><td>35</td></tr><tr><td>Total</td><td>33</td><td>09</td><td>42</td></tr></table>	Year	Local	Non-local	Total	2022	05	02	07	2023	28	07	35	Total	33	09	42
	Year	Local	Non-local	Total													
	2022	05	02	07													
	2023	28	07	35													
Total	33	09	42														
<table><tr><th>Year</th><th>Permanent</th><th>Temporary</th><th>Total</th></tr><tr><td>2022</td><td>06</td><td>01</td><td>07</td></tr><tr><td>2023</td><td>33</td><td>02</td><td>35</td></tr><tr><td>Total</td><td>39</td><td>03</td><td>42</td></tr></table>	Year	Permanent	Temporary	Total	2022	06	01	07	2023	33	02	35	Total	39	03	42	
Year	Permanent	Temporary	Total														
2022	06	01	07														
2023	33	02	35														
Total	39	03	42														
Means of verification:	The value for employment created is taken from Plant employment records ^{/13/} , and PP declaration. Verification team interviewed some employees and Local stakeholders.																
Cross check mechanism	Not applicable																

Safeguarding principle:	4.3.5
Data/parameter:	Hazardous Waste and non-hazardous waste
Unit	-
Description	The manufacture, trade, release, and use of hazardous chemicals and/or materials
Source of data checked by the assessment team	Plant Records
Value(s) of monitored parameter	0
Means of verification:	Assessment team checked that the parameter is measured. The waste is disposed to the waste handlers and the firm is complies with all the local laws for monitoring and disposal. The VVB team verified the plant records and observed no hazardous material used / generated or released as waste by project activity during monitoring period
Cross check mechanism	-

a. 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 DSA report issued by NRPC / Invoices raised to SECI etc. and hence sampling plan was not required. The verification team hereby confirms that it has checked all the documents.

b. 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 verification site visit interviews. The Calibration details^{/10/} are presented in Appendix 2 of this report. Calibration^{/10/} of meters carried out by a M/s Authentic Instrument and Automation Pvt. Ltd. for testing and calibration, Govt of India (<http://www.nabl-india.org/>) to carry out calibration.

Assessment team checked the same and found that the calibration conducted is appropriate and correct as 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 Target	SDG	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
<ul style="list-style-type: none"> Quantitative employment, Quality of employment 	8.6: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value		<ul style="list-style-type: none"> Training of Staff Quantitative employment 	<ul style="list-style-type: none"> Training of Staff Quantitative employment 	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
Hazardous Waste	Safeguarding principle: 4.3.5		Hazardous Waste	Hazardous Waste	Yes

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. Same if any, it is resolved as per the standard operating procedures of the company. By checking grievance book^{/15/} submitted by PP, it was able to confirm there are no negative comments received from the local people for the present monitoring period. Staff complaints/grievances were addressed as per the company policies. Local people are happy with the implementation of the project activity as it entrusts employment and improve living standard of local people and villagers.

Assessment team conducted remote interviews with PP representatives and local stakeholders. It was noted that plant operations have not faced any major issues and is operating without any major breakdown.

Local stakeholders confirmed that they found project is working satisfactorily and have no grievances towards the project.

Sections	Debriefing
Project implementation, , operational issues, ongoing, stakeholder consultation, SDG goals etc. Employment opportunities, Trainings, Salaries etc.	PP representative – Mr. Manish Buri confirmed that the project has not faced any issue during current monitoring period. The project staff is well trained and is paid salaries on time. The plant records are maintained on daily basis and are available for review on request on site or during remote interviews too. Local people are employed by project activity and the local stakeholders have not grievance towards the project.
Project details, operational issues if any, ongoing, stakeholder consultation, Employment opportunities, Standard of Livings etc.	Local stakeholders – Mr. Rajaram Muleek and Mr. Jignesh Vohra confirmed that project is in good operating condition and has not caused any issue. They are aware of ongoing stakeholder grievance process and have not grievance for the current monitoring period. The project has helped their local area as it has created jobs for local people.

