



**Verified Carbon
Standard**

“BUNDLED SOLAR POWER PROJECT BY SOLARARISE INDIA PROJECTS PVT. LTD.”



Document Prepared by LGAI Technological Center, S.A. (Applus+
Certification)

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Project title	Bundled Solar Power Project by SolarArise India Projects Pvt. Ltd.
Project ID	1762
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Client	SolarArise India Projects Private Limited

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Summary:

LGAI Technological Center, S.A. (hereafter referred to as Applus+ Certification) has been contracted by SolarArise India Projects Private Limited to conduct the verification of the project - “Bundled Solar Power Project by SolarArise India Projects Pvt. Ltd.”, VCS ID 1762 regarding the relevant requirements of VCS programme guidelines and standard (VCS standard version 4.7, & VCS program guide version 4.4).

The scope of verification includes confirming the implementation of the monitoring plan of the registered Joint VCS PD&MR (v 02, dated 09/06/2018) and the application of the monitoring methodology “Grid-connected electricity generation from renewable sources”, ACM0002, Version 18.1. The monitoring period covers under this verification is from 01/04/2023 to 30/09/2023 (both days included).

Crediting period for project activity is considered as 10 years renewable twice. It is to be noted that the crediting period is in line with the Clause 3.8.1 of VCS standard v 3.7, valid and applicable at the time of registration of project.

The project involves installation of solar PV project in three different states of India. The total installed capacity of the project is 120 MW. The details of the each for the sub-project and their location of installation are provided in the table below:

State	District/Village	Capacity (MW)	Project Developer (Investor)	Date of commissioning
Telangana	Mahbubnagar/ Palwai	10	Talettutayi Solar Projects Pvt Ltd	23/06/2016
	Mahbubnagar/ Palwai	10	NV Vogt Solar One Pvt Ltd (previously known as Talettutayi Solar Projects Six Pvt Ltd)	23/06/2016
Karnataka	Koppal/ Chikkoppa and Mudhol	30	Talettutayi Solar Projects One Pvt Ltd	05/01/2018
	Koppal/ Kerahalli	20	Talettutayi Solar Projects Two Pvt Ltd	07/08/2019
Maharashtra	Beed/Chatgaon	50	Talettutayi Solar Projects Four Pvt Ltd	10/08/2017
Total (MW)	-	120	-	-

The project activity involves electricity generation by the solar power supplying the generated electricity to respective state DISCOM (part of integrated Indian grid). The project being a renewable energy generation activity, leads to a reduction in fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and plays beneficial role in the mitigation of climate change.

A risk-based approach has been followed to perform this verification. During verification, 02 Corrective Action request (CARs), 00 Forward Action request (FARs), and 01 Clarification request (CLs) were raised and successfully closed.

The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and project proponent have

provided LGAI Technological Center S.A. (Applus+ Certification) with sufficient evidence to verify the fulfillment of the stated criteria of VCS.

LGAI Technological Center S.A. (Applus+ Certification) confirms that the project is implemented in accordance with the registered Joint VCS PD&MR /01/. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the project's 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 seen and evaluated we confirm that the emission reductions from the project activity "Bundled Solar Power Project by SolarArise India Projects Pvt. Ltd." during the period 01/04/2023 to 30/09/2023 (including both days) amount to 116,234 tons of CO₂e.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (Hereafter referred as Applus+ Certification) has been contracted by SolarArise India Projects Private Limited, to undertake the verification of the renewable energy project titled “Bundled Solar Power Project by SolarArise India Projects Pvt. Ltd.” (VCS ID-1762). The verifiers have reviewed the GHG data collected to date for the monitoring period from 01/04/2023 to 30/09/2023 (both days included) covered in this verification. The objective of this verification is a thorough and independent assessment of registered project activities against the applicable VCS requirement by the VVB. The verification process shall determine whether the proposed project activity complies with the following requirements:

- VCS standard v 4.7 dated 16/04/2024 /17/
- VCS Program Guide v 4.4, dated 29/08/2023 /18/
- Applicability conditions of the selected methodology ACM0002 V 18.1 /10/
- Registration and Issuance Process v 4.4. dated 31/08/2023 /26/
- Host country (India) regulations (<https://mnre.gov.in/development-of-solar-parks-and-ultra-mega-solar-power-projects/>)

LGAI Technological Center, S.A. (Applus+ Certification) as the Validation/Verification Body (VVB) for the project activity is accredited as a DOE by UNFCCC and meets the competence requirements as set out in the normative reference ISO 14065:2020.

1.2 Scope and Criteria

The scope of verification is to assess the claims and assumptions made in the VCS monitoring report (MR) against the VCS criteria (See Section 1.1. above), including but not limited to, VCS standard V 4.7, applied methodology and other relevant rules and requirements established for VCS project activities as outlined under section 1.1 above.

The verification has been conducted in accordance with the VCS Standard version 4.7, other valid and applicable VCS Regulatory Documents and templates (see Appendix 2 of this Verification Report below), UNFCCC rules and requirements (where applicable) and associated decisions of the VCS Secretariat and the UNFCCC Executive Board (where applicable) (hereinafter also can be referred to as regulatory documents).

The Verification is not meant to provide any consulting towards the project proponents. However, stated requests for clarification and/or correction actions request may have provided inputs for improvement of the project design.

The only purpose of the verification is its usage during the issuance process as part of the VCS project cycle. Therefore, LGAI Technological Center S.A. (Applus+ Certification) can't be held liable by any party for decisions made or not made based on the verification opinion, which will go beyond that purpose.

1.3 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements. Reasonable assurance is a high level of assurance regarding material misstatements, but not an absolute one.

Reasonable assurance includes the understanding that there is a remote likelihood that material misstatements will not be prevented or detected on a timely basis. To achieve reasonable assurance, the auditor needs to obtain sufficient appropriate audit evidence to reduce audit risk to an acceptably low level. This means that there is some uncertainty arising from the use of sampling, since it is possible that a material misstatement will be missed.

Through an exhaustive process of documentary review, interviews with the project owners, site visits and sampling and surveying (where applicable), assessment on GHG Emission Reductions calculations against applicable methodology and any other regulatory document and reporting of objective evidence, the VVB can reach a reasonable level of assurance on the conduction of the Verification process.

The achieved level of assurance for this verification is thus a reasonable level of assurance as per the requirements set out in the applied VCS Standard version 4.7 clause 4.1.10 (1).

VVB applied a materiality threshold of 5% with respect to omission or misstatements concerning reported quantities as per VCS Standard version 4.7 clause 4.1.10 (4).

Additionally, according to the VCS Validation and Verification Manual version 3.2, while all material errors, omissions and misrepresentations must be addressed for a project to receive a positive validation or verification opinion, when non-material errors have been found in the project documents, the VVB requested the project proponent to correct them and ensured that such errors have been addressed where practicable.

The evidence used to achieve a reasonable level of assurance is specified in section 2.3 and 2.4 of this report. Materiality for the project is 5%, however the assessment team has verified 100% data (no sampling plan is applied), hence it is sufficient to meet the materiality requirements of the project.

1.4 Summary Description of the Project

The project activity comprises installation of grid connected solar photovoltaic based power project in the state Telangana, Karnataka, and Maharashtra in India. The project activity involves installation of 20 MW solar project in Mahbubnagar District of Telangana, 50 MW solar project in Koppal district- Karnataka, 50 MW solar project in Beed District of Maharashtra, India.

There are 5 SPDs (solar project developer) involved in the project activity and each SPD is subsidiary of SolarArise India Projects Pvt. Ltd. (project proponent). The details of investors (SPDs) installed capacity with location and commissioning status is provided under “summary” section of this report.

