



RENEWABLE SOLAR POWER PROJECT BY SHAPOORJI PALLONJI



Document Prepared By

LGAI Technological Center S.A. (Applus+ Certification)

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Summary:

Verification purpose: LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed/^{2/} by “Terralight Rajapalayam Solar Private Limited” to perform the 3rd periodic verification of the “Renewable Solar Power Project by Shapoorji Pallonji” (VCS ID 1976)^{4/}. The main purpose of this verification activity is to have an independent third party for the assessment of the project design, monitoring report to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements.

The project is a bundled project activity which involves installation of 220 MW solar projects. The solar power plants are located in the three different states of India which includes *Maharashtra, Tamilnadu & Karnataka*. The purpose of the project activities to generate energy electricity by the utilization of solar energy and further selling the generated energy to the Indian grid. In this process there is no consumption of any fossil fuel and hence it does not lead to any greenhouse gas emissions. Thus, electricity would be generated through sustainable means without causing any negative impact on the environment.

Start date of the project activity is the 30-March-2018 (As per earliest date of commissioning of solar power project at Karnataka state of India by SPV “Suryodaya One”) as per deviation sought during second verification of the project activity ^{18/}. The monitoring period for this VCS verification is 01-January-2021 to 30-September-2021 (including both days) and the project activity achieved 272,606 tCO₂e emission reductions during this monitoring period thereon displaced 291,016.26 MWh amount of electricity from the generation-mix of power plants connected to the 15

Indian Grid, which is mainly dominated by thermal/fossil fuel-based power plant.

The scope of the verification is the independent and objective review of the Monitoring Report (MR)^{6/}. The MR is reviewed against the relevant criteria (see above) and decisions by the CDM Executive Board and VCS executive board, including the approved baseline and monitoring methodology. The verification was based on the guidance given in the CDM validation and verification standard for project activities, version 03.0/^{16/}, review against registered joint PD & MR/^{4/} and Final Validation report, CDM Project Standard for project activities, version 03.0/^{16/}, CDM project cycle procedure for project activities, version 03.0/^{16/}, VCS program guideline version 4.1/^{10/} and VCS Standard Version 4.2/^{10/}

A risk-based approach has been followed to perform this verification activity. In the course of verification, 06 Corrective Action request (CAR) and 01 Clarification Requests (CLs) were raised and successfully closed. No FAR was raised during this verification. The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent

background investigation, follow-up interviews and PP have provided LGAI Technological Center S.A. (Applus+ Certification) with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

The assessment team has employed a risk-based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the MR. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VERs. The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring report combined.

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.

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for document verifications. The entire documents checked/verification conducted to arrive at positive verification conclusions.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed by “Terralight Rajapalayam Solar Private Limited” to perform the 3rd periodic verification of the “Renewable Solar Power Project by Shapoorji Pallonji” under guideline version 4.1 and VCS standard Version 4.2. The objective of this verification activity is to have an independent third party for the assessment of the project design, Monitoring Report and Final Verification report and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular;

- The project's baseline is assessed against ACM0002 of version 19.0/^{20/}
- The project's monitoring plan is assessed against “ACM0002 of version 19.0/^{20/}
- the projects compliance with the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country legislation and sustainability criteria along with VCS guideline version 4.1/^{10/} and standard Version 4.2/^{10/}
- CDM validation and verification standard for project activities, Version 03.0/^{16/}
- CDM Project Standard for project activities, version 03.0/^{16/}
- CDM project cycle procedure for project activities, version 03.0/^{16/}
- VCS program guideline v4.1/^{10/}
- VCS standard v4.1/^{10/}

Verification is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of verified emission reductions (VERs).

1.2 Scope and Criteria

The scope is defined as an independent and objective review of the Monitoring report (MR)^{6/} prepared as per the registered joint PD & MR^{4/} and registered approved methodology ACM0002 version 19.0/^{20/}. The MR is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board and VCS standard Version 4.2/^{10/} and guideline version 4.1/^{10/}, including the approved baseline and monitoring methodology AMS-I.D version 19.0/^{20/}. The verification was based on the requirements in the CDM validation and verification standard for project activities, Version 03.0/^{16/}, CDM Project Standard for project activities, version 03.0/^{16/}, CDM project cycle procedure for project activities, version 03.0/^{16/} and VCS program guideline version 4.1/^{10/} and VCS Standard Version 4.2/^{10/}

The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input

for improvement of the Monitoring report. In line with Guidelines for Application of materiality in verifications, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. It follows the paper trail back to the raw data such as meter reading records and invoices. There are no material errors, overestimation of ER, omission or misstatement. Verification team conducted Remote audit due to pandemic situation and equipment's, technical details and metering/monitoring arrangement verified through photos/certificate shared by PP. The verification team has reviewed all the documents like commissioning certificates/^{1/}, technical specification/^{3/}, O&M practices, JMR/^{11/}, invoices/^{11/}, grievance registers/^{15/} etc.

1.3 Level of Assurance

Applus + Certification has planned and performed the verification by obtaining evidence and other information and explanations that assessment team considers necessary to give reasonable assurance that reported estimated GHG emission reductions are fairly stated. All documentary evidences were checked, a Remote audit was conducted due to pandemic situation and technical details and metering/monitoring arrangement verified through photos/certificate shared by PP to arrive at a verification conclusion by the assessment team.

In our opinion, the estimated GHG emissions reductions were calculated correctly on the basis of the approved baseline and monitoring methodology "ACM0002 of version 19.0"/^{20/} and the VCS Standard Version 4.2/^{10/}

1.4 Summary Description of the Project

The project activity is a solar based power generation project. The project activity involves installation of 220 MW solar project in in different states of India which includes *Maharashtra, Tamilnadu & Karnataka*. The commissioning details of the project and their location with SPVs are mentioned in the table below:

Sl. No.	Name of SPVs	Capacity (MW)	COD	Connection with Grid	State	Usage
1	Solar Edge Power and Energy Private Limited	50	26-April-2018	Indian Grid	Maharashtra	Sale to SECI
		50	08-April-2018			
		30	22-April-2018			
2	Terralight Rajapalayam Solar Private Limited (Previously known as Shapoorji Pallonji Infrastructure Capital Company Private Limited and Shapoorji Pallonji Suryaprakash Private Limited)	50	26-September-2018	Indian Grid	Tamil Nadu	Sale to Grid
3	Suryoday One Energy Private Limited	40	30-March-2018	Indian Grid	Karnataka	Sale to Grid

The monitoring period this VCS verification covered from 01-January-2021 to 30-September-2021 (inclusive of both dates) and the project activity achieved 272,606 tCO₂e emission reductions during this monitoring period.