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	700,290.44 MWh	700,290.44 MWh
SDG 8: Decent Work and Economic Growth	0 Training provided to O&M Staff 0 employment generation	06 Trainings provided to O&M Staff 42 employments generation	No. of trainings conducted: 06 Trainings No. of employment opportunities created: 42 employments
SDG 13: Climate Action	654,490 tCO ₂ e	0 tCO ₂ e	654,590 tCO ₂ e

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	741,845 MWh/year 678,838.99 MWh for current MP	700,290.44 MWh
SDG 8: Decent Work and Economic Growth	01 trainings provided to O&M Staff per year 36 no. of jobs created per year	06 Trainings provided to O&M Staff 42 no. of jobs created
SDG 13: Climate Action	693,327 tCO ₂ e/year 634,442 tCO ₂ e for current MP	654,490 tCO ₂ e

CL 04 and 05 were raised and closed successfully. Refer appendix 1 for more information.

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 05^{/01/} and corresponding ER calculation spread-sheet 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 sources, it's confirmed that the values of the parameters from the raw data sources are consistent with those quoted in the Monitoring Report, version 05^{/01/} and corresponding ER calculation spread-sheet. The verification process for the same has been clearly described in above section of the report. 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:

$$BE_y = EG_{PJ, facility, y} \times EF_{grid, CM, y} \quad \text{Equation 11}$$

$$EG_{PJ, y} = EG_{facility, y} \quad \text{Equation 12}$$

$$BE_y = 700,290.44 \times 0.9346$$

$$= 654,490 \text{ tCO}_2\text{e (round down figure)}$$

Project emissions:

The project is a solar power project, no fossil fuel is be consumed according to the methodology ACM0002, version 20.0 & according to registered GS4GG PDD, PE_y = 0 tCO₂e

Leakage:

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

Emission reductions:

Thus, the emission reductions are:

$$ER_y = BE_y - PE_y$$

$$= 654,490 - 0$$

$$= 654,490 \text{ tCO}_2\text{e}$$

The amount of GS-VERs achieved during the present monitoring period are 3.16% higher than the estimated value in the GS4GG PDD. The current monitoring period is less than of a year (334 days) and there is possibility of more sunny days during the monitoring period. Same is not in control of PP, hence accepted by assessment team.

For the current monitoring period, the comparison of the estimated and actual emission reductions is presented below which was cross checked and confirmed based on the submitted energy generation records and ER sheet.

Monitoring period	01/11/2022 to 31/12/2022	01/01/2023 to 30/09/2023	Total	Unit
Actual emission reductions for this monitoring period	105,843.00	548,647.00	654,490.00	tCO ₂ e/Year
Total Days	61	273	334	days
Estimated value as per registered PDD	693,327	693,327	693,327	tCO ₂ e/Year
Value as per the registered PDD for current monitoring period	115,871	518,571	634,442	tCO ₂ e/Year
Variation observed	-8.65%	5.80%	3.16%	%
PLF as per the registered PDD			28.37%	
PLF achieved for the current monitoring period			29.12%	

VVB noted that the variation in PLF by less than 2% will not have impact on the project's additionality as the registered PDD has already discussed sensitivity analysis with +/- 10% and thus the project remains additional for the current monitoring period.

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 & document review, 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 getting sufficient training to perform the required monitoring activities and other tasks.

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.

4. REFERENCE

LIST OF DOCUMENTS	
S. No.	Document/Evidence/Reference/Web link, Version, Date
1.	Monitoring Report Version 01 dated 09/02/2024 Final Monitoring report version 05 dated 11/12/2024
2.	ER sheet, version 01 dated 09/02/2024 ER sheet, version 02 dated 12/05/2024 ER sheet, version 03 dated 11/12/2024 SDG Impact tool
3.	Registered GS4GG PDD Version 05 dated 15/01/2022, Final GS Validation report version 03 dated 15/01/2022 GS Design & performance review documents
4.	ACM0002: Grid-connected electricity generation from renewable sources, version 20.0
5.	GS4GG validation and verification standard, version 01
6.	GS4GG guidelines: GS Principles and Requirements, version 1.2 GS Renewable energy activity requirements, version 1.4 GS Safeguarding principles and requirements, version 2.1 GS Site visit and remote audit requirements, version 2.0
7.	Employment and training records of the employees
8.	Operation & Maintenance 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 certificates for solar power plant
12.	Log book records for scheduled maintenance of the solar power plant for the complete monitoring period
13.	Sample work contract for both skilled and non-skilled manpower
14.	CSR report
15.	Grievance register
16.	HSE procedures
17.	Power purchase agreement
18.	O&M agreement
19.	Technical datasheet of the solar project
20.	Employment records

5. FINAL VERIFICATION STATEMENT

Applus+ Certification has been engaged by Clean Solar Power (Bhadla) Pvt. Ltd. to perform the 3rd verification of the “300 MW Solar PV Plant at Bhadla, Rajasthan” (GS Ref. No. GS7726).