The sub-projects of capacity 10 MW each located in Telangana is developed by Talettutayi Solar Projects Pvt Ltd and Talettutayi Solar Projects Six Pvt Ltd, has signed power purchase agreement (PPA) with the Southern Power Distribution Company of Telangana (TSSPDCL), is the Electricity Distribution company owned by the government of Telangana for the five southern districts of Telangana.

The sub-project 50 MW located in Maharashtra developed by Talettutayi Solar Projects Four Pvt Ltd and sub-project 30MW located in Karnataka developed by Talettutayi Solar Projects One Pvt Ltd, both the SPDs has signed power purchase agreement (PPA) with SECI (Solar Energy Corporation of India Limited), is a company of the Ministry of New and Renewable Energy, Government of India, established to facilitate the implementation of the National Solar Mission. It is the only Central Public Sector Undertaking dedicated to the solar energy sector.

The sub-project 20 MW located in Karnataka developed by Talettutayi Solar Projects Two Pvt Ltd, has signed power purchase agreement (PPA) with Bangalore Electricity Supply Company (BESCOM) is the Electricity Distribution company owned by the government of Karnataka.

The commissioning date of each sub-project is verified through the respective commissioning certificate/14/. Technical specifications of the equipment's i.e., solar PV modules, inverters and transformers involved in the project activity as reported under section 3.1 of the MR are verified through the physical inspection and are found to be consistent with the same as mentioned in the MR and registered PD.

The emission reductions achieved by the project activity during the period 01/04/2023 to 30/09/2023 (including both days) amount to 116,234 tons of CO₂e.

Based on the information's verified during the site, interviews with PPs representatives and desk review of the documents, the assessment team can confirm that the project activity is fully functional and implemented as described in the registered joint VCS PD &MR.

2 VERIFICATION PROCESS

The registered VCS project is undergoing 7th verification period, the approach adopted to ensure the quality of emission reductions is described in the following sections.

2.1 Method and Criteria

The Verification process has been conducted following the regulatory documents and based on the ISO 14064-3:2019 and ISO 14065:2020 using standard auditing techniques as required by the VCS Standard v4.7 /17/.

The Verification process has been conducted through an onsite inspection (see below), thus, no need for a risk analysis for on-site inspections has been determined for this Verification.

No ICT means have been used for the conduction of this verification process other than those for the provision of documents and transferring information and undertake normal communications with the PP(s). Those ICT means supporting the process in this sense, have been used to an extent sufficient to cover the background necessities of the verification process and have demonstrated enough effectiveness to conduct it in accordance with the relevant applicable regulatory requirements.

This process has included: the review of data and information presented to verify their completeness; the review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements and the QA/QC procedures; an evaluation of data management; and an evaluation of the QA/QC system in place in the context of its influence on the generation and reporting of emission reductions.

No virtual sites have been included in the verification process according to the definition in the IAF MD4:2023 document. Instead, the documentation has been provided upon request from the VVB by other means (such as physical documents, mail, transfer applications, etc.)

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the Applus+ Certification's procedures and policies, that are in accordance with the ISO 14065:2020 regulatory provisions.

The verification approach consists of two phases.

In the first phase, Applus+ Certification completed a strategic review and risk assessment of the project's activities and processes 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 verification Report.

Based on the above, the VVB prepared a Verification Plan and applied an evidence-gathering plan designed to collect sufficient and appropriate evidence upon which to base the conclusion and to consider the inherent risk for the verification. The evidence-gathering plan is based on analytical procedures and tests and considers the thresholds for materiality as per the regulatory documents applied for this verification (5% as per the applied VCS Standard version 4.7).

The applied evidence-gathering plan is used by the VVB to determine the conformity of the statements made by the client against the principles and requirements of the applied regulatory documents during this verification.

The evidence-gathering plan designed by the VVB takes into consideration, as a minimum:

- The selection and management of the data and information;
- The processes for collecting, processing, consolidating, aggregating and reporting the data and information;
- Systems and processes in place to ensure the validity and accuracy of the data and information;
- The design and maintenance of the system to control the data and information;
- Systems, processes and personnel that support system in place, including activities for ensuring data quality;

- The plans for instrument maintenance and calibration where appropriate;
- The results of previous validation activities and verifications, where available and appropriate

At the end of this phase, Applus+ Certification produced a verification plan which, based on the risk assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan (if applicable).

In the second phase using the verification plan, Applus+ Certification verified the implementation of the monitoring plan and the data presented in the VCS MR/05/ for the period in question. This involved on-site visit & interviews of project proponent representative's and a desk review of the Monitoring Report. This verification report describes the findings of this assessment.

The process of verification involved the following relevant milestones:

- The signature of the contract for verification between the PP and the VVB;
- A kick-off meeting/communication to require the documentary material to perform an initial desk review;
- An initial desk review of the documentary evidences prepared by the Project Proponent;
- The issuance of findings coming from this initial desk review (if any);
- The conduction of an onsite audit, including interviews and video-calls in substitution of a site visit (see Sections 2.3 and 2.4 below);
- The issuance of findings from the onsite audit and communication of deviations (if any) to the Project Proponent;
- The assessment of their resolution and closure, when appropriate;
- Once all the findings have been closed, the elaboration of this Verification Report, in which such findings (if any) are described;
- The conduction of an independent Technical Review;
- Upon conclusion of the Technical Review, the VVB may perform a final quality check before the issuance of the Final Verification Report (FVR) and signature of the corresponding Verification Deed.

The process of this verification assessment has not implied any sampling plan.

Verification schedule is described in the below table:

Sr. No	Date	Milestones
1	21/02/2024	Contract signed
2	10/05/2024	Desk review

3	14/05/2024 - 17/05/2024	Site visit
4.	04/09/2024	Draft verification report

2.2 Document Review

The verification is performed primarily as a document review of the registered Joint VCS PD&MR /01/, previous MRs and Verification reports/10.1/ and associated documents as stated in detail in appendix 2 of this document. The assessment is performed by a verification team using a protocol. The cross checks between information provided in the Monitoring report, Joint VCS PD&MR and information from sources other than those used, if available, the team’s sectoral or local expertise and, if necessary, independent background investigations.

2.3 Interviews

The site visit for the project location, by the assessment team, was conducted on 14/05/2024 - 17/05/2024, and the following stakeholders were interviewed.

S N	Name	Organization
1	Mr. Anant Agarwal	Manager, SolarArise
2	Mr. P Harish	Senior Engineer, SolarArise (Telangana site)
3	Mr. G.P Raju	In Charge (EPC) (Karnataka site)
4	Mr. Akash Salgar	Engineer, SolarArise (Maharashtra site)

The topics covered during interview ranges from general features and implementation of project to technical details of the project like calibration details, monitoring and measuring system and data collection, recording and archiving procedures. The assessment was drawn based on the feedback received during the interview coupled with the documentation and observations.

Interviews with local stakeholders:

The verification team has interviewed the local stakeholders, and they were questioned for various topics as summarized below.