Assessment team checked the Commissioning status of the project activity with the commissioning Certificates and found correct. The project is implemented as per the description in the registered joint PD & MR. No event observed during the current monitoring period which can alter or deviate from the methodology requirement.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification Process: The project assessment is based on the “CDM validation and verification standard for project activities, Version 03.0/16/ and “VCS standard Version 4.2/10/, program guideline version 4.1/10/” and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. 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.

Once the project is received by the assessment team, the members of the assessment team carried out: -

1. A desk review of the Monitoring report^{16/} against the registered PD & MR^{04/} and final validation report^{17/};
2. Follow-up interviews with project participant;
3. The resolution of outstanding issues and the issuance of the final verification report and opinion.

The prepared verification report and other supporting documents then undergo an internal quality control at the HQ (Accredited office) before being submitted to the VCS executive board.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. Applus+ Certification has developed a specific checklist customized for the project. The checklist demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from validating the identified criteria.

Appointment of the assessment team

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

The composition of audit team shall be approved by the Applus+ Certification ensuring that the required skills are covered by the team.

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

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

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

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Dr. Atul Takarkhede	LA/TE	YES	YES	NA	YES
Mr. Simon Shen	TR	YES	YES	NA	NA

The detail regarding the assessment team is provided below in this report as Appendix 3

Document review

The Monitoring report version 01/06/ submitted by the PP was reviewed against the approved methodology/^{20/}, registered PD & MR/^{04/}, final validation report and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in this report below in Appendix 1.

Follow-up interviews

A Remote audit is conducted by Applus+ Certification. Audit team performed interviews, via video/telephone conferences with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report.

Resolution of Clarification and Corrective Action Request

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the Appendix 2.

The final MR Version 03/06/ submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Internal quality control

As final step of a verification of the final documentation including the verification report and the checklist have to undergo an internal quality control by the technical review committee, i.e., each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of Interest.

After confirmation of the PP the positive verification opinion and relevant documents are submitted to the VCS board through the VCS web-platform.

2.2 Document Review

The details of the document observed during the verification process are listed below in Appendix 1 of this report

2.3 Interviews

A remote audit was conducted for the project activity on 26-January-2022. Remote audit was conducted due to on-going COVID-19 pandemic situation in the entire state of India. Taking into account the rules of relevant national and local authorities (local to the DOE offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the DOE and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return). Moreover, The VCS Program does not explicitly mandate site visits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.2).

The VVB has taken alternative measures to reach reasonable level of assurance and conducted remote audit through Skype/Telephone with site personal & consultant (refer section 2.3) with the PP representative. This is also in line with the COVID-19 travel guidance for projects of VERRA.

Technical details & metering/monitoring arrangement verified through onsite photographs/name plates and calibration certificates shared by PP. All the documents were cross checked to ensure conservative estimation of emission reduction. During the remote audit, the PP representatives were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of meters, the generation, recording, and monitoring of the data and the error accountability were discussed. To cross check the information provided by PP, various documents like technical specifications, commissioning certificates, PPA, JMR sheets, invoice, calibration certificates, etc. were also verified. The names of the persons interviewed during remote audit through verification team & telephonic interview is given below;

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Millar	Mr. S.	Solar Edge Power and Energy Private Limited	26-January-2022	Project Implementation, JMR & invoicing procedure, calibration, grievance mechanism, Management practices, data storage, QA/QC	Dr. Atul Takarkhede
2.	Millar	Mr. S.	Terralight Rajapalayam Solar Private Limited (Previously known as Shapoorji Pallonji Infrastructure Capital Company Private Limited)			
3.	Venkatesh	Mr. M	Suryoday One Energy Private Limited			

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
4.	Kulkarni	Mr. Rahul	EKI Energy Services Limited		GHG calculations, MR and ER preparation, Data collection, data storage, QA/QC	

2.4 Site Inspections

Duration of on-site inspection: 26-January-2022 (Remote audit)					
No.	Activity performed on-site	Site location	Date	Team member	
1.	Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring. Assessment team also checked that whether the monitoring plan as described in the VCS PD is actually practised onsite. Also, assessment team checked any change in host country criteria which may affect the baseline of the project activity.	Remote Audit through video conferencing	26-January-2022	Dr. Atul Takarkhede	

2.5 Resolution of Findings

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues from verification which need to be clarified for Applus+ Certification's positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the Appendix 2.

The final MR Version 03/06/ submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Areas of validation and verification findings	No. of CL	No. of CAR	No. of FAR
Project design document and Monitoring report	00	01	00
Description of project activity	01	02	00
Application of selected baseline and monitoring methodology and selected standardized baseline			
Applicability of methodology and standardized baseline	00	00	00
Deviation from methodology	00	00	00
Clarification on applicability of methodology, tool and/or standardized baseline	00	00	00
Project boundary	00	00	00
Establishment and description of baseline scenario	00	00	00
Demonstration of additionality	00	00	00
Emission reductions	00	01	00
Calibration details	00	01	00
Monitoring plan	00	00	00
No Net harm assessment	00	00	00
Local stakeholder consultation	00	01	00
Others (please specify)	00	00	00
Total	01	06	00

The list of findings and the resolution is presented in Appendix 2 of this report.

2.5.1 Forward Action Requests

This is 3rd periodic verification of the project activity and no FAR was raised from validation and previous verification.

2.6 Eligibility for Validation Activities

Applus+ Certification is VERRA approved VVB for validation & verifications under Sectoral Scope 1 with VVB ID 034¹. Thus, this section not applicable.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is not applied under any other GHG program like CDM, GS, hence not applicable. PP has submitted an undertaking regarding no participation in any other GHG mechanism.