The management of Clean Solar Power (Bhadla) Pvt. Ltd. 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 of 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 as per GS4GG requirements;
- 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 GS4GG;
- 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 “300 MW Solar PV Plant at Bhadla, Rajasthan” for the monitoring period 01/11/2022 to 30/09/2023 (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: 01/11/2022 to 30/09/2023 (Both days included)

Verified emissions in the above reporting period:

Leakage emissions	0 tCO ₂ e equivalents
Project emissions	0 tCO ₂ e equivalents
Baseline emissions	654,490 tCO ₂ e equivalents
Emission reductions	654,490 tCO ₂ e equivalents

Vintage wise breakup of verified emission reduction is given below:

Year	Baseline emissions (tCO₂)	Project Emissions (tCO_{2e})	Emission Reductions (tCO_{2e})
01/11/2022 to 31/12/2021	105,843	0	105,843
01/01/2022 to 30/09/2023	548,647	0	548,647
Total	654,490	0	654,490



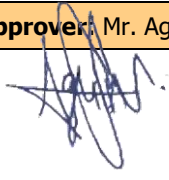
Date: 11/12/2024

Lead Auditor: Mr. Deepak Pundlik

Tech. Reviewer: Dr. N. Premjit Singh

Approver (*Applus+ Certification VVB Technical Manager*)

Mr. Agustín Calle de Miguel

ASSESSMENT TEAM	
Lead Auditor: Deepak Pundlik	Technical Reviewer: Dr. N. Premjit Singh
Signature: 	Signature: 
Approver: Mr. Agustín Calle de Miguel	
Signature: 	

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

Table 1: Forward Action Request from previous performance certification:

Type:	<input type="checkbox"/> CAR <input type="checkbox"/> CL/CR <input checked="" type="checkbox"/> FAR	Number:	01
Raised by:	SustainCert	FVeR Section:	3.6
Description of the audit finding	Date: 11/12/2024		
For future interviews during verifications, VVB shall consider more people directly or indirectly impacted by the project.			
Project Developer's response	Date:		
Not applicable			
Documentation provided as evidence by Project Developer			
Not applicable			
VVB assessment	Date: 11/12/2024		
For the current verification, VVB had requested to arrange for 4-5 local persons who are directly or indirectly impacted by the project. However, at the time of remote audit, PD could arrange only 02 nos. as PD could not arrange for more.			
However, VVB has now raised this FAR for the subsequent verification that minimal 05 people who are directly or indirectly impacted by the project shall be interviewed by VVB during on-site/remote audit which will be conducted.			

Table 2: Clarification requests (CR) from the current performance certification:

Type:	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL/CR <input type="checkbox"/> FAR	Number:	01
Raised by:	Mr. Deepak Pundlik	FVeR Section:	3.2
Description of the audit finding	Date: 02/03/2024		
MR section G.1 mentions that during the current monitoring period, there were no comments/feedbacks received in the grievance register. PP to submit the grievances register for the current monitoring period to confirm the same.			
Project Developer's response	Date: 12/03/2024		
Grievances register for the current monitoring period has been submitted.			
Documentation provided as evidence by Project Developer			
Grievances register			
VVB assessment	Date: 02/04/2024		
VVB has checked the submitted grievance register and confirmed that no comments were received for the current monitoring period which re-affirms the statement made during the remote audit.			
CL 01 is closed.			