- a) Effect of project on their livelihood and income
- b) Any problem related to project installation in nearby areas
- c) Are they happy with the benefits and development as CSR activity of the PP?
- d) General feedback about the project
- e) Do they know about the grievance and feedback back register/mechanism?
- f) Any feedback; Concern (C) Positive (P) and Negative (N)

S. No.	Name of stakeholder	Village	Feedback (Positive/Negative/Concerns)
Location: Koppal district, Karnataka			
1	Ramappa	Hosalli	Positive
2	Mallesh	Hosalli	Positive
3	Bharamappa	Kerehalli	Positive
4	Muttanna	Agalakera	Positive
5	Sharanappa	Kerehalli	Positive
6	Rajasab D	Kerehalli	Positive
7	Siddaramaya Vastrad	Hosalli	Positive
Location: Mahabubnagar district, Telangana			
1	R Devadash	Palwai	Positive
2	B Prasad	Palwai	Positive
3	Chanti	Palwai	Positive
4	R yellappa	Palwai	Positive
5	Ramudu	Palwai	Positive
6	P Hanumanth	Palwai	Positive
7	B Anji	Palwai	Positive
8	G Ramesh	Palwai	Positive
9	S Nalla Reddy	Palwai	Positive
Location: Beed district, Maharashtra			
1	Abhiman Patekar	Telgaon	Positive
2	Vijay Sangle	Telgaon	Positive
3	Anant Sahebrao Shinde	Telgaon	Positive
4	Mahadev Tidke	Telgaon	Positive
5	Lahu Kothimbire	Telgaon	Positive
6	Babasaheb Rambau Tidke	Telgaon	Positive

2.4 Site Visits

The onsite visit was undertaken on 14/05/2024 - 17/05/2024, by the verification team member Ravi Kant Soni (Lead Auditor), to carry out the following.

- a) An assessment of the implementation and operation of the registered project activity as per the registered Joint VCS PD&MR and subsequent MRs.
- b) A review of information flows for generating, aggregating, and reporting the monitoring parameters.

- c) Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the Joint VCS PD&MR.
- d) A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources.
- e) A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the Joint VCS PD&MR, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline.
- f) A review of calculations and assumptions made in determining the GHG data and emission reductions.
- g) An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.
- h) Assessment of SDGs impact
- i) Assessment of implementation of grievance redress procedure and ongoing communications.

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and interaction with site personnel during the on-site visit. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and non-conformities, which may be of following types;

CAR (Corrective Action Request) is raised if one of the following occurs:

Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project proponents , 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 proponents ;

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 proponents. Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CLs raised by the Applus+ Certification during verification shall be resolved prior to submitting a request for issuance.

FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

During the current verification, 02 Corrective Action request (CARs), 00 Forward Action request (FARs), and 01 Clarification request (CLs) were raised and successfully closed. All the findings that are raised and communicated to project proponent during the verification are included under Appendix 3. The section also includes the response, if provided, by the project proponents and an assessment by the verification team if it was closed out or otherwise.

2.5.1 Forward Action Requests

The project activity is undergoing 7th verification, there were no FARs raised during the validation or previous verifications/10.1/.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification, as Applus+ Certification holds the accreditation for Validation of projects under this Sectoral Scope.

3 VALIDATION FINDINGS

There are deviations identified during the previous monitoring periods, validation of project deviations is provided under section 3.2 of this report.

3.1 Methodology Deviations

There is no methodology deviation identified during the current monitoring period.

3.2 Project Description Deviations

There is no project deviation identified during the current monitoring period. However, during the previous monitoring periods following deviation was considered:

In accordance with the registered Joint VCS PD&MR, the net electricity supplied to the grid (for Karnataka site) is calculated as the difference of electricity exported to the grid and electricity from

grid by the project activity. However, in actual practice net electricity supplied to the grid ($EG_{PJ,y}$) is calculated as electricity exported after deduction of 115%* import and transmission losses. The project proponent has corrected the formula used in the calculation of $EG_{PJ,y}$ and considered this change as project deviation in the previous monitoring period.

The project deviation considered by the project proponent during the previous monitoring period is valid for the current monitoring period.

The assessment team can confirm that the deviation identified during the previous monitoring period is appropriately described and justified and the project remains in compliance with the VCS rules. In line with the requirements of clause 3.21.4 of VCS standard v 4.7, the assessment team can confirm that the deviations don't have impact on the project applicability, baseline scenario and additionality. The project remains in conformance with the VCS rules and project deviations are valid for the current monitoring period.

3.3 New Project Activity Instances in Grouped Projects

Not applicable. The project activity is not a grouped project.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

- Yes No

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:				
Audit history	The audit history table is provided below:				
	Audit Type	Period	Program	VVB Name	Number of years
	Joint Validation & Verification	23/06/2016 to 25/04/2018	VCS	LGAI Technological Centre, S.A. (Applus + Certification)	1 year, 10 months

Verification	26/04/2018 to 25/08/2020	<u>VCS</u>	4K Earth Science Pvt. Ltd.	2 years,4 months
Verification	26/08/2020 to 31/08/2021	<u>VCS</u>	TUV SOD South Asia Pvt. Ltd.	1 years,6 days
Verification	01/09/2021 to 31/03/2022	<u>VCS</u>	LGAI Technological Center S.A.	6 months
Verification	01/04/2022 to 30/09/2022	<u>VCS</u>	LGAI Technological Center S.A.	6 months
Verification	01/010/2022 to 31/03/2023	<u>VCS</u>	LGAI Technological Center S.A.	6 months
Verification	01/04/2023 to 30/09/2023	<u>VCS</u>	LGAI Technological Center S.A.	6 months
Total	23/06/2016 to 30/09/2023	=	-	7 years, 03 months, 08 days

The assessment team has checked the information about the audit history as provided in the above table and confirmed that the information provided are accurate.

Double counting and participation under other GHG programs

The project activity is registered under the VCS only (VCS Project ID 1762) and is not registered under any other emissions trading program or any other mechanism that includes GHG allowance trading. The assessment team has checked the relevant registry websites/28/ and confirmed the same.

The PP also confirms that net GHG emission reductions or removals generated during this monitoring period shall not be used for compliance under any such programs or mechanisms. This was confirmed through a declaration/15/ submitted by the PP and hence accepted by the assessment team.

	<p>The PP has submitted the declaration/15/ which states that the net GHG emission reductions generated by the project activity will not be used for compliance with any other emissions trading program or to meet binding limits on GHG emissions for the same monitoring period. The project is exclusively registered under VCS only and has not been rejected by another GHG program/28/.</p>						
<p>No double claiming with emissions trading programs or binding emission limits</p>	<p>The PP has submitted the declaration/15/ which states that the net GHG emission reductions generated by the project activity will not be used for compliance with any other emissions trading program or to meet binding limits on GHG emissions for the same monitoring period.</p>						
<p>No double claiming with other forms of environmental credit</p>	<p>The project activity has not sought, received, or is planning to receive credit from another GHG-related environmental credit system. The PP has submitted the declaration/15/ which states that the net GHG emission reductions generated by the project activity will not be used for compliance with any other emissions trading program or to meet binding limits on GHG emissions for the same monitoring period.</p>						
<p>Supply chain (scope 3) emissions double claiming</p>	<p>The project activity is a solar power project and does not involve any supply chain involved in the project such as manufacturers, wholesalers, distributors, and retailers. So, no indirect upstream and downstream GHG emissions are not involved in the project activity. Thus, the Scope 3 emissions are not applicable in this project activity.</p>						
<p>Sustainable development contributions</p>	<p>The project's contribution towards sustainable development has been assessed as under the below table:</p> <table border="1" data-bbox="435 1341 1386 1808"> <thead> <tr> <th data-bbox="435 1341 553 1446">Sr.No</th> <th data-bbox="553 1341 732 1446">Sustainable Indicator</th> <th data-bbox="732 1341 1386 1446">VVB assessment</th> </tr> </thead> <tbody> <tr> <td data-bbox="435 1446 553 1808">1</td> <td data-bbox="553 1446 732 1808">Social well being</td> <td data-bbox="732 1446 1386 1808"> <p>There are several job opportunities were created to local people during erection, commissioning, and maintenance of the solar power project. This may result to a social balance in the region.</p> <p>The frequency of visiting to villages and nearby areas by skilled, technical and industrialist has increased due to installation /site visit/operation and maintenance work related to solar plant site.</p> <p>This directly and indirectly positively effects the economy of nearby populace.</p> </td> </tr> </tbody> </table>	Sr.No	Sustainable Indicator	VVB assessment	1	Social well being	<p>There are several job opportunities were created to local people during erection, commissioning, and maintenance of the solar power project. This may result to a social balance in the region.</p> <p>The frequency of visiting to villages and nearby areas by skilled, technical and industrialist has increased due to installation /site visit/operation and maintenance work related to solar plant site.</p> <p>This directly and indirectly positively effects the economy of nearby populace.</p>
Sr.No	Sustainable Indicator	VVB assessment					
1	Social well being	<p>There are several job opportunities were created to local people during erection, commissioning, and maintenance of the solar power project. This may result to a social balance in the region.</p> <p>The frequency of visiting to villages and nearby areas by skilled, technical and industrialist has increased due to installation /site visit/operation and maintenance work related to solar plant site.</p> <p>This directly and indirectly positively effects the economy of nearby populace.</p>					