¹ <https://verra.org/project/lgai-technological-center-s-a-applus/>

3.2 Methodology Deviations

This section is not applicable for present verification as no methodology deviation sought during this verification

3.3 Project Description Deviations

Following deviations are approved during previous verification:-

- i. Change in ownership of the SPVs located in Tamil Nadu and Maharashtra of the project activity. The details of the new owner have mentioned in Section 1.3 of previous Monitoring Report. The deviation was accepted and approved by VVB during last verification.
- ii. In addition to that, as per the Commissioning Certificate issued by the state utility of Karnataka, the commissioning date of 40 MW installation at Karnataka is 30- March-2018 which is the earliest date of commissioning of the project activity. But PP has taken 08 April 2018, which is the Commissioning date of installations at Maharashtra as the start date of the project activity. Hence, the crediting period chosen for the project activity is revised to 30-March-2018 to 29-March-2028. The deviation was accepted and approved by VVB during last verification^{18/}.

Following deviation have been applied by PP during this verification:

At Karnataka Site (Suryoday One Energy Private Limited, 40 MW), PP has considered transmission losses at substation end as mentioned in JMR as a conservative approach for emission reduction calculation. Emission reduction calculation is done considering transmission losses as a conservative approach.

Above deviation does not have impact on the project description, scale, methodology & monitoring practices. Thus, accepted by VVB being conservative approach.

3.4 Grouped Project

This is not a grouped project. Thus, this section is not applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During the Remote audit, it was concluded that the project is implemented as per the requirement of the registered VCS PD and approved monitoring plan, during the current monitoring period; it was observed that no unforeseen incident/event evolved which can impact

the operation of the project activity which was verified from breakdown records. The project undergone continuous operation and only scheduled maintenance is observed as per the manufactures specification which is acceptable to the assessment team and evident from JMRS.

The project activity is a 220 MW solar power project and locations of the same are confirmed by the verification team during the Remote audit. The plant location including latitudes and longitudes are confirmed below:

Sl. No.	Name of SPVs	Capacity (MW)	Latitude	Longitude	Location
1	Solar Edge Power and Energy Private Limited	50	21° 01' 36.01"	75° 59' 6.82"	Wadhawe, Hartale & Manpur, Jalgaon District, Maharashtra
		50	18° 55' 21.06"	76° 21' 29.28"	Parli, Beed District, Maharashtra
		30	18° 55' 21.06"	76° 21' 29.28"	Parli, Beed District, Maharashtra
2	Terralight Rajapalayam Solar Private Limited (Previously known as Shapoorji Pallonji Infrastructure Capital Company Private Limited and Shapoorji Pallonji Suryaprakash Private Limited)	50	9° 33' 14.52"	77° 53' 03.25"	Thenkarai, Virudhnagar district, Tamil Nadu State
3	Suryoday One Energy Private Limited	40	16° 10' 40.92"	74° 47' 22.56"	Gokak Falls, Belgavi District, Karnataka State

Verification team confirmed from the registered joint PD & MR^{4/} and from previous verification reports^{17/} that the location of the project activity including the coordinates is same as mentioned in the registered VCS joint PD & MR^{4/}.

Assessment team checked the commissioning certificate^{1/} and confirmed that the dates of Commission for the Solar plants are correct. Assessment team also conform during interview with the PPs representatives that there is no change in project design and the project is implemented as per the description provided in the VCS PD & MR. The details of solar plant with SPVs and connected feeders are provided below:

Sl. No.	Name of SPVs	Capacity (MW)	Feeder Connectivity
1	Solar Edge Power and Energy Private Limited	50	132 KV Muktainagar
		50	132 KV GSS Pangri, Beed
		30	
2	Terralight Rajapalayam Solar Private Limited (Previously known as Shapoorji Pallonji Infrastructure Capital Company Private Limited and Shapoorji Pallonji Suryaprakash Private Limited)	50	110 KV, Nallamanaickenpatti
3	Suryoday One Energy Private Limited	40	110 KV Gokak Shindikur substation further connected to 220 kV R/S Ghataprabha.

The project boundary includes the electricity generation equipment at the project site, substation and the regional grid (now Indian grid). Connected substation is verified through onsite documents submitted by PP to assessment team during remote audit.

Assessment team also checked the technical details of the Solar plants installed onsite from documents submitted by PP and previous verification reports. The same is cross checked from the photographs of the number plates, module capacity etc. submitted by PP & also cross checked from the technical details from Manufacturer.

The technical details of the Solar PV Project are described in the table below.

a) The technical detail of 40 MW solar project by Suryoday One Energy Private Limited

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Solar PV technology (Poly-Crystalline)
2	Number of modules and their capacity	No. of Modules- 164734 Model capacity- 340 Wp
3	Number of Inverters & Capacity	16 Inverters 2750 KW

- b) The technical specification of 50 MW solar project by Solar Edge Power and Energy Private Limited

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Solar PV technology (Poly-Crystalline)
2	Number of modules and their capacity	JA Solar Model capacity- 325 Wp
3	Number of Inverters & Capacity	25 Inverters 2000 KW

- c) The technical specification of 50 MW solar project by Terralight Rajapalayam Solar Private Limited (Previously known as Shapoorji Pallonji Infrastructure Capital Company Private Limited and Shapoorji Pallonji Suryaprakash Private Limited).

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Solar PV technology (Poly-Crystalline)
2	Number of modules and their capacity	No. of Modules- 164880 Model capacity- 325 Wp, 330 Wp
3	Number of Inverters & Capacity	25 Inverters 2000 KW

- d) The technical specification of 30 MW solar project by Solar Edge Power and Energy Private Limited

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Solar PV technology (Poly-Crystalline)
2	Number of modules and their capacity	Model capacity- 117.5 Wp (JA Solar), 325 Wp (First Solar)
3	Number of Inverters & Capacity	15 Inverters 2000 KW

- e) The technical specification of 50 MW solar project by Solar Edge Power and Energy Private Limited

Sl. No.	Technical details of the equipment	Description
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1	Technology Used	Solar PV technology (Poly-Crystalline)
2	Number of modules and their capacity	JA Solar Model capacity- 325 Wp
3	Number of Inverters & Capacity	25 Inverters 2000 KW

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period. The project design as mentioned in the registered PD is implemented and thus the same is acceptable to the assessment team. All required monitoring equipment's and procedures as mentioned in the registered PD are available and implemented in an appropriate manner.

