



SOLAR PHOTOVOLTAIC PROJECT BY GIRIRAJ RENEWABLES PRIVATE LIMITED



Document Prepared by KBS Certification Services Pvt. Ltd

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Summary:

KBS Certification Services Pvt. Ltd. has been contracted by “Emergent Ventures India Pvt. Ltd.” to undertake 4th verification-certification for the greenhouse gas (GHG) emission reductions reported from ‘Solar Photovoltaic Project by Giriraj Renewables Private Limited’ for the monitoring period 01-January-2021 to 31-August-2021, under the crediting period 02-March-2018 to 01-March-2028, in the initial monitoring report version 1.0 dated 06-December-2021,/1/ with regard to the relevant requirements of VCS Standard Version 4.2./6/

The Solar Photovoltaic Project by Giriraj Renewables Private Limited with the current total capacity of 153 MW is a bundled project activity located in different states in India like Karnataka, Maharashtra and Uttar Pradesh. The electricity generated is sold to the Indian Grid. The project activity has been operational since commissioning (02-March-2018) and during 4th monitoring period i.e., from 01-January-2021 to 31-August-2021 has generated 204,491 MWh net electricity, thereby resulting in emission reduction of 191,567 tCO_{2e}. The monitoring period subject to this monitoring report is inclusive of first and last day of period.

The verification is based on the VCS PD, Monitoring report (MR), Emission reduction calculation spread sheet (ER sheet), proof of title, proof of right, additional documents related to baseline and monitoring methodology, the subsequent background investigation, follow-up interviews and supporting documents made available to the verification team by project proponent.

A risk-based approach has been followed to perform the verification of the project activity. In the course of verification, 01 Corrective Action Requests (CARs) and 03 Clarification Requests (CLs) and 01 Forward Action Request (FAR) have been raised. All the CARs and CLs have been closed successfully.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01-January-2021 to 31-August-2021 based on the reported emission reductions in the final monitoring report version 1.2 dated 24-February-2022 /2/for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, KBS planned and performed work to obtain the information and explanations that was considered necessary to provide sufficient evidence to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

As a result of the verification, the verification team confirms that:

- The project fulfils criteria of VCS Standard Version 4.2.
- The project is in line with all relevant VCS requirements.
- Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board and VCS Association;
- All information and references relevant to the project activity resulting in emission reductions;

The monitoring is transparent, adequate and in line with applied baseline and monitoring methodology of ACM0002: Consolidated Baseline Methodology for grid-connected electricity generation from renewable sources, version 19.0./11/

Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 191,567 tCO₂e emission reductions during the 4th monitoring period (01-January-2021 to 31-August-2021), under the first crediting period (02-March-2018 to 01-March-2028).

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1 INTRODUCTION

1.1 Objective

KBS Certification Services Pvt. Ltd. has been contracted by, “Emergent Ventures India Pvt. Ltd.” to undertake 4th verification and certification for the greenhouse gas (GHG) emission reductions reported from ‘Solar Photovoltaic Project by Giriraj Renewables Private Limited’ for the monitoring period 01-January-2021 to 31-August-2021, under the crediting period 02-March-2018 to 01-March-2028, in the initial monitoring report version 1.0 dated 06-December-2021 /1/, with regard to the relevant requirements of VCS Standard Version 4.2 /6/. The VCS projects must undergo an independent third-party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD) and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- Monitoring report and other supporting documents are complete;
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Voluntary Emission Reductions (VERs/VCUs) without any double counting, and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The verification scope is defined as an independent and objective review of monitoring report, VCS project description (VCS PD), including the monitored data, and other relevant documents made available to verifier and information collected through performing interviews during Remote assessment (interviews) of the project activity.

The project is assessed against the requirements of VCS standard version 4.2 and related rules and guidance /6//7/. Based on the recommendations in the latest version of Verified Carbon standard, and a rule-based approach (as criteria) in the verification KBS has maintained focus on the identification of significant reporting rules and the reliability of project monitoring.