	2	Environmental well being	Solar power is one of the cleanest renewable energy powers and does not involve any fossil fuel. There are no GHG emissions. The impact on land, water, air and soil is negligible. Thus, the project activity contributes to environmental well-being without causing any negative impact on the surrounding environment.
	3	Economic well being	<p>The project activity has generated permanent and temporary employment opportunity within the vicinity of the project.</p> <p>The electricity supply in the nearby area improves which directly and indirectly improves the economy and lifestyle of the area.</p> <p>During the on-site visit, the assessment team has interviewed the PPs representatives, site personnel and observed that almost all the personnel were unemployed before taking up the job with the project developer.</p> <p>In general, the project activity has delivered the following economic benefits:</p> <ul style="list-style-type: none"> I. Employment opportunities II. Reduce rate of migration to urban area III. Improvement of a rural economy
	4	Technological well being	The project activity is step forward in harnessing the untapped solar power potential and further diffusion of the technology in the region. The project activity leads to the promotion and demonstrates the success of solar projects in the region which further motivate more investors to invest in solar power projects. Hence, the project activity leads to technological well-being.
<p>The project activity claimed contribution to SDG7, SDG8 and SDG13 (assessment is provided under section 4.4 of this report).</p>			
Additional information relevant to the project	<p>No commercially sensitive information has been excluded from the public version of the project description.</p>		

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	<p>Local stakeholder consultation was appropriately conducted prior to initial validation under VCS to inform the design of the project and maximize participation from stakeholders during the validation/27/.</p> <p>The stakeholders identified by the project proponent were local villagers who are the major population of the area, local communities, and project employees, including the contractors, village/panchayat heads and local government officers at block level. The assessment team verified the list of participants who attended the stakeholder meeting and confirms the stakeholders identified were relevant.</p> <p>The assessment team has checked the attendance sheet, MoM and photographs/27/ of the people present during the LSC meetings and verified that different categories of the people as mentioned by the PP were present</p> <p>The assessment team has physically visited the project site and confirmed that there are no changes with reference to the stakeholder’s identification since validation.</p>
Legal or customary tenure/access rights	<p>The project is implemented on private owned land and does not interfere with any legal or customary rights to territories and resources held by project stakeholders. During the onsite visit a few stakeholders were interviewed on this, and no issues identified in this regard.</p>
Stakeholder diversity and changes over time	<p>Following types of Stakeholders were identified:</p> <ul style="list-style-type: none"> • Local community • Local village administration • Technology suppliers • Local vendors <p>The assessment team has verified the attendance sheet/27/ of LSC meetings conducted, and interviewed stakeholders/users during the site visit. It is confirmed that all the stakeholders are in India, and no changes identified over the time.</p>
Expected changes in well-being	<p>During the site visit the assessment team interviewed some of the local villagers and observed that there was agreement among the stakeholders that the proposed project activity would lead to the</p>

	overall development of the area, mainly by generating employment opportunities and improving the infrastructure leading to an improved life for the villagers.
Location of stakeholders	The project activity involves installation of solar power project and the location of stakeholders, Indigenous Peoples (IPs), local communities (LCs), customary rights holders, and areas outside the project area are not impacted by the project.
Location of resources	The Land belongs to the project and hence there are no uncertainties regarding land tenure, access rights, usage rights or land ownership which stakeholders own or to which they have customary access.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion								
Ongoing consultation	<p>For on-going stakeholder’s communication, the PP has kept grievance register/21/ in plant site office seeking complaints/grievances from local community as a part of ongoing communication with stakeholders in line with clause 3.18.4 of VCS Standard, v.4.7.</p> <p>The PP has also kept provision for submitting comments/grievances from local stakeholder through direct emails. Below are the details:</p> <ul style="list-style-type: none"> • Company Website: https://www.solararise.com/ • Email: info@solar-arise.com <p>During the current monitoring period, no negative comments were received from the local stakeholders.</p>								
Date(s) of stakeholder consultation	<p>Local stakeholder consultation has been conducted at the time of project registration/27/.</p> <table border="1"> <thead> <tr> <th>Project Location</th> <th>Date of meeting</th> <th>Mode of invitation</th> <th>Meeting Venue</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Project Location	Date of meeting	Mode of invitation	Meeting Venue				
Project Location	Date of meeting	Mode of invitation	Meeting Venue						

	District: Mahabubnagar State: Telangana	04/05/2015	Public notice and Personal Invitation letter	Project site
	District: Beed State: Maharashtra	17/09/2016	Public notice and Personal Invitation letter	Project site
	District: Koppal State: Karnataka	21/01/2017	Public notice and Personal Invitation letter	Project site

Communication of monitored results

The stakeholders were invited through public notice and personal invitation letters. The stakeholders identified by the project proponent were local villagers who are the major population of the area, local communities, and project employees, including the contractors. The assessment team verified the list of participants who attended the stakeholder meeting and confirms the stakeholders identified were relevant.

The minutes of meeting are reviewed and confirmed that the benefits of solar power projects like, increasing energy availability and improving quality of power and its assistance to the local population by providing employment opportunities to both skilled & unskilled labours were explained to the stakeholders.

The representative of project participant explained technical aspects of project to stakeholders. He also explained about social, environmental & economic benefits of the project. He also elaborated about carbon mechanism & its requirement for the current project. After the detailed discussions, the session was open for questions from stakeholders. Most of the questions were related to employment opportunities, economic development, benefits from project to villagers and other development activities.

Consultation records	Minutes of meeting, photographs, stakeholder feedback and attendance list of stakeholders /27/ are checked and found to be appropriate.
Stakeholder input	<p>During the stakeholder consultation some questions were related to employment opportunities, economic development, benefits from project to villagers and other development activities and the project proponent has appropriately answered the same as described in section 5.3 of the registered Joint VCS PD&MR /01/ and MoM/27/.</p> <p>The assessment team checked the grievance register/21/ provided by PP and found that no grievance/feedback was received during the current monitoring period. Thus, verification team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.</p>

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	The project is located at site where there are not any peoples residing. The project is located at barren land. there is no physical or economic relocation of people.
Outcome of FPIC discussion	This is not relevant for project activity. No resettlement/ forced physical or economic displacement was required without consent.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	The assessment team checked the grievance register/21/ provided by PP and found that no grievance/feedback was received during the current monitoring period.
Grievance redress procedure	The PP has kept grievance register /21/in plant site office seeking complaints/grievances from local community as a part of ongoing

communication with stakeholders in line with clause 3.18.4 of VCS Standard, v.4.7.