Type:	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL/CR <input type="checkbox"/> FAR	Number:	02
Raised by:	Mr. Deepak Pundlik	FVeR Section:	3.2
Description of the audit finding		Date:	02/03/2024
<p>PD shall submit single line diagram of the project activity along details about billing energy meter's locations and also submit the calibration certificates for them.</p> <p>PD shall submit the technical specifications of the solar modules in use along with geo-tagged photographs of the same as during the remote audit, VVB noted that modules with multiple capacity are operational at the project site.</p>			
Project Developer's response		Date:	12/03/2024
<ol style="list-style-type: none"> Single line diagram, technical specification details, and geo-tagged photographs has been submitted. Calibration details are taken from registered monitoring report dated 30/08/2022. 			
Documentation provided as evidence by Project Developer			
Single line diagram, technical specification details, and geo-tagged photographs.			
VVB assessment		Date:	02/04/2024
<p>PD has now submitted single line diagram which confirms the project's details and it also confirms the billing energy meter's location. The submitted calibration certificates were checked to confirm that they are valid for the current monitoring period.</p> <p>PD to provide response for the 2nd point.</p> <p>This CL is open.</p>			
Project Developer's response		Date:	03/04/2024
The technical specifications of the solar modules in use along with geo-tagged photographs has been submitted.			
Documentation provided as evidence by Project Developer			
Technical specifications of solar modules and geo tagged photographs of the project			
VVB assessment		Date:	12/04/2024
<p>VVB has checked the submitted technical specifications to confirm the details presented in the submitted MR and were found correct. PD has submitted geo tagged photographs which confirm the project's location. Hence this part of CL is closed.</p> <p>CL 02 is closed.</p>			

Type:	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL/CR <input type="checkbox"/> FAR	Number:	03
Raised by:	Mr. Deepak Pundlik	FVeR Section:	3.2
Description of the audit finding		Date:	02/03/2024
<p>As per registered PDD section D.1, safeguarding principles 2, 6.1 and 9.5 are to be monitored. VVB noted that the safeguarding principles refer to SDG goals claimed by PD. However, PD shall mention at the respective places about relation between SDG goal and safeguarding principles to be monitored.</p>			
Project Developer's response		Date:	12/03/2024
Safeguarding principles 2, 6.1 and 9.5 are updated in the monitoring report.			
Documentation provided as evidence by Project Developer			

MR V02		
VVB assessment	Date:	02/04/2024
VVB has checked the revised MR and confirmed that section D.2 now mentions safeguarding principles 2, 6.1 which are related to SDG 8.5.1, 8.6.1 respectively. Safeguarding principle 9.5 relates to safeguarding principle 4.3.5 as per the registered PDD and the same is now mentioned.		
CL 03 is closed.		

Type:	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL/CR <input type="checkbox"/> FAR	Number:	04
Raised by:	Mr. Deepak Pundlik	FVeR Section:	3.5
Description of the audit finding	Date:	02/03/2024	
<ol style="list-style-type: none"> PD shall provide a table of SDG achieved in ER sheet and check comments in the ER sheet. PLF value is highlighted in section B.1 which is not matching the same provided in the ER sheet as per actual generation records. 			
Project Developer's response	Date:	12/03/2024	
<ol style="list-style-type: none"> Table of SDG achieved has been added in ER sheet and comments are addressed. Section B.1 of the monitoring report has been updated. 			
Documentation provided as evidence by Project Developer			
<ol style="list-style-type: none"> ER V02 MR V02 			
VVB assessment	Date:	02/04/2024	
<ol style="list-style-type: none"> Revised ER sheet was checked to confirm that SDG wise data is now provided and the comments raised are closed through appropriate corrections. Hence this part of CAR is closed. Revised MR section B.1 was checked confirm that value mentioned is now consistent with the ER sheet. Hence this part of CAR is closed. 			
CL 04 is closed.			

Type:	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL/CR <input type="checkbox"/> FAR	Number:	05
Raised by:	Mr. Deepak Pundlik	FVeR Section:	3.5
Description of the audit finding	Date:	02/03/2024	
<ol style="list-style-type: none"> Section D.2 of MR under SDG 8.5.1 mentions that 1 person is employed at the project site in year 2023 and no person was employed in year 2022. PD shall clarify how the project kept operational without an employee. PD to provide employee records/O&M contractor data to confirm the same. Further, as per the registered PDD, PD to provide 36 jobs per year while for the current monitoring period, jobs offered are 1 nos. PDD also mentions that the parameter will monitor male/women employed, job is of type temporary/permanent or skilled/unskilled and local/non-local. The submitted MR does not provide this information. Also, the value mentioned in section D.2 does not match with section E.4 which mentions current MP employment as 36 nos. 			