The aspects to be covered under the purview of verification are:

- Ensure that the project activity has been implemented and operated as per the registered VCS PD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place as per the documents provided by the client and during remote audit;
- Ensure that the monitoring report and other supporting documents provided are complete
- Ensure that the practiced monitoring system and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved CDM methodology /11/;
- Evaluate the data recorded and stored are as per the monitoring methodology.

1.3 Level of Assurance

☒ Reasonable level of assurance

The verification is based on the VCS PD, MR, proof of title, proof of right, additional documents related to baseline and monitoring methodology, the subsequent background investigation, monitoring plan, follow-up interviews and supporting documents made available to the verification team by project proponent. The information in these documents is reviewed against the requirements of VCS Standard Version 4.2. KBS has employed a risk-based approach in the verification, focusing on the identification of significant risks for project implementation and the generation of Emission Reductions.

The items covered in the verification are described below:

- Criteria of VCS Version 4 (VCS Program Guide Version 4.1 & VCS Standard Version 4.2) /6//7/
- Criteria of CDM approved methodology, ACM0002- Version 19 /11/
- VCS Monitoring Report
- Monitoring Plan
- Background investigation and follow up interviews
- Stakeholder feedback
- Registered VCS-PD and Validation Report/5/
- Project's compliance with other relevant rules, including the project country (India) legislation and assurance to stakeholders of the quality

Furthermore, the verification team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data available on public domain. A desk review is carried out to assess the following:

- Compliance with relevant law and regulations

- Stakeholder comments (If any)
- Single line diagram and site location map/9/
- Technical specifications of solar panels, meters/8/
- Commissioning Certificate
- Remote auditing (14-December-2021) for verification/12/
- Calibration Certificates /13/
- Export/Import data records/Joint meter readings /14/

The Verification team has checked all the above-mentioned details and confirms that all the information provided is accurate.

Through the remote interviews host country rule and regulations related to project activity, Project description, technological measures, Implementation, Operation, Management of project activity and Training of personnel, Baseline and Monitoring plan, Stakeholder consultation etc. has been checked and found appropriate.

KBS applies the risk-based approach aimed at focusing on high-risk issues to the verification results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the verification and the verification report was submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions.

Hence the above steps were followed for achieving the level of assurance in verification report. Based on the process and procedures conducted, KBS confirms that the information in the MR:

- is materially correct and is a fair representation of the actual project details, and
- is prepared in accordance with VCS requirements and the applied CDM methodology for information pertaining to GHG qualification, monitoring and reporting.

The verification work is carried out as per this requirement and the verification opinion is assured, provided the credibility of all above. Details are presented in the Verification statement in section 5 below.

1.4 Summary Description of the Project

The Solar Photovoltaic Project by Giriraj Renewables Private Limited with the current total capacity of 153 MW is a bundled project activity located in different states of India i.e. Karnataka, Maharashtra and Uttar Pradesh. The electricity generated is sold to the Indian Grid. The project activity has been operational since commissioning (02-March-2018) and during the fourth monitoring period i.e., from 01-January-2021 to 31-August-2021 and has generated 204,491MWh net electricity, thereby resulting in emission reduction of 191,567 tCO₂e. The

monitoring period subject to this monitoring report is inclusive of first and last day of period. The details of commissioning are provided below:

Name of SPV	Capacity Commissioned	COD	Connection with Grid	State
Avaada Sustainable Energy Pvt. Ltd	30 MW	02-March-2018	Indian Grid	Karnataka
Avaada Clean Energy Power Limited	5 MW	14-September-2018	Indian Grid	Uttar Pradesh
Giriraj Renewables Pvt ¹ . Ltd now known as Avaada Energy Pvt Ltd	28 MW	16-April-2018	Indian Grid	Maharashtra
Solarsys Non-Conventional Energy Pvt. Ltd	30 MW	30-March-2018	Indian Grid	Karnataka
	60 MW	31-March-2018	Indian Grid	Karnataka