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No comments received as verified through the project view page/14/ and grievance register	Not applicable	Not applicable

4.2.6 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: Appendix -III, page 86, VCS standard v 4.7
Working conditions	Not applicable. Ref: Appendix -III, page 86, VCS standard v 4.7
Safety of women and girls	Not applicable. Ref: Appendix -III, page 86, VCS standard v 4.7
Safety of minority and marginalized groups, including children	Not applicable. Ref: Appendix -III, page 86, VCS standard v 4.7
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	Not applicable. Ref: Appendix -III, page 86, VCS standard v 4.7

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: Appendix -III, page 86, VCS standard v 4.7
Management experience	Not Applicable Ref: Appendix -III, page 86, VCS standard v 4.7
Gender equity in labor and work	Not Applicable- Ref: Appendix -III, page 86, VCS standard v 4.7
Human trafficking, forced labor, and child labor	Not Applicable Ref: Appendix -III, page 86, VCS standard v 4.7

4.2.7.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Human rights	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: Appendix -III, page 86, VCS standard v 4.7

4.2.7.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: Appendix -III, page 86, VCS standard v 4.7

4.2.7.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Disputes over rights to territories and resources	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: Appendix -III, page 86, VCS standard v 4.7
Respect for property rights	Not Applicable- Ref: Appendix -III, page 86, VCS standard v 4.7

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: Appendix -III, page 86, VCS standard v 4.7
Benefit sharing during the monitoring period	Not Applicable- Ref: Appendix -III, page 86, VCS standard v 4.7

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025. Ref: Appendix -III, page 86, VCS standard v 4.7
Soil degradation and soil erosion	Not Applicable- Ref: Appendix -III, page 86, VCS standard v 4.7
Water consumption and stress	Not Applicable Ref: Appendix -III, page 86, VCS standard v 4.7
Usage of fertilizers	Not Applicable Ref: Appendix -III, page 86, VCS standard v 4.7

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	<p>This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025.</p> <p>Ref: Appendix -III, page 86, VCS standard v 4.7</p>

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
No species introduced	Not applicable

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
No invasive species exists	Not applicable

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	<p>This section is not applicable yet. Effective for all project requests submitted to the Verra Registry on or after 1 January 2025.</p> <p>Ref: Appendix -III, page 86, VCS standard v 4.7</p>

4.3 Accuracy of Reduction and Removal Calculations

The calculation of the emission reductions is found to be correct. The details of the reported and the verified values for all parameters are listed in section 4.5 of this report.

The parameter $EG_{PJ,y}$ is directly sourced from monthly JMRs issued by state utility. The PP has provided the complete set of data for all the monitored parameters in the ER spreadsheet/05/. This data has been verified as described in section 4.5 below. The formulae & method used to calculate the baseline emissions, project emissions and leakage are appropriate and in line with the approved methodology ACM0002 version 18.1.

The PP has calculated the grid emission factor as per the combined margin approach described in the 'Tool to calculate the emission factor for an electricity system', version 05.0. The grid emission factor has been calculated as the weighted average of OM & BM; and has been fixed ex-ante for the entire crediting period.

The OM and BM have been obtained from a publicly available source i.e., "CO2 Baseline Database for Indian Power sector", version 12/11/ published by Central Electricity Authority, Ministry of Power, and Government of India. The OM has been determined as the average of the previous 3 years values obtained from the CEA database/11/. The value of BM has been identified directly from the CEA database. The combined margin emission factor was arrived at by applying weights of 75% for OM and 25% for BM, as specified in the tool. The OM and BM have been calculated to be 0.9843 tCO₂/MWh and 0.9083 tCO₂/MWh respectively. Applying the weights, the grid emission factor has been calculated to be 0.9653 tCO₂/MWh.

As per ER excel spreadsheet/05/ submitted by the PP, the net emission reductions for the current monitoring period were verified as 116,234 tCO₂e for the current monitoring period.

The assessment team able to confirm that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

4.4 Quality of Evidence to Determine Reductions and Removals

All the data recorded is following the registered Joint VCS PD & MR/01/. The assessment team has checked the monthly JMRs for electricity generated and supplied by project activity/08/ for the current monitoring period to verify the values of monitoring parameter reported in ER calculation sheet and found to be consistent. Since the monthly JMRs prepared and issued by state utility, they are found to be reliable and authentic.

The monitoring of the project activity is found to be in accordance with the monitoring methodology described in ACM0002, Version 18.1 /09/. The monitoring mechanism is effective and reliable. During the site visit, personnel involved at various levels of the operation of the project activity have been interviewed to confirm that the plant personnel are conscious of the importance of the monitoring activities. The verification of the plant records during desk review substantiating consistency in recording and reporting of monitored data.

The assessment team has checked the online monitoring system (SCADA) & confirms that the monitoring systems have been installed and are operational. The meters comply with appropriate quality standards applicable for the used technology. The accuracy class of the meters installed for the project activity was verified through the registered VCS PD & MR/01/, MR /04/, and calibration certificates, and cross-checked against the PPAs/12/ signed for the project activity, found to be consistent with the same as indicated at the meters.

The supporting records of JMRs/08/ issued by the respective state utility and invoices raised for the entire monitoring period were checked and found to be sufficient to enable verification of emission reductions.

The following parameter has been verified for current monitoring period:

Parameter	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y, $EG_{PJ,y}$ (MWh)	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is continuously monitored and recorded on a monthly basis.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered VCS PD & MR/01/ and monitoring methodology/09/.
	Monitoring equipment	Energy meters of accuracy class 0.2s are used /06/. (Calibration details of meter is provided separately in this section, under the heading "Calibration of meters")
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	Yes, accuracy class of meter is in line with registered monitoring plan/01/ and as per PPA /12/.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance	Yes. The calibration frequency is in line with the monitoring plan as outlined in the registered Joint VCS PD & MR/01/ (P.37).

	<p>with the local/national standards, or as per the manufacturer's specifications?</p>									
	<p>Is the calibration of measuring equipment carried out by an accredited person or institution?</p>	<p>Yes, the calibration is conducted by NABL Accredited entity/06/.</p> <table border="1" data-bbox="889 443 1427 926"> <thead> <tr> <th data-bbox="889 443 1101 516">Location</th> <th data-bbox="1101 443 1427 516">Calibration Entity</th> </tr> </thead> <tbody> <tr> <td data-bbox="889 516 1101 642">Telangana</td> <td data-bbox="1101 516 1427 642">Ganga Calibration Services (NABL: C-2127)</td> </tr> <tr> <td data-bbox="889 642 1101 800">Maharashtra</td> <td data-bbox="1101 642 1427 800">Maharashtra State Electricity Distribution company Limited (MSEDCL)</td> </tr> <tr> <td data-bbox="889 800 1101 926">Karnataka</td> <td data-bbox="1101 800 1427 926">Gulbarga Electricity Supply Company Limited (GESCOM)</td> </tr> </tbody> </table>	Location	Calibration Entity	Telangana	Ganga Calibration Services (NABL: C-2127)	Maharashtra	Maharashtra State Electricity Distribution company Limited (MSEDCL)	Karnataka	Gulbarga Electricity Supply Company Limited (GESCOM)
	Location	Calibration Entity								
	Telangana	Ganga Calibration Services (NABL: C-2127)								
	Maharashtra	Maharashtra State Electricity Distribution company Limited (MSEDCL)								
	Karnataka	Gulbarga Electricity Supply Company Limited (GESCOM)								
	<p>Is(are) calibration(s) valid for the whole reporting period?</p>	<p>Calibration of the energy meters installed at respective sites are valid during the current monitoring period.</p>								
<p>Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?</p>	<p>Yes. The calibration is carried out appropriately.</p>									
<p>How were the values in the monitoring report verified?</p>	<p>Monthly values for the entire monitoring period are reported in the monitoring report/04/ and in the ER calculation sheet/05/. The monthly values were verified from the "JMRs" issued by the respective state utility for all three sites and found to be consistent.</p> <p>Value of this parameter for the current monitoring period was verified as 120,412 MWh.</p>									
<p>If applicable, has the reported data been cross-checked with other available data?</p>	<p>The monthly reported values were further cross checked with the monthly invoices raised by the PP /07/ to state utility and found to be consistent.</p>									