The organisational role and responsibility as mentioned in the registered PD & MR/^{4/} is followed onsite confirmed during remote audit. All the emergency preparedness as mentioned in the registered joint PD & MR/^{4/} is followed onsite and no discrepancies were found regarding the same. Meters are calibrated as per calibration frequency in registered VCS joint PD & MR/^{4/}. All the emergency preparedness as mentioned in the registered VCS joint PD & MR is followed onsite and no discrepancies were found regarding the same. Thus, completeness of the monitoring plan confirmed and there are no any material discrepancies between the actual monitoring system and the plan provided in the registered joint PD& MR.

CL01, CAR 01 & CAR 02 is raised for the inconsistency with respect to MR template guidelines and CAR 03 is raised for supporting evidences for No-Double counting and closed successfully after proper response of PP.

Assessment team confirms following during the verification Remote audit:

1. Start date of the project activity is 30-March-2018 as as per deviation sought during second verification of the project activity /^{18/}.
2. An undertaking letter dated 02-February-2022 has been submitted by PP for no double counting with any other GHG program. PP also has given a written declaration that project has not claimed other form of GHG credit for the concerned monitoring period. Assessment team also checked that the projects are not registered under the REC mechanism of India and the same can be cross-checked at <https://recregistryindia.nic.in>. PP has given a written declaration that the credit claimed under VCS for the current monitoring period is not claimed under any other GHG mechanism/^{12/}.
3. Assessment team confirms that this is the 3rd monitoring under VCS and covers the activity from 01-January-2021 to 30-September-2021 (inclusive of both dates). The project activity adopts renewable crediting period of 10 years period and can be renewed for maximum 2 times. 30-March-2018 to 29-March-2028 is the crediting period as per deviation sought during second verification of the project activity/^{18/}.

The GHG credits from 01-January-2021 to 30-September-2021 will be claimed under VCS only. At any point of time during the crediting period, the project proponent will abide by the "No Double Counting"/^{12/}.

4. Assessment team checked and found that the Project proponent of the project activity mentioned in Section 1.3 of monitoring report is correct^{6/}:
5. Assessment team also checked the details of other entity mentioned in Section 1.3 of monitoring report and found correct^{6/}.
6. The quantified emission reduction calculation for the monitoring period is correct and conservative. Assessment team also compared actual VER with the estimated VER and found that the actual VER is 272,606 tCO₂e which is 15.47% lower than the estimated emission reductions 322,502 tCO₂e (432,770 tCO₂e/365 days x 272 days) during this monitoring period which is due to low PLF (unfavourable sun) which is a natural phenomenon and beyond the control of the Project Proponent. Hence accepted^{6/}.

SUSTAINABLE DEVELOPMENT:

Ministry of Environment, Forests & Climate Change, Government of India has stipulated following indicators for sustainable development in the interim approval guidelines for GHG projects.

Social well-being: The project activity has resulted in creating job opportunities for the local population on temporary and permanent basis. Manpower is required both during erection and operation of the renewable energy projects. This results in the improvement in living standards of the local community. The installation of the renewable energy projects also led to development of basic infrastructure like roads, communication with the nearby cities etc. which also improved in living standards of the local population.

Economic well-being: The project activity has created direct and indirect job opportunities to the local community during installation and operation of the renewable energy projects. The investment for the project activity has led to the improvement in the economic activity in the local area.

Technological well-being: The successful operation of project activity has led to promotion of solar power generation and would encourage other entrepreneurs to participate in similar projects.

Environmental well-being:

The project activity utilizes renewable energy for generating electricity which otherwise would have been generated through alternate fuel (most likely - fossil fuel) based power plants, contributing to reduction in specific emissions (emissions of pollutant/unit of energy generated) including GHG emissions. As renewable energy projects produce no end products in the form of solid waste (ash etc.), they address the problem of solid waste disposal encountered by most other sources of power. Being a renewable resource, to generate electricity contributes to resource conservation. Thus, the project causes no negative impact on the surrounding environment.

In view of the above, the PP has considered that the project activity profoundly contributes to the sustainable development.

4.2 Safeguards

4.2.1 No Net Harm

No potential environment or socio-economic matter was found during the documents review of VCS joint PD & MR and grievance register etc. The project is renewable energy project and thus no negative impact observed due to project activity.

The project activity promotes environmental and socio-economic well-being as it results in zero GHG emissions due to installation and operation of clean, renewable energy technology for electricity generation. The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013². This report clearly mentioned that solar/Wind power project activity operations do not result in direct air pollution, noise pollution. Moreover, also as per the Central Pollution Control Board of India notification³ solar/wind project falls under White Category and are practically non-polluting.

4.2.2 Local Stakeholder Consultation

Local stakeholder consultation has been conducted at the time of project registration. For on-going stakeholder’s communication, PP have maintained grievance register/^{15/} at the site office. All the stakeholders are happy with the implementation and operation of the project activity and no negative comments envisaged for the project activity. Complaint/suggestion/feedback register is maintained at site as a part of ongoing communication with stakeholders in line with clause 3.16.17 of VCS Standard, ver. 4.2/^{10/} and appropriate actions taken time to time by PP.

Assessment team checked the grievance register/^{15/} provided by PP and found that local stakeholders can anytime lodge their grievances if any in the register over the operational life time of the project. During current monitoring period no grievance was received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate. CAR 04 was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.