During the remote audit inspection /12/, location (as mentioned in section 1.7 of MR) and all the technical aspects of the project activity (equipment, serial no., type, date of calibration etc.) mentioned in the PD /5/ have been verified. The same was also crosschecked during the desk review of supporting documents. /8//13//14/

Project entity information as verified is presented below:

Item	Data
Project Entities	Giriraj Renewables Private Limited (now known as Avaada Energy Private Limited) (Project Owner)
	Emergent Ventures India Pvt. Ltd. (Project developer: Responsible for development of emission reduction through the Verified Carbon Standard)

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification process was carried out in line with the requirements of VCS Version 4.0. In addition, the verification team followed the guidelines of the CDM Validation and Verification Standard, Standard auditing techniques and KBS's CDM Procedures were also applied during

¹ Name change document included in Appendix 3 of the MR

the verification. A risk-based approach was followed to carry out verification and access all the factors and concerns that relate to the issuance of emission reductions from a project activity.

They include:

- Identification of all the sources contributing to the project emissions and emission reductions.
- Authenticity of the provided data is checked.
- A risk-based analysis is carried out to ensure a clear and transparent assessment. The risks involved in this process are mainly with the informational flows and data recording.

KBS follows a risk-based verification approach, wherein a desk review of the project documentation is undertaken, which is followed by a remote discussion/video inspection by the members of verification team. The verification team captured findings that were based on standard auditing practices and VCS requirements. It provides transparent means to record the observations by the verification team members and the non-conformities, if any. It is an internal document, and available on request.

Duration of Verification:

Verification Contract	06-December-2021
Remote audit	14-December-2021 (Justification section 2.4 below)
Draft Verification Report	24-February-2022
Final Verification Report	14-06-2022

2.2 Document Review

A desk review is undertaken, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

The list of documents reviewed is included in the section 'References'.

2.3 Interviews

Please refer section 2.4, where complete list of interviewed personnel and key points discussed is provided.

2.4 Site Inspections

Due to COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for VERRA guidance on site visits, notification of Covid-19 Travel Guidance for Projects

<https://verra.org/covid-19-travel-guidance/> and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit. Further Email from VERRA dated 24/03/2020 from “Andrew Beauchamp” has been referred as per which “*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, v4.0). Therefore, where a VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for an exemption or pre-approval from Verra is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, please ensure that the applicable section of the validation/verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit*”.

Hence, the VVB has used other standard auditing techniques for verification as referred to in VCS Rules/requirements,/6//7/ VCS Validation and Verification Manual version 3.2.

Verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification. Along with desk review, audit team has conducted remote audit interview as follows:

- A complete desk review of the MR, calibration certificates, JMR etc. as well as all applicable country legal requirement and supportive evidence have been checked by the verification team.
- Verification team has performed Zoom video conferencing interview with PP in order to check implementation, project boundary, current situation, monitoring and metering equipment, monitoring procedures, calibration etc.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in MR and supporting documents.
- A check of the monitoring equipment including performance and observations of monitoring practices against the requirements of the registered VCS PD and the selected methodology.

Details of interviewees, topics covered and additional information are presented below:

Dates:	14-December-2021 (Zoom/Google meet conferencing interview)	
Key points discussed:	Name of person, interviewed	Designation, Organization
Operational data, Calibration, Data collection, QA/QC procedures, Calculation of ERs	Mr. Subham Mondal	Senior Engineer, Avaada Clean Energy Power Limited, Kanpur, Uttar Pradesh
	Mr. Surya Prakash	Deputy Manager, Solarsys Non-Conventional Energy Pvt. Ltd.-30MW, Banavikalu, Ballary, Karnataka
	Mr. Sarvanan V.	Assistant Manager, Solarsys Non-Conventional Energy Pvt. Ltd.-60MW, Ilkal, Bagalkot, Karnataka
	Mr. Basavaraj M.	Deputy Manager, Avaada Sustainable Energy Pvt. Ltd.-30MW, Hanagal, Karnataka
	Mr. Jayesh Jadav	Senior Manager, Avaada Energy Pvt. Ltd.-28 MW, Satara, Maharashtra
	Mr. Manoj Joshi	Avaada Contact person (regarding invoice cross checking)
Calculation of ERs	Mr Deepak Bawari	Emergent Ventures India Pvt Ltd