	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	<p>Yes, all the stakeholders, namely, the Grid Authority (DISCOMs), the PP and the O&M Contractor for all four sites, implemented the adequate QA/QC procedures. The data transfer process for the said parameter is as follows:</p> <p>The Joint meter reading at common metering points is taken by the representatives of DISCOMs in the presence of PPs officials in the form of JMRs.</p> <p>Monthly “JMRs” issued state utility provide the value of $EG_{PJ,y}$ that is directly used for emission reduction calculations.</p>
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1, CAR #1 and CAR #2 was raised and resolved	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

Monitoring of SDGs:

During the current monitoring period, following SDGs are monitored:

Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all

SDG Target: 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

SDG Indicator: 7.2.1 Renewable energy share in the total final energy consumption

Relevant Parameter: Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh, $EG_{PJ,y}$

Means of verification		
	Criteria/Requirements	VVB assessment

	Measuring /Reading /Recording frequency	The parameter is calculated as difference of electricity exported and imported from grid. This parameter is recorded monthly basis in line with the approved monitoring plan.
	Data source	This parameter is recorded on monthly basis in the JMRs issued by state utility.
	How were the values in the monitoring report verified?	<p>The data transfer process for the said parameter is as follows:</p> <p>The Joint meter reading at all the metering points at DISCOM substation is taken by the representatives of DISCOM in the presence of PPs representative in the form of JMRs.</p> <p>Cumulative value of $EG_{PJ,y}$ for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the JMRs issued by state utility/08/ and found to be consistent.</p> <p>Value of this parameter for the current monitoring period is 120,412 MWh.</p>
	If applicable, has the reported data been cross-checked with other available data?	Monthly reported values of $EG_{PJ,y}$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /07/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, all the stakeholders, namely, the Grid Authority (DISCOM), and the O&M Contractor, implemented the adequate QA/QC procedures.
Findings	No issues identified and hence finding was not raised for this section	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all

SDG Target: 8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.

SDG Indicator: 8.8. Protect labour rights and promote safe and secure working environments for all workers

Relevant Parameter: Number of occupational health and safety trainings

Means of verification	Criteria/Requirements	VWB assessment
	Measuring /Reading /Recording frequency	Project participant conducts various activities on regular basis for improving the skills and thereby ensuring safety of its employees. Various indicators of secure working environments viz. health care facilities, skill build-up through workshops and trainings, putting safeguard in place and living standard of the plant staff are monitored as and when such activities are organised/21,22,23/.
	Data source	The records for the training regarding the occupational health, safety of employees and working environment i.e. training attendance, photographs etc.

	<p>How were the values in the monitoring report verified?</p>	<p>The following training programs/21/ to enhance the safety awareness, operational skills and occupational health management have been organized during the current monitoring period.</p> <table border="1"> <thead> <tr> <th>Training Objective</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Work Permit training</td> <td>20/04/2023</td> </tr> <tr> <td>Electrical Safety</td> <td>23/04/2023</td> </tr> <tr> <td>Loto training</td> <td>30/04/2023</td> </tr> <tr> <td>Heat Stroke</td> <td>22/05/2023</td> </tr> <tr> <td>Heat Stress</td> <td>23-05-23</td> </tr> <tr> <td>Fire Fighting Training</td> <td>25/05/2023</td> </tr> <tr> <td>HSE training</td> <td>25/05/2023</td> </tr> <tr> <td>safety Practice during PM of electrical equipment's and panels</td> <td>07/06/2023</td> </tr> <tr> <td>First Aid against electrical</td> <td>20/06/2023</td> </tr> <tr> <td>Road and drive Safety</td> <td>24/06/2023</td> </tr> <tr> <td>Importance of environment safety and avoid plastic use at workplace</td> <td>27/06/2023</td> </tr> <tr> <td>Fire extinguisher and method of use</td> <td>24/09/2023</td> </tr> <tr> <td>EHS training</td> <td>26/09/2023</td> </tr> </tbody> </table>	Training Objective	Date	Work Permit training	20/04/2023	Electrical Safety	23/04/2023	Loto training	30/04/2023	Heat Stroke	22/05/2023	Heat Stress	23-05-23	Fire Fighting Training	25/05/2023	HSE training	25/05/2023	safety Practice during PM of electrical equipment's and panels	07/06/2023	First Aid against electrical	20/06/2023	Road and drive Safety	24/06/2023	Importance of environment safety and avoid plastic use at workplace	27/06/2023	Fire extinguisher and method of use	24/09/2023	EHS training	26/09/2023
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EHS training	26/09/2023																													
<p>If applicable, has the reported data been cross-checked with other available data?</p>	<p>Yes, the reported data has been cross checked with the quantitative information about the secure working environments which includes the records of HR, training, health care facilities etc. are maintained /22,23,24/.</p>																													

	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Counting of the number of trainings and respective attendees is done by a training attendance sheet which states the programme name, venue, faculty, date and timing, attendee details (name, designation, and department). Each training attendance sheet has a unique form number.
Findings	No finding was raised.	
Conclusion	The parameter has been monitored appropriately, in accordance with the sustainability monitoring plan (as per measurement methods and procedures to be applied). The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

Goal 13. Take urgent action to combat climate change and its impacts

SDG Target: 13.2 Integrate climate change measures into national policies, strategies, and planning

SDG Indicator: 13.2.2 Total greenhouse gas emissions per year

Relevant Parameter: Emission reductions achieved (tCO₂)

Means of verification	Criteria/Requirements	VVB assessment
	Measuring /Reading /Recording frequency	Emission reductions achieved due to implementation of the solar power plant is monitored once during each monitoring period.
	Data source	Monthly JMRs & ER calculation sheet.
	How were the values in the monitoring report verified?	The value is calculated in line with the procedure as described in registered Joint VCS PD&MR. Value of this parameter for the current monitoring period is 116,234 tCO ₂ .
	If applicable, has the reported data been cross-checked with other available data?	Not applicable
	Does the data management ensure correct transfer of data and reporting of emission	No separate QA/QC procedures is required.

	reductions and are necessary QA/QC processes in place?	
Findings	No issues identified and hence finding was not raised for this section	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

Parameters fixed ex ante:

$EF_{grid,OM,y}$ (tCO₂e/MWh): it is the operating margin emission factor of Indian grid fixed for the entire crediting period and the value is considered as 0.9843 tCO₂e/MWh, that is consistent with the registered VCS PD and MR.

$EF_{grid,BM,y}$ (tCO₂e/MWh): it is built margin emission factor of Indian grid fixed for the entire crediting period and the value is considered as 0.9083 tCO₂e/MWh, that is consistent with the registered VCS PD and MR.

$EF_{grid,CM,y}$ (tCO₂e/MWh): it is the combined margin emission factor of Indian grid fixed for the entire crediting period and the value is considered as 0.9653 tCO₂e/MWh, that is consistent with the registered VCS PD and MR.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the meters have been checked and found appropriate. The installation and working conditions of the meters were checked through physical inspection of meters, review of calibration certificates and were found to be satisfactory. Details of meters are provided in below table.