2. Section D.2 of MR under SDG 8.6.1 mentions that 2 training per year was conducted. PD is requested to provide training records to confirm the same. Further, table 1 in the MR mentions 4 trainings were conducted which is not line with data presented in section D.2.		
Project Developer's response	Date:	12/03/2024
1. Values mentioned in monitoring report was a typo error and same has been corrected in monitoring report version 02 and parameter has been monitored mentioned as per male/women employed, job is of type temporary/permanent or skilled/unskilled and local/non-local. Employment record has been submitted. 2. Section D.2 and table 1 of the MR has been updated and training records has been provided.		
Documentation provided as evidence by Project Developer		
1. MR V02 and Employee attendance sheet. 2. MR V02 and training records.		
VVB assessment	Date:	02/04/2024
1. PD has revised MR section D.2 to mention total employment as 42 persons. VVB checked this based on the submitted employment records and confirmed the number. The parameter - Quantitative employment now provides data as male/women employed, job is of type temporary/permanent or skilled/unskilled and local/non-local which is confirmed based on employment records. The values are corrected in section D.2 and E.4 and are now consistent. Hence this part of CL is closed. 2. PD has provided training records which confirmed that 06 trainings were conducted during current monitoring period. Same is now updated in the revised MR which is checked and confirmed. Hence this part of CL is closed.		
CL 05 is closed.		

Type:	<input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL/CR <input type="checkbox"/> FAR	Number:	06
Raised by:	Mr. Deepak Pundlik	FVeR Section:	3.5
Description of the audit finding	Date:	02/04/2024	
PD shall transparently provide the following information: 1) Section A.1.1, PD shall include that there is no double counting with national climate policies. 2) PD shall include that the project activity is not registered with any other compliance or voluntary market-based mechanism. PD shall state in the MR that they cannot claim VERs for the same vintage in another standard other than GS. 3) PD shall include that the GHG emissions reductions from the project activity are not accounted for within the relevant system of the host country/regional regulator or voluntary mechanism. 4) PD shall clarify and VVB shall provide an assessment on no risk of double counting concerning national climate policies for the project, also with reference to the existing NDC target of the host country (India). 5) PD shall explain how the income of the person employed at the site is at par with local/National regulations.			
Project Developer's response	Date:	03/04/2024	

1. Section A.1.1 of the monitoring report has been updated.
2. In MR project developer declared that they cannot claim VERs for the same vintage in another standard other than GS.
3. In MR project developer declared that the GHG emissions reductions from the project activity are not accounted for within the relevant system of the host country/regional regulator or voluntary mechanism.
4. In MR project developer declared that in project activity no risk of double counting concerning national climate policies for the project, also with reference to the existing NDC target of the host country (India).
5. The average hourly earnings of a person is calculated by considering 8 hours per day working as per Indian standards and is depicted below. E.g. a person is getting a monthly salary of INR 14,501; then his hourly earnings will be calculated as follows:
 $\text{Hourly Income} = 14,501 / (30 \times 8) = \text{INR } 60.42.$

The minimum wages can be checked from State government published Minimum Wages (Final) Notification 2019: <https://labour.rajasthan.gov.in/notification.aspx>

Also, from the notification from the order published by the Chief Labour Commissioner (Central): <https://clc.gov.in/clc/min-wages>

As per the notification from Chief Labour Commissioner, for semi-skilled workers working in B Category of cities, the daily wage is 357, and accordingly the average hourly earnings come out to be INR 44.62.

Thus, it can be justified that, PP is providing the employees/workers with salary/wages higher than the minimum wages as determined by the updated/ latest minimum wages order published by Chief Labour Commissioner (Central). The same can be checked from the salary slips provided.

Documentation provided as evidence by Project Developer

1. MR V03
2. MR V03
3. MR V03
4. MR V03
5. MR V03

VVB assessment

Date:

12/04/2024

VVB checked the revised MR version 03 and has confirmed that following changes/corrections are incorporated.

1. PD has revised section A.1.1 to include that there is no double counting with national climate policies which has been confirmed by VVB through review of national climate policy and hence accepted. This part of CL is closed.