2.5 Resolution of Findings

KBS applies the risk-based approach aimed at focusing on high-risk issues to the verification results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the verification and the verification report was submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions. Criteria for determining gaps as CAR, CL & FAR are as follows:

Corrective action request (CAR):

- the project proponent has made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions
- the Voluntary Carbon Standard's requirements have not been met, or
- there is a risk that emission reductions cannot be monitored or calculated.

Clarification request (CL):

- Information is insufficient or not sufficiently clear to determine whether the applicable VCS requirements have been met.

FAR (Forward Action Request):

- FAR is to be raised to highlight issues related to project implementation that require review during the first or periodic verification of the project activity.

CARs and CLs are to be resolved or closed out if the PP modifies the project description, rectifies the MR or provides adequate additional explanations or evidence that satisfies the concerns. If this is not completed, the project activity cannot be recommended for issuance under VCS registry.

The monitoring report was revised addressing the CARs and CLs, issued by KBS. After reviewing the revised and resubmitted MR/2/; resolving the CARs & CLs raised and outstanding concerns, KBS issues this final verification report and opinion.

During current verification, 01 CAR and 03 CLs were raised and closed satisfactorily. There is 01 FAR raised. The list of CARs/CLs raised and the response provided, the means of verification, reasons for their closure and references to correction in the MR are provided in appendix 2 of this report. The revised MR/2/ with changes incorporated as per the issues raised were rechecked with the documentary evidence and found to be inline.

2.5.1 Forward Action Requests

During previous verification 01 FAR was raised which is addressed and closed in the current verification and 01 FAR has been raised during this Verification.

2.6 Eligibility for Validation Activities

KBS conducted the verification activity, the validation was performed by the other VVB. KBS has a valid UNFCCC accreditation in the sectoral scope from UNFCCC applicable to the project activity.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is listed under Gold Standard (GS11219) but is not yet registered and has not claimed any emission reductions.. PP undertakes that no emission reductions shall be claimed under any other carbon program for the current monitoring period. An undertaking to this effect from the project proponent confirms the same./19/

3.2 Methodology Deviations

The verification team confirms that the registered PDD complies with the requirements in the applied monitoring methodology ACM0002 version 19.0/11/. Therefore, no methodology deviations are applied during the monitoring period.

3.3 Project Description Deviations

There is a deviation observed during the current verification activity that the geo coordinates for Solarsys Non-Conventional Energy Pvt Ltd (both 30MW & 60 MW) provided in the registered PD/5/ do not match with the project site locations when checked on Google Map. Project proponent has now corrected the same in-line with actual locations in the revised MR in section 1.7 and also described the same in section 3.2.2./2/

The correct coordinates are as below.

Name of SPVs	Capacity	State	Latitude (N)	Longitude (E)
Solarsys Non-Conventional Energy Pvt Ltd	30 MW	Karnataka	14° 45' 41.3"	76° 31' 21.9"
	60 MW	Karnataka	15° 57' 35.2"	76° 04' 34.3"

The CL was raised for the same and was closed satisfactorily. The appendix 2 of the report can be referred for the details.

In case of deviation raised during previous verification about the capacity of the project activity, it was verified during current verification and verification team based on adequate justification and supporting evidence provided by the project proponent was able to confirm that total capacity of project activity will remain 153MW instead of 225MW for rest of the crediting period.