4.3 AFOLU-Specific Safeguards

This section is not applicable as this project activity is a non-AFOLU project activity.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the VCS PD. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the VCS PD & MR.
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² <https://smartnet.niua.org/sites/default/files/resources/report-on-developmental-impacts-of-RE.pdf>

³ http://envfor.nic.in/sites/default/files/Latest_118_Final_Directions.pdf

Findings	CAR 05 was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	Baseline Emissions: The baseline Emissions for a given year is calculated by multiplying the energy baseline with the grid emission factor. The grid in this case would be the 'Indian Grid' Formula Used: - $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ Where , BE_y = Baseline Emissions in year y, tCO₂ $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr) $EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (t CO₂/MWh) Ex-ante parameters: The baseline emission factors are taken ex-ante in line with the registered VCS PD as well as cross checked with section validation report and found correct^{4/}. The baseline emission factors are calculated by the Central Electricity Authority, Govt. of India. The values of OM and and BM are sourced from the CEA CO₂ Baseline database version 14. The data Combined margin CO₂ emission factor ($EF_{grid,CM,y}$) is equal to 0.9368 tCO₂/MWh. The calculation approach was in line with the VCS PD. Values are as follows: $EF_{grid,OM,y} = 0.9610 \text{ tCO}_2/\text{MWh}$ $EF_{grid,BM,y} = 0.8644 \text{ tCO}_2/\text{MWh}$ $EF_{grid,CM,y} = 0.9368 \text{ tCO}_2/\text{MWh}$ Ex-post parameter: For Karnataka Site: $EG_{PJ,y} = 51,448.08 \text{ MWh}$ For Maharashtra Site: $EG_{PJ,y} = 179,643.18 \text{ MWh}$ For Tamil Nadu Site: $EG_{PJ,y} = 59,925.00 \text{ MWh}$ Total Net generation for the project activity : 291,016.26 MWh

	The verification team has checked the entire monthly JMR reports ^{/11/} for net electricity generated & supplied to the grid and crosschecked same with the invoices^{/11/} raised by PP towards State Utilities for the monitoring period. All values are found correct. All the parameters are monitored and recorded as per the monitoring plan in the MR. However; PPs have apportioned the values for the last month of the monitoring period where dates are not matching with JMR cycle in Karnataka and Tamil Nadu states. Apportioning found appropriate and conservative. The billing meters are installed in switchyard of each SPVs and connected to substations of respective states utilities (Refer Appendix 5 of this report). The details of monitoring equipment installed at each SVP are given in appendix 05 below. The calculations/measurement of net electricity supplied to grid is under purview of state electricity board and the PP/Project activity Instance owner has no role on it. PP/Project activity Instance owner gets value of net electricity supplied to grid and hence this parameter is mentioned as a part of monitoring plan The net electricity supplied the grid by the project activity during the monitoring period is 291,016.26 MWh. All relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement/determination method, the correctness of the values applied for ER calculation^{/7/}, the accuracy, and applied QA/QC measures. Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors. BE_y (baseline emissions), tCO₂e $BE_y = 291,016.26 \text{ MWh} \times 0.9368 \text{ tCO}_2\text{e/MWh}$ $= 272,606 \text{ tCO}_2\text{e (round down values)}$ As per applied methodology ACM0002, version 19.0, the VCS joint PD & MR, project emission is considered zero as the project activity involved Solar power generation^{/4/}. PE_y = As per ACM0002 - Version 19.0, all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected. As the project activity involved solar power project emissions (PE_y) are taken as zero. Leakage: As per ACM0002 - Version 19.0, Leakage emissions are not considered for the project activity^{/20/}. Hence, $ER_y = BE_y - PE_y$ $= 272,606 - 0$
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	= 272,606 tCO₂e (round down values) Verification team confirms that the monitoring has been carried out in accordance with the monitoring plan contained in the registered VCS PD/^{4/}. Assessment team confirmed that the GHG emission reductions and removals have been quantified correctly in line with the registered VCS PD/^{4/}.
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4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	The verification team checked the Calibration details of the monitoring meters with the calibration certificates.
Findings	CAR 06 was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	The verification team checked the break down log for the monitoring period/^{13/}. During the remote verification audit and the feeder wise location of the solar plants is also checked. The metering arrangement is bi-directional energy meters (Main and Check) of accuracy class 0.2s at the State Electricity Board (SEBI) sub-station. These electricity meters are being used by state electricity board for Share certificate statements. These meters record several parameters including electricity exported & imported. These electricity meters are being used by state electricity board for monthly generation reports/^{14/}. The details like make, Serial number, Calibration dates etc./^{5/}. are provided in appendix 05 of this report. Verification team confirms that all the energy meters (main and check meter) installed at the substation are of accuracy class of 0.2s and are calibrated as per the calibration frequency mentioned in monitoring plan in VCS joint PD & MR i.e. The calibration frequency of meters is once in 5 years/^{5/}. No delayed calibrations were observed in the project activity for this monitoring period. All the meters are of same accuracy class i.e., 0.2s as per the requirement of the registered PD. On-site photographs and interview during Remote audit with O&M personnel also confirms the same/^{5/}. The calculation of net electricity supplied to grid is under purview of state electricity board and PP does not have control on it. Calibration details of the monitoring meters checked with calibration certificates submitted by PP and found that calibration frequency of 5 years is compiled/^{5/}. Thus, no delayed calibration is observed and thus the same is found appropriate. The break down log is checked and there is no major breakdown during the monitoring period. No unforced error observed. No sampling procedure applied for monitoring of the data parameter and entire documents were checked by the assessment team to arrive at positive verification conclusions. The monitoring plan is followed at the project site. The monitoring meters were

	calibrated in line with the registered monitoring plan and there was no delay in calibration observed. Thus, assessment team concluded that the evidences are sufficient in quantity, and appropriate for the quality, to determine the GHG reductions and removals. Assessment team checked the calculation of estimated VER vs. Actual VER. As per the registered VCS PD the amount of VERs annually is 432,770 tCO₂e. The days involved in present monitoring period are 272. Therefore, on pro-rata basis, the estimated VERs for the monitoring period is 322,502 tCO₂e. Actual VERs obtained for the monitoring period is 272,606 tCO₂e and thus the actual VER is 15.47% lower than the estimated VER. This variation is majorly due to low PLF (unfavourable sun) which is a natural phenomenon and beyond the control of the Project Proponent. Hence confirms that decrease in VER by 15.47% in this monitoring period is acceptable.
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4.6 Non-Permanence Risk Analysis

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
NA	NA	NA	NA	NA

5 VERIFICATION CONCLUSION

Applus+ Certification has been engaged^{/02/} by Terralight Rajapalayam Solar Private Limited to perform the 3rd periodical verification of the “Renewable Solar Power Project by Shapoorji Pallonji”.