Location: Mahabubnagar, Telangana (2 sub-projects of 10 MW each)

Sub-station	Project developer	Meter Serial No	Calibration Date	Calibration due date
132/33 kV Substation, Gadwal.	Talettutayi Solar Projects Pvt Ltd	Main meter: APX00685	24/08/2022	23/08/2027
		Check meter: APX00686	24/08/2022	23/08/2027
		Standby meter: APX APX00687	24/08/2022	23/08/2027
	Talettutayi Solar Projects Six Pvt Ltd	Main meter: APX00682	24/08/2022	23/08/2027
		Check meter: APX00684	24/08/2022	23/08/2027

		Standby meter: APX00704	24/08/2022	23/08/2027
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Location: Beed, Maharashtra (50 MW Solar power project)

Sub-station	Project developer	Meter Serial No	Calibration Date	Calibration due date
132kV Telgaon Sub-Station	Talettutayi Solar Projects Four Pvt Ltd	Main meter: 02832405	08/12/2021	07/12/2026
		Check meter: 02832406	08/12/2021	07/12/2026
		Standby meter: 02832404	08/12/2021	07/12/2026

Location: Koppal, Karnataka (30 MW and 20 MW Solar power project)

Sub-station	Project developer	Meter Serial No	Calibration Date	Calibration due date
110/33/11 KV MUSS Yelburga substation	Talettutayi Solar Projects One Pvt Ltd	Main meter: 20007786	12/04/2022 and 09/01/2023	11/04/2027 and 08/01/2028
		Check meter: 20007853	12/04/2022 and 09/01/2023	11/04/2027 and 08/01/2028
110/33/11 KV Kerehalli substation	Talettutayi Solar Projects Two Pvt Ltd	Main meter: 20009519	16/02/2022 and 16/02/2023	15/02/2027 and 15/02/2028
		Check meter: 20009520	16/02/2022 and 16/02/2023	15/02/2027 and 15/02/2028

It is evident from the above table that calibration of all the existing meters was valid during the current monitoring period. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006 and its amendments notified on 26/06/2010 No. 502/6/2009/DP&D/D-I /16/ which is considered as national standard, mentions that for voltage of 650 V up to 33 kV, 0.5s accuracy class or above is recommended. Hence, the accuracy classes of 0.2s for the energy meters installed at the project activity site are found to be appropriate.

The details of monitoring equipment are involved in the project activity and their calibration details/07/ are mentioned under Appendix-1 of the VCS MR/04/. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006/16/ which is considered as national standard mentions that "All interface meters shall be tested at least once in five years." Hence, the stipulated calibration frequency once in 5 years is appropriate.

GHG Calculations:

The emission reduction as per the applied methodology equals the baseline emissions (project emissions and leakage emissions for such project activities is considered zero). The formula provided for the calculation of baseline emissions is:

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

Where:

BE_y: Baseline emissions in year y (tCO₂e/yr)

$EG_{PJ, y}$: Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

$EF_{grid, CM, y}$: Combined Margin (CM) Emission Factor of Indian grid (tCO₂e/MWh)

Thus, $BE_y = EG_{PJ, y} * EF_{grid, CM, y}$

Thus, $BE_y = 120,412 \text{ MWh} \times 0.9653 \text{ tCO}_2/\text{MWh}$

$= 116,234 \text{ tCO}_2$

The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations are justified.

All the data were made available and have monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation, is described above.

4.5 Non-Permanence Risk Analysis

Not applicable for the project activity.

5 VERIFICATION OPINION

5.1 Verification Summary

LGAI Technological Center S.A. (hereinafter referred to as (Applus+ Certification) contracted by SolarArise India Projects Private Limited, to perform the independent verification of the emission reductions for the VCS project activity “Bundled Solar Power Project by SolarArise India Projects Pvt. Ltd.” (VCS ID- 1762) in India for the monitoring period 01/04/2023 to 30/09/2023 as reported in the Monitoring Report Version 03 dated 06/11/2024. The SolarArise India Projects Private Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity. Applus+ Certification commenced the verification based on the baseline and monitoring methodology ACM0002 version 18.1, the monitoring plan contained in the registered Joint VCS PD&MR Version 02 and VCS program guide version 4.4 & VCS standard v 4.7, Monitoring Report Version 03 dated 06/11/2024 as per the process described under Section 2 of this report. Applus+ Certification verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these.

Applus+ Certification planned and performed the verification by obtaining evidence and other information and explanations that Applus+ Certification considered necessary to give reasonable assurance that reported GHG emission reductions are stated.

5.2 Verification Conclusion

In our opinion the GHG emissions reductions reported for the project activity for the period 01/04/2023 to 30/09/2023 (both days included) are fairly stated in the Monitoring Report Version 03 dated 06/11/2024 . The GHG emission reductions were calculated correctly based on the approved baseline and monitoring methodology ACM0002, Version 18.1, and the VCS standard version 4.7.

As summary the verification team able to conclude that:

- The project is in line with all relevant host country criteria (India) and all relevant VCS version 4 program guidelines requirements.
- Verification of the GHG statement was conducted in accordance with ISO 14064-3:2019.
- A reasonable level of assurance has been applied.

Verification period: 01/04/2023 to 30/09/2023 (including both days)

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

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-Apr -2023 to 30-Sept -2023	116,234	0	0	116,234	-	116,234
Total	116,234	0	0	116,234	-	116,234

5.3 Ex-ante vs Ex-post ERR Comparison

Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered Joint VCS PD&MR:

Monitoring Period	Ex-ante emissions reductions/removals	Achieved emissions reductions/removals	Percent difference	Justification for the difference
01-Apr -2023 to 30-Sept -2023	122,820	116,234	-5.36%	Below this table.
Total	122,820	116,234	-5.36%	Below this table.

The actual emission reduction achieved during the current monitoring period are 2.08% lesser than the estimated amount of emission reductions at the time of validation, which is due to the low PLF achieved by the project activity during the monitoring period.

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

<i>Section</i>	<i>Information</i>	<i>Justification</i>	<i>Assessment method and conclusion</i>
-	Not applicable	Not applicable	Not applicable

APPENDIX 2: DOCUMENT REFERENCE

S.No	Title of Document	Version	Date
1.	Registered Joint VCS PD&MR	02	07/12/2021
2.	VCS Validation Report	01	20/12/2019
3.	VCS Monitoring Report	01	30/05/2024
4.	VCS Monitoring Report (Final)	03	06/11/2024
5.	ER spread sheet	01	30/05/2024
6.	ER spread sheet (corresponding to the final monitoring report)	02	28/08/2024
7.	Certificates of Calibration for all the meters	-	-
8.	Invoice issued by PP to respective state DISCOMs for all 3 sites	For the period 01/04/2023 to 30/09/2023	-
9.	Monthly Joint Energy Meter Reading issued for all 3 sites	For the period 01/04/2023 to 30/09/2023	-
10.	Approved Consolidated Methodology ACM0002	18.1	-
10.1	Verification report 6 th MP (period: 01/10/2022 to 31/03/2023)	Version 02	15/11/2023
11.	CEA Database	version 12	May 2017
12.	Commissioning certificate 10 MW solar plant by Talettutayi Solar Projects Pvt Ltd, in Telangana	-	23/06/2016
	Commissioning certificate 10 MW solar plant by Talettutayi Solar Projects Six Pvt Ltd, in Telangana		23/06/2016
	Commissioning certificate 50 MW solar plant by Talettutayi Solar Projects Four Pvt Ltd, in Maharashtra		10/08/2017
	Commissioning certificate 30 MW solar plant by Talettutayi Solar Projects One Pvt Ltd, in Karnataka		05/01/2018
	Commissioning certificate 20 MW solar plant by Talettutayi Solar Projects Two Pvt Ltd, in Karnataka		07/08/2019
13.	Power purchase agreement for 10 MW solar plant by Talettutayi Solar Projects Pvt Ltd, in Telangana	-	Dated 18/03/2015
	Power purchase agreement for 10 MW solar plant by Talettutayi Solar Projects Six Pvt Ltd, in Telangana		Dated 19/03/2015
	Power purchase agreement for 50 MW solar plant by Talettutayi Solar Projects Four Pvt Ltd, in Maharashtra		Dated 11/04/2016