Rest all information in MR is in compliance with the scenario described at the Project Design Document dated 15-May-2020 and the validation report dated 19-May-2020./5/

3.4 Grouped Project

The project is not a grouped project. Therefore, this section is not applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity is in operation since commissioning and verified by the verification team during remote inspection /12/ of all sites. All the physical components and project boundary are in conformity with the description in registered VCS PD /5/. The capacity of project equipment has been confirmed during the remote inspection, also through the technical specifications /8/ and found in-compliance with the registered VCS PD/5/. The project activity's first site was commissioned on 02-March-2018 as per commissioning certificate/10/.

Based on the remote inspection /12/ and the reviewed project documentation /8//9//10/, the verification team confirms that the project was implemented and operated as described in the registered VCS PD/5/.

The total generation capacity of the project is 153 MW. One of the Project Participant - Giriraj Renewables Pvt. Ltd now known Avaada Energy Pvt Ltd. had planned for 100 MW capacity installation (as per the registered Joint PD-MR Version 03 dated 15-May-2020). PP had installed 28 MW on 16-April-2018. The remaining 72 MW however has also been installed but under a separate SPV M/s Avaada Satara MH Pvt. Ltd. on 09-November-2020, Commissioning certificate for the same is verified by the verification team. PP had applied for project deviation during earlier verification period and same is approved./10//18/ /20/.

Further it was noticed that during the monitoring period the project activity operated under normal conditions and no significant event that may have impact on monitoring of GHG emission reductions was observed. Same has been checked from the operational data during remote auditing.

Ownership and other programs:

The project is listed under Gold Standard (GS11219) but is not yet registered and has not claimed any emission reductions. PP undertakes that no emission reductions shall be claimed under any other carbon program for the current monitoring period. PP confirmed that the project will only be going forward with VCS registry, as declared in VCS-PD /5/. Thus, emission reductions generated by project will be solely claimed by PP and PP has the right of use, which is acceptable. Net GHG emission reductions or removals generated by this project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions as the host country i.e. India is not a participant in any emission trading programs or nor does it have any binding limits.

PP will not claim the carbon credits under any other GHG emission reduction scheme for the crediting period under VCS and PP has provided declaration on the same./19/. Hence, there is no possibility of double counting. CL 03 was raised in this regard and closed on submission of relevant document. Details may be referred in Appendix 2 of this report.

Sustainable Development Contributions:

As confirmed during the remote audit, the project displaces electricity produced in fossil fuel-based power plants, by using clean renewable source to generate electricity and thereby contributes to sustainable development through reduction in greenhouse gas (GHG) emissions. It has also been confirmed that the project implementation has led in significant environmental and socio-economic benefits (as stated in section 1.11 of the submitted MR) and contributes to the social, economic, technological and environmental well-being. The project supplies clean, affordable and renewable energy (204,491 MWh net electricity under the monitoring period) without reliance on fossil fuels for generation of electricity to meet the growing demands in the region. Also, the implementation of project is providing employment to locals with a decent and secure work environment by reducing emissions otherwise generated by the operation of fossil fuel-based power plants and would lead to promotion of solar-based power generation and to encourage other entrepreneurs to participate in similar projects as well.

Management and operational system:

Verification team was able to verify that authorities and responsibilities for monitoring and reporting of all data related to the emission reductions were clearly defined for the monitoring period from 01-January-2021 to 31-August-2021.

The allocation of the responsibilities is documented in a written form and is followed as described in the registered VCS PD/5/. Routines for the archiving of data are defined and documented. The electricity generation records /14/ were verified and found that the data is consistent with the provided in the final MR/2/ and ER sheets/4/.

The monitoring plan described in section 4.3 of the MR/2/ is confirmed to be correct. All the parameters of the monitoring plan are monitored using appropriate metering system.