The project participants are 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 VCS joint PD & MR^{/4/} and the applied methodology ASM-I.D version 19.0^{/20/}

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board. 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. Further, the verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for document verifications. The entire documents checked/Power plant verification conducted to arrive at positive verification conclusions. The verification team can confirm that:

- the project is operated as planned and described in the project document;
- the monitoring plan is as per the applied methodology;
- the monitoring process in Monitoring Report is as per the registered joint PD & MR^{/4/};
- the development and maintenance of records and reporting procedures are in accordance with the 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.
- A Reasonable Level of assurance was achieved as planned, during verification process.
- Verification period: 01-January-2021 to 30-September-2021 (inclusive of both days)

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

Year	Baseline emissions or removals (tCO ₂ e) ⁴	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01-January-2021 to 30-September-2021	272,606	0	0	272,606
Total	272,606	0	0	272,606

⁴Rounddown values

APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

No.	Author	Title	References to the document	Provider
1.	Respective State Utility	Commissioning certificates of the Solar plants :- ii) For 2x20 MW solar plant at Gokak site in state of Karnataka issued by <i>Hubli Electricity Supply Company Ltd.</i> Ref. C45/05 ii) For 30 MW solar plant at Beed site in state of Maharashtra issued by <i>Solar Energy Corporation of India Ltd.</i> Ref No. SECI/SD/NSM/P2B4T3/SEPEPL/1 V-COD/24219 iii) For 50 MW solar plant at in state of Maharashtra issued by <i>Solar Energy Corporation of India Ltd.</i> Ref No. SECI/SD/NSM/P2B4T3/SEPEPL/1 V-COD/24220. iv) For 50 MW solar plant at in state of Maharashtra issued by <i>Solar Energy Corporation of India Ltd.</i> Ref No. SECI/SD/NSM/P2B4T3/SEPEPL/1 V-COD/24221 v) For 50 MW at Virudhunagar site in state of Tamil Nadu issued by <i>Tamil Nādu Generation and Distribution Corporation Limited</i> , Ref No. SE/VREDC/VDR/AEE/GI/AE.1/F.Solar/D.No. 1220/18	Dated 26-April-2018. Dated 01-August-2018 Dated 01-August-2018. Dated 01-august-2018 Dated 24-october-2018.	PP
2.	Applus	Contract of the project participant with the DOE. Ref. No. A+SH_SYST_TQC_VCS_VER_30121	16-November-2021	PP
3.	NA	The operational lifetime of the project activity from the manufacturer (Technical specifications)	Manufacturer technical specifications	PP
4.	NA	Registered PD & MR https://registry.terra.org/app/projectDetail/VC S/1976	29-January-2022	PP
5.	Respective state authority	Calibration Certificates of energy meters	-	PP
6.	NA	Draft MR version 01 Revised MR version 02	28-December-2021 18-February-2022	PP

No.	Author	Title	References to the document	Provider
		Final MR version 03 (VERRA review)	18-April-2022	
7.	NA	Emission reduction sheet version 01 Emission reduction sheet version 02	28-December-2021 18-February-2022	PP
8.	PP	O & M Agreements	-	PP
9.	SPVs and state board	Power Purchase Agreements : M/s Terralight Rajapalayam Solar Private Limited (50 MW) M/s Suryoday One Energy Pvt Ltd (40 MW) M/s Solar Edge Power and Energy Pvt Ltd (50 MW, 50MW & 30 MW)	27-September-2017 09-July-2018 30-December-2016	PP
10.	NA	Tools/ guidelines used in the project activity - Glossary of CDM terms version 07 - VCS standard Version 4.2 - VCS Program Guide 4.1 - VCS verification report template version 4.1	UNFCCC CDM/VCS web site	UNFCCC
11.	State Utility for JMR, PP for invoice	Monthly statement- JMR & invoices for the complete monitoring period	-	PP
12.	PP	Declaration regarding no participation in other GHG program for the concerned monitoring period	02-February-2022	PP
13.	NA	Breakdown details for the monitoring period	-	PP
14.	NA	Employment records for plant persons	-	PP
15.	NA	Grievance Register maintained at site	-	PP
16.	UNFCCC	CDM validation and verification standard for project activities, Version 03.0	-	UNFCCC
17.	Applus	Joint Validation and Verification report of the first monitoring period. Ref. No. 11419	Version 01 11-December-2019	
18.	ESPL	Previous Verification Report, Report ID: VCS.VAL.21.28 (Under VERRA approval)	29-January-2022	PP
19.	PP	Breakdown details of the power plant	-	PP
20.	UNFCCC	ACM0002 of version 19.0	version 19.0	UNFCCC

APPENDIX 2: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)

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

FAR ID	XX	Section no.	E.2	Date : DD/MM/YYYY
Description of FAR				
There is no FAR from the validation/previous verification of the project activity				
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.	4.1	Date: 03-February-2022
Description of CL				
- The project crediting period start date and end date in monitoring report is not in line with the VCS Joint PD MR. Thus, PP is requested to clarify the same. - In section 1.1 the details of the SPVs are not in line with VCS PD as the usage section of the Table in MR, it is mentioned sale to grid whereas, in PD it is sale to SECI please clarify.				
Project participant response				Date: 10-February-2022
- Project crediting start date & end date is now revised as per VCS joint PD & MR, submitting herewith revised VCS MR version 02 dated 10-February-2022 - With reference to Power Purchase Agreement (PPA) signed between Solar Edge Power and Energy Pvt. Ltd. With Solar Energy Corporation of India Ltd. (SECI) for 50 MW SPP at Muktainagar dated 10-February-2017, 30 MW SPP at Beed dated 10-February-2017 & 50 MW SPP at Beed dated 10-February-2017, it is mentioned as a sale to SECI under usage of section 1.1 of VCS MR. Submitting herewith copy of PPA agreement to VVB for verification.				
Documentation provided by project participant				
Revised VCS MR (Version 02) Copy of signed PPA between Solar Edge Power and Energy Pvt. Ltd. With Solar Energy Corporation of India Ltd. (SECI)				
DOE assessment				Date: 21-FEBRUARY-2022

1. PP has submitted revised monitoring report now crediting period start and end date is made consistent with deviation sought. Thus, accepted and CAR is Closed.
2. PP has now updated the SPVs inline with the VCS PD and submitted PPA (Power Purchase Agreement) signed between the Solar Edge Power and Energy Pvt. Ltd. With Solar Energy Corporation of India Ltd. (SECI) for 50 MW SPP at Muktainagar dated 10-February-2017, 30 MW SPP at Beed dated 10-February-2017 & 50 MW SPP at Beed dated 10-February-2017. Thus, CAR is Closed.