S.No	Title of Document	Version	Date
	Power purchase agreement for 30 MW solar plant by Talettutayi Solar Projects One Pvt Ltd, in Karnataka		Dated 02/08/2016
	Power purchase agreement for 20 MW solar plant by Talettutayi Solar Projects Two Pvt Ltd, in Karnataka		Dated 07/03/2018
14.	VCS webpage for the project, VCS ID 1762. Verra Search Page	-	-
15.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period	-	28/08/2024
16.	Central Electricity Authority (Installation and Operation of Meters) Regulations Notified on 17/03/2006 No. 502/70/CEA/DP&D Amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I	-	-
17.	VCS Standard	Version 4.7	16/04/2024
18.	VCS Program Guide	Version 4.4	29/08/2023
19.	On-site visit observations	-	15/05/2024 - 17/05/2024
20.	Technical specifications of Solar Panels, transformers and invertors installed at all three sites	-	-
21.	Grievance register/suggestion box placed at site office Grievances Redressal policy	-	-
22.	Training records (Attendance and photographs)	For the period 01/04/2023 to 30/09/2023	-
23.	Records of Safety system and procedures implemented on site	-	-
24.	Records of health care and first aid facilities for employees available on/off site	-	-
25.	Policy, procedure, and records for occupational safety	-	-
26.	Registration and Issuance Process	Version 4.4	31/08/2023
27.	Stakeholder consultation documents e.g Public notice, invitation letters, attendance sheet, MoM and photographs	-	-
28.	Registry Websites checked: CDM: Project Activities (unfccc.int) GSF Registry (goldstandard.org) Renewable Energy Certificate Registry of INDIA (recregistryindia.nic.in)		

APPENDIX 3: ABBREVIATIONS

Abbreviations	Full texts
ABT	Availability Based Tariff
BEF	Baseline Emission Factor
BESCOM	Bangalore Electricity Supply Company
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMS	Central Monitoring System
CMP	Conference of Parties Serving as Meeting of Parties
CO2	Carbon dioxide
DISCOM	Distribution Company
EB	Executive Board
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
JMR	Joint Meter Reading
kW	Kilowatt
kWh	Kilowatt hour
MFR	Multi-Function Relay
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MWh	Megawatt-hour
NEWNE	Northern Eastern Western Northern-Eastern
PD	Project Description
PLF	Plant Load Factor
PP	Project Proponent
QA/QC	Quality Assurance and Quality Control
SECI	Solar Energy Corporation of India Limited
TSSPDCL	The Southern Power Distribution Company of Telangana
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard

VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 4: FINDINGS OVERVIEW

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

FAR ID	-	Section no.	-	Date :
Description of FAR				
NA				
Project participant response				Date :DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 2. CL from this verification

CL ID	01	Section no.	2.2	Date : 26/07/2024
Description of CL				
Please submit the following documents: <ul style="list-style-type: none"> • Monthly generation records and corresponding invoices • Calibration certificates valid for the current monitoring period. • Declaration confirming that net GHG emission reductions or removals generated during this monitoring period shall not be used for compliance under any such programs or mechanisms. 				
Project participant response				Date : 28/08/2024
Monthly generation records and corresponding invoices are enclosed. Calibration certificates are enclosed. Declaration is being submitted.				
Documentation provided by project participant				
JMRs Invoices Calibration certificates Declaration				
DOE assessment				Date: 01/09/2024
The PP has submitted the monthly JMRs/invoices for the current monitoring period. The assessment team has verified the monthly data as reported in the ER sheet and found consistent with the corresponding JMRs/invoices. Calibration certificates submitted are found valid for the current monitoring period. The PP has submitted the declaration confirming that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions, found to be satisfactory. CL #1 is closed.				

Table 1. CAR from this verification

CAR ID	01	Section no.	3.3	Date : 26/07/2024
Description of CAR				

The PP is requested to clarify if the number of jobs created is also monitored under SDG 8. Please submit the evidence for the trainings organized during the current monitoring period.	
Project participant response	Date : 28/08/2024
We would like to clarify that the number of jobs created is not monitored under SDG 8, information is corrected in the MR. Training records are enclosed.	
Documentation provided by project participant	
Revised MR Training records	
DOE assessment	Date: 01/09/2024
The PP has clarified that number training are provided and monitored as SDG 8 impacts, information is updated in the MR, found to be appropriate Training records submitted by the PP are found to be appropriate. CAR #1 is closed.	

CAR ID	02	Section no.	4.2	Date : 26/07/2024
Description of CAR				
The actual ERs achieved are lower than the estimated ERs as per the registered PD for comparable period. The PP is requested clarify the reasons and justify that the decrease does not impact on additionality of the project.				
Project participant response				Date : 28/08/2024
The actual emission reduction is lower than the estimated emission reduction. The justification of the same has been provided in the Section 5.4 of the MR				
Documentation provided by project participant				
Revised MR Revised ER sheet				
DOE assessment				Date: 31/08/2024
The PP has provided justification for the decrease in actual ERs achieved during the monitoring period, since the actual ERs are lower than the estimated ERs as per the registered joint VCS PD for comparable period ,hence further clarification is required. CAR #2 is closed.				

Table 2. FAR from this verification

FAR ID	XX	Section No.	XX	Date :
Description of FAR				
NA				
Project participant response				Date : DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

APPENDIX 5: COMPETENCY STATEMENTS

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, Applus+ Certification has composed an assessment team in compliance with the Contract Review and Assessment Team appointment rules in the internal Quality Management System of Applus+ Certification as well as in compliance with the applicable requirements in the Accreditation Standard.

The composition of the Assessment Team (Applus+ Certification’s validation team) has been approved by Applus+ Certification during the Contract Review process ensuring that the required skills and capabilities are covered.

The qualification levels for Assessment Team members that are assigned by aforementioned appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training).

The Sectoral Scopes / Technical Areas required knowledge linked to the applied methodology(ies) is covered by the Assessment Team as shown below:

Name	Qualification	Coverage of scope	Coverage of technical Area	Financial aspect	Host country Experience	Attendance to the On-Site Assessment
Ravi Kant Soni	Lead Auditor (LA)	Yes (1)	Yes (1.2)	N/A	Yes	Yes
Ravi Kant Soni	Technical Expert (TE)	Yes (1)	Yes (1.2)	N/A	Yes	Yes
Simon Shen	Technical Reviewer (TR)	Yes (1)	Yes (1.2)	N/A	N/A	N/A

Ravi Kant Soni is a certified lead auditor for Lead Auditor ISO 14001:2004&Lead Auditor ISO 14064:2006 GHG Inventory and verification. He has more than 10 years of work experience across Climate Change, Environmental Management & Monitoring, Health & Safety Management, and Statutory Compliance. He was involved in more than 100 CDM validation and verifications activities and Gold Standard, VER projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1 technical area 1.2.

He has done Master in Technology (Energy Management) from a premier institute, School of Energy & Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from M.I.T.S Gwalior Jiwaji University Gwalior, India.

Simon Shen (master's degree in Thermal Energy Engineering, bachelor's degree in environmental engineering) is a Lead Auditor appointed by Applus+ Certification for the GHG project assessment. He is based in Shanghai. He has several years of work experience in environmental protection field. Before he joined Applus+ Certification, he had been worked for TÜV SÜD as a GHG Validator/Verifier and ISO 9001/14001 Lead Auditor for 5.5 years.