The verification team has interviewed the plant personnel who are involved in the monitoring of the parameters that are used to determine the emission reductions of the VER project. It is confirmed based on the interviews /12/ that the plant's team is competent enough to monitor the parameters as described in the monitoring plan.

As discussed above, the verification team concludes that management and operational system of the project is implemented and operated well. Thus, it ensures the quality of data which is required in calculating the emission reductions.

Implementation status of the monitoring plan:

Verification team confirms through remote inspection /12/ and from the document review /8//9//14/ the actual monitoring system complies with the monitoring plan mentioned in the registered VCS PD /5/.

During the verification, all relevant monitoring parameters of the registered monitoring plan have been verified with regard to the appropriateness of the verification method; the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures. All monitoring

parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. It is confirmed that the monitoring mechanism is effective and reliable.

Therefore, from the document review and remote inspection, it is confirmed that all the parameters were monitored in accordance with the registered monitoring plan during the monitoring period. Following are the details of monitoring in accordance with the monitoring plan of the registered VCS PD/5/:

For Karnataka Site:

Data - Parameter	EG _{PJ,y}										
Data unit	MWh/year										
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh										
Source of data	Monthly joint meter reading reports called as Form B/14/										
Description of measurement methods and procedures to be applied	Verification team confirms that the data has been measured directly from energy meters as verified by the verification team through remote audit. The difference of final value of export and import is used for monthly values of net electricity supplied to the grid by the project activity and same value is considered for ER calculations as verified by the verification team through remote audit.										
Frequency of monitoring-recording	Continuous measurement & monthly recording as verified by the verification team through remote assessment.										
Value monitored	163,601 MWh Verification team has checked the JMR/14/ and the calculations in ER sheet /4/ to confirm that the monitored value is accurate and acceptable.										
Monitoring equipment	During the remote inspection /12/ and through document review, it has been confirmed that the data has been monitored continuously by metering devices /8/. The Calibration dates of the meters for 03 locations of Karnataka and their validity is as follows: <u>Avaada Sustainable Energy Private Limited (30 MW) located at Chitradurga, Karnataka²</u> <table border="1"> <thead> <tr> <th>Meter Serial number</th><th>Accuracy class</th><th>Calibration Date</th><th>Valid Until</th></tr> </thead> <tbody> <tr> <td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Meter Serial number	Accuracy class	Calibration Date	Valid Until				
Meter Serial number	Accuracy class	Calibration Date	Valid Until								

² The calibration dates mentioned in the registered VCS-PD do not match with the dates stated in the above table. The dates mentioned in the above table are verified with Calibration certificates issued by authorised entity, hence can be considered correct.

	18015390 (Main meter)	0.2s	28/02/2018	27/02/2023
	18015388 (Check meter)	0.2s	28/02/2018	27/02/2023
	<u>Solarsys Non-Conventional Energy Private Limited (30 MW) located Ballary, Karnataka</u>			
	Meter Serial number	Accuracy class	Calibration Date	Valid Until
	18015356 (Main meter)	0.2s	14/11/2018	13/11/2023
	18015439 (Check meter)	0.2s	14/11/2018	13/11/2023
	<u>Solarsys Non-Conventional Energy Private Limited (60 MW) located at Balkot known as Bagalkot, Karnataka</u>			
	Meter Serial number	Accuracy class	Calibration Date	Valid Until
	18015391 (Main meter)	0.2s	28/03/2019	27/03/2024
	18015392 (Check meter)	0.2s	28/03/2019	27/03/2024
The meters are factory calibrated and tested at installation and tested periodically by the grid operator. The calibrations are valid for 5 years and the same has been confirmed through the registered VCS-PD and the validation report/5/. Both the meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period/13/. There was no event of meter failure observed during current verification period. Hence the details of calibration of meters remains valid during current verification period.				
QA-QC procedures to be applied	There are two meters, main and check meter at each site as confirmed during remote inspection /12/ and through snapshot/8/. Form-B (JMR) issued by State Utility Board/14/has been cross-checked with the corresponding invoices/17/ and was found to be consistent. The calibration frequency for meters is defined to be once in 5 years in the registered PD.			
Purpose of the data	Data has been used for the calculation of Baseline Emissions.			
Calculation method	Direct Continuous Measurement			

	Net electricity supplied to the grid by the project plant in a given month = Export, kWh – Import, kWh
Comments	As confirmed during the remote inspection /12/, the collected data will be kept during the crediting period and until two years after the last issuance of VERs for the project activity for that crediting period.