Table 3. CAR from this verification:

Project Implementation Status

CAR ID	01	Section no.	4.1	Date:	03-February-2022
Description of CAR					
1. PP requested to review the applicability of VCS Standard 4.2 and associated templates for MR etc. Kindly review. 2. Date format found not inline with guidelines to complete MR throughout the monitoring report. Corrective action sought. 3. Section 3.1 of the MR found not inline with guidelines to complete MR. Corrective action sought. 4. PP requested to submit copies of technical specifications of SPVs, commissioning certificates, SPV name change records, PPA, O&M agreement.					
Project participant response					Date: 10-February-2022
1. Submitting herewith VCS – MR as per latest template (VCS version 4.1), all relevant sections are updated as per VCS standard 4.2 2. All dates are now revised as per date format inline with VCS guidelines, submitting herewith revised MR Version 02 dated 10-February-2022 3. Details about change in PP name is now mentioned in section 3.1 of the revised VCS MR and in all applicable sections in revised MR (version 02 dated 10-February-2022) 4. Submitting herewith Copy of technical specifications of SPV Commissioning Certificate SPV name change record PPA O & M Agreement					
Documentation provided by project participant					
Revised VCS MR (Version 02) Copy of technical specifications of SPV Commissioning Certificate SPV name change record PPA O & M Agreement					
DOE assessment					Date: 21-FEBRUARY-2022

1.	PP has submitted the revised MR as per the updated monitoring report version i.e., VCS (MR template version 4.1) and section of revised MR is updated as per VCS standard version 4.2. Thus, CAR is Closed.
2.	Date format is now inline with VCS guidelines and MR template version 4.1 in revised MR. Thus, CAR is Closed.
3.	Section 3.1 of revised MR is now inline with the VCS MR template version 4.1 and change in PP name is updated and certificate of Incorporation change in name of PP company name submitted issued by Government of India and name is now terralight rajapalayam solar private limited dated 05 February 2021. Thus CAR is Closed.
4.	PP has submitted the following document: i) Copy of Technical specification of all WTGs installed in the project activity. ii) Commissioning certificate for 2x20 MW solar plant at gokak site in state of Karnataka issued by Hubli electricity supply company Ltd. Dated 26-April-2018. iii) Commissioning certificate for 30 MW solar plant at beed site in state of Maharashtra issued by solar energy corporation of India Ltd. Ref No. SECI/SD/NSM/P2B4T3/SEPEPL/1 V-COD/ iv) Commissioning certificate for 50 MW solar plant at in state of Maharashtra issued by solar energy corporation of India Ltd. Ref No. SECI/SD/NSM/P2B4T3/SEPEPL/1 V-COD/24220.dated 01-august-2018. v) Commissioning certificate for 50 MW solar plant at in state of Maharashtra issued by solar energy corporation of India Ltd. Ref No. SECI/SD/NSM/P2B4T3/SEPEPL/1 V-COD/24221 dated 01-august-2018. vi) Commissioning certificate for 50 MW at Virudhunagar site in state of Tamilnadu issued by Tamilnadu generation and distribution corporation limited Ref No. SE/VREDC/VDR/AEE/GI/AE.1/F.Solar/D.No. 1220/18 dated 24-october-2018. vii) Certificate of Incorporation change in name of SPv name submitted by PP issued by Government of India and name is now name is <i>Terralight Rajapalayam Solar Private Limited</i> dated 05-February-2021. viii) PPA (power purchase agreement) between SPVs and respective state electricity board. ix) O &M agreement between PP and Suryoday one energy pvt. Ltd dated 1-April-2018 and PP and Solar Edge Power and Energy Private Limited, dated 21-February-2018 and between Shapoorji Pallonji infrastructure capital company private limited. Above document has been verified by assessment team and found consistent with the revised monitoring report and current monitoring period.

CAR ID	02	Section no.	4.1	Date: 03-February-2022
Description of CAR				
1. Complete details of Project Proponent are missing in section 1.3 of the Monitoring Report. Thus, Corrective action sought.				
2. In Section 1.7 of Monitoring Report the Geo-coordinates of latitude and longitude is not inline with approved Joint VCS PD MR. Thus, Corrective action sought.				
Project participant response				Date: 10-February-2022
1. Necessary details of project proponent is now added to section 1.3 of revised MR (version 02 dated 10-February-2022)				
2. Geo-coordinates are now mentioned in line with approved VCS PD MR.				
Documentation provided by project participant				
Revised VCS MR (Version 02)				
DOE assessment				Date: 21-FEBRUARY-2022
1. PP has included Project Proponent name in section 1.3 of the revised Monitoring Report. Thus, CAR is Closed.				
2. PP has updated Geo-coordinates of latitude and longitude is inline with approved Joint VCS PD MR. Thus, CAR is closed.				

CAR ID	03	Section no.	4.1	Date: 03-February-2022
Description of CAR				

PP is requested to submit an undertaking for no any double accounting for current monitoring period and for project activity is participated in other GHG program other than VCS to the assessment team. Kindly submit.	
Project participant response	Date: 10-February-2022
Submitting herewith signed copy of undertaking for no any double accounting for current monitoring period and for project activity is participated in other GHG program other than VCS.	
Documentation provided by project participant	
Copy of under taking letter	
DOE assessment	Date: 21-FEBRUARY-2022
PP has submitted the undertaking letter for no any double counting for current monitoring period dated 02-February-2022 and for project activity PP not claiming any ERs other than VCS verified by assessment team. Thus, CAR is closed.	

CAR ID	04	Section no.	4.2.2	Date: 03-February-2022
Description of CAR				
PP is requested to submit records of ongoing local stakeholder consultation including grievance register etc.				
Project participant response				Date: 10-February-2022
Submitting herewith copy of grievance register for verification				
Documentation provided by project participant				
grievance register				
DOE assessment				Date: 21-FEBRUARY-2022
PP has submitted grievance register as a supporting document for the ongoing local stakeholder consultation. During review of the same, Assessment team observed no major grievance submitted by local stakeholder to the PP and all minor grievance are already resolved. Thus, accepted and CAR is closed.				