2) PD has revised section A.1.1 to include that the project activity is not registered with any other compliance or voluntary market-based mechanism and the project will be claimed VERs for the same vintage in another standard other than GS. This is acceptable. Hence this part of CL is closed.

3) PD has revised section A.1.1 to include that the GHG emissions reductions from the project activity are not accounted for within the REC system of the host country which is checked and confirmed. Hence this part of CL is closed.

4) PD has revised section A.1.1 of MR and has provided declaration that there is no risk of double counting concerning national climate policies for the project and the project is not part of the existing NDC target of the host country (India).

5) PD response is accepted. VVB has checked the concerned weblink for minimum wages and salary records submitted to confirm that employee's income at site is at par or more than local/national regulations.

CL 06 is closed.

Table 3: Forward Action Request (FAR) from the current performance certification :

Type:	<input type="checkbox"/> CAR <input type="checkbox"/> CL/CR <input checked="" type="checkbox"/> FAR	Number:	01
Raised by:	Mr. Deepak Pundlik	FVeR Section:	3.6
Description of the audit finding	Date: 11/12/2024		
1. VVB shall conduct the re assessment on PLF and impact on investment analysis. In case the PLF is consistently higher than the estimated value. VVB shall cap the emission reductions suitably for entire crediting period. 2. VVB shall interview minimum 05 people who are directly or indirectly impacted by the project during on-site/remote audit which will be conducted as a part of verification.			
Project Developer's response		Date:	
Documentation provided as evidence by Project Developer			
VVB assessment		Date:	

Appendix 2: Calibration details of monitoring meters

Details of Meter Calibration:

Meter Type	Meter Sl. No.	Meter Make	Accuracy Class	Date of Calibration	Due date for Calibration	Calibration Compliance
Main meter	2106286	G Tech	0.2s	23/06/2021	22/06/2026	No delay Observed
Main meter	E8272938	KYORITSU		23/06/2021	22/06/2026	
Main meter	19090774	Amprobe		23/06/2021	22/06/2026	
Check meter	NA	Fluke		23/06/2021	22/06/2026	
Check meter	R190000453	AIT501		23/06/2021	22/06/2026	
Check meter	R190014149	AET23		23/06/2021	22/06/2026	

Appendix 3: Audit Team CVs

Name	SHORT CV. BACKGROUND INFORMATION
Mr. Deepak Pundlik	<p>Mr. Deepak Pundlik has an experience in climate change, waste management and environmental management fields. He is a post graduate in Environment Sciences from Pune university, India. As a GHG consultant, he handled projects from renewable energy and waste management sectors during his stint with different companies like MITCON, Thermax Limited etc. As a GHG auditor, he is involved in validating/verifying projects under various carbon registries from renewable energy, energy demand, waste management sectors. Currently he is associated with True Quality Certifications Pvt. Ltd. (Applus+ Certification's Outsourced Entity). Mr. Deepak Pundlik is based in Pune, India and is participating as a Team Leader and Technical Expert in the project team.</p>
Dr. N. Premjit Singh	<p>Dr. N Premjit Singh has a PhD in Mechanical Engineering (Thesis: Design and development of a square parabolic dish system with a concentrated photovoltaic (CPV) module for performance improvement) from the Indian Institute of Technology (IIT) Chennai, India, awarded in 2021. M.Tech in Energy Technology, Tezpur University, Napaam, India (2007), and B.Tech in Mechanical Engineering (2005), NERIST, Nirjuli, India. He has extensive experience of about 7 years with DOEs, including UNFCCC CDM and other carbon related schemes (e.g., VCS, GS, GCC), and 5 years + in research projects, renewable energy, and energy audits. In Applus+ since March 2023, he has been the Product Assurance Manager for CDM/VCS/GS4GG/GCC Department to ensure the quality of the performance of different assessments. Coordinate the global team for technical reviews, and identify the training needs for the auditors and technical reviewers to improve the quality of reports. Holds experience as a Lead Auditor, Validator and Verifier for GHG mitigation projects and programmes of activities in Sectoral Scope 1.2 (Renewables), and is qualified as per Applus+ procedures. Dr. N Premjit Singh is based in Gurugram, India and he participates as a part of Technical Review team.</p>