Accuracy of GHG Emission Reduction and Removal Calculations

CAR ID	05	Section no.	4.4	Date: 03-February-2022
Description of CAR				
1. PP requested to submit all JMR & other supporting documents for all the monitoring parameters and invoices for crosscheck of electricity export/import for the project activity. Kindly submit.				
2. PP requested to submit ER sheet for further assessment. Value of achieved emission reduction is thus reserved till submission. Kindly submit.				
Project participant response				Date: 10-February-2022
1. Submitting herewith copies of JMR and invoices, along with supportive doc. as per monitoring parameters as per registered monitoring plan for monitoring period under consideration (01-January-2021 to 30-September-2021).				
2. Submitting herewith Emission reduction calculation sheet.				
Documentation provided by project participant				
Copies of JMR & Invoices Emission Reduction Calculation sheet				
DOE assessment				Date: 21-FEBRUARY-2022
1. PP has submitted all JMR & other supporting documents for all the monitoring parameters and invoices for crosscheck of electricity export/import for the project activity. Thus, CAR is Closed.				
2. PP has submitted the ER sheet for current monitoring. During review, team observed that ER calculation is found correct and conservative. Thus, accepted and CAR is closed.				

Quality of Evidence to Determine GHG Emission Reduction and Removals

CAR ID	06	Section no.	4.5	Date: 03-February-2022
Description of CAR				
Information related to the installed monitoring meters and its calibration details are mentioned in the monitoring report. Moreover, to verify the same PP is requested to submit the copies of calibration certificates covering complete monitoring period to the assessment team. Corrective action sought.				
Project participant response				Date: 10-February-2022
Submitting herewith copies of calibration certificate for installed monitoring meter applicable for this monitoring period.				

Documentation provided by project participant	
Calibration certificates for installed monitoring meters.	
DOE assessment	Date: 21-FEBRUARY-2022
PP has submitted the calibration certificate for the current monitoring period issued by respective state electricity board during review no delay has been found. Thus, CAR is Closed .	

Table 4. FAR from this verification

FAR ID	XX	Section No.		Date : DD-Month-YYYY
Description of FAR				
There is no FAR from this verification				
Project participant response				Date : DD-Month-YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD-Month-YYYY
NA				

APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Lead Auditor/Technical Expert	OR	TAKARKHEDE	ATUL	TQC-Outsourced entity	Yes	Yes	Yes	Yes

Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer (TR) / Technical Expert (TE)	EI	Shen	Simon	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustin	Applus+ Certification

Short CVs of the Team:

- Dr. Atul Takarkhede** is Ph.D. (Environmental Sciences) from Institute of Science, RTM Nagpur University, Nagpur, and he has already published different technical papers related to environmental sciences. He counts with more than 11 years of experience in field of Environmental Auditing, consulting and accreditation. He is an expert in ISO 9001-14001, CO2/GHG Reporting, Carbon Foot Print, Energy, Water and Waste Management reporting for organizations' environmental performance. His professional portfolio is mainly related with carrying out EIA, conducting QA/QC of EIA Reports; conducting environmental/water audits; NABET requirements appliance, functional area expert in Water Pollution & Solid & Hazardous Waste management among others. Furthermore, he counts with solid experience on CDM-VCS-GS consultancy and auditing. Currently he is associated with True Quality Certifications Private Limited and empanelled with Applus+ Certification to carry out GHG audits in the aforementioned schemes.
- Mr. Simon Shen** (Master's Degree in Thermal Energy Engineering, Bachelor's Degree in Environmental Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and review with Applus+, apart from the years of

experience working as GHG Auditor and ISO 9001/14001 in TUV SUD for 3.5 years before he joined Applus+. Mr. Simon Shen has extensive experience also as former Applus+ Shanghai CDM Technical Manager.

APPENDIX 4: ABBREVIATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CMS	Central Monitoring system
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
PP	Project Participant

APPENDIX 5: CALIBRATION DETAILS

Meter and Calibration Details for 40 MW solar project by Suryoday One Energy Private Limited

Bay Number	Bay-01		Bay-02	
Meter Details	Main Meter	Check Meter	Main Meter	Check Meter
Meter Serial No.	18037240	18037249	18037252	18015450
Meter Maker	L & T	L & T	L & T	L & T
Accuracy Class	0.2s	0.2s	0.2s	0.2s
Date of Calibration	01-March-2018	01-March-2018	01-March-2018	01-March-2018
Due date of next calibration	28-February-2023	28-February-2023	28-February-2023	28-February-2023
Calibration Compliance	No delay has been observed during the current monitoring period.			

Meter and Calibration Details for 50 MW solar project by Solar Edge Power & Energy Pvt. Ltd.

Meter Details	Main Meter	Check Meter
Meter Serials No.	Y0280008	Y0280009
Meter Maker	Secure	Secure
Accuracy Class	0.2s	0.2s
Date of Calibration	10-February-2018	10-February-2018
Due date of next calibration	09-august-2023	09-august-2023
Calibration Compliance	No delay has been observed during the current monitoring period.	

Meter and Calibration Details for 80 MW solar project by Solar Edge Power & Energy Pvt. Ltd.

Meter Details	Main Meter	Check Meter
Meter Serials No.	0289013	02839014

Meter Maker	Elster	Elster
Accuracy Class	0.2s	0.2s
Date of Calibration	06-December-2017	06-December-2017
Due date of next calibration	05-December-2022	05-December-2022
Calibration Compliance	No delay has been observed during the current monitoring period.	

Meter and Calibration Details for 50 MW solar project by Terralight Rajapalayam Solar Private Limited (Previously known as Shapoorji Pallonji Infrastructure Pvt. Ltd. and Shapoorji Pallonji Suryaprakash Pvt. Ltd.)

Meter Details	Main Meter	Check Meter
Meter Serials No.	17074152	17076761
Meter Maker	L & T	L & T
Accuracy Class	0.2s	0.2s
Date of Calibration	29-June-2018	29-June-2018
Due date of next calibration	28-June-2023	28-June-2023
Calibration Compliance	No delay has been observed during the current monitoring period.	