For Kanpur (Uttar Pradesh) Site:

Data - Parameter	EG _{PJ,y}											
Data unit	MWh/year											
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh											
Source of data	Monthly joint meter reading reports/14/											
Description of measurement methods and procedures to be applied	Verification team confirms that the data has been measured directly from energy meters as verified by the verification team through remote audit. The difference of final value of export and import is used for monthly values of net electricity supplied to the grid by the project activity and same value is considered for ER calculations as verified by the verification team through remote audit.											
Frequency of monitoring-recording	Continuous measurement & monthly recording as verified by the verification team through remote assessment.											
Value monitored	6,732 MWh Verification team has checked the JMR/14/ and the calculations in ER sheet /4/ to confirm that the monitored value is accurate and acceptable.											
Monitoring equipment	During the remote inspection /12/ and through document review, it has been confirmed that the data has been monitored continuously by metering devices /8/. The Calibration dates of the meters and their validity is as follows: Avaada Clean Energy Power Limited (5 MW)³ <table><tr><th>Meter Serial number</th><th>Accuracy class</th><th>Calibration Date</th><th>Valid Until</th></tr><tr><td>UPP67363 (Main meter)</td><td>0.2s</td><td>21/07/2018</td><td>20/07/2023</td></tr></table>				Meter Serial number	Accuracy class	Calibration Date	Valid Until	UPP67363 (Main meter)	0.2s	21/07/2018	20/07/2023
Meter Serial number	Accuracy class	Calibration Date	Valid Until									
UPP67363 (Main meter)	0.2s	21/07/2018	20/07/2023									

³ The calibration dates mentioned in the registered VCS-PD do not match with the dates stated in the above table. The dates mentioned in the above table are verified with Calibration certificates issued by authorised entity, hence can be considered correct.

	UPP67364 (check meter)	0.2s	21/07/2018	20/07/2023
	UPP67365 (Standby meter)	0.2s	21/07/2018	20/07/2023
	The meters are factory calibrated and tested at installation and tested periodically by the grid operator. The calibrations are valid for 5 years and the same has been confirmed through the registered VCS-PD and the validation report./5/ Both the meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period./13/ There was no event of meter failure observed during current verification period. Hence the details of calibration of meters remains valid during current verification period.			
QA-QC procedures to be applied	There are two meters, main and check meter at each site as confirmed during remote inspection /12/ and through snapshot/8/. Imported electricity was also monitored by the operator using software for internal monitoring, which was again confirmed during the remote inspection /12/. The generation data has been cross-checked with the invoices/17/ and was found to be consistent. The calibration frequency for meters is defined to be once in 5 years in the registered PD.			
Purpose of the data	Data has been used for the calculation of Baseline Emissions.			
Calculation method	Direct Continuous Measurement Net electricity supplied to the grid by the project plant in a given month = Export, kWh – Import, kWh			
Comments	As confirmed during the remote inspection /12/, the collected data will be kept during the crediting period and until two years after the last issuance of VERs for the project activity for that crediting period.			

For Maharashtra Site:

Data - Parameter	EG _{PJ,y}
Data unit	MWh/year
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh
Source of data	Monthly joint meter reading reports known as Group Credit Note/14/

Description of measurement methods and procedures to be applied	Verification team confirms that the data has been measured directly from energy meters as verified by the verification team through remote audit. The difference of final value of export and import is used for monthly values of net electricity supplied to the grid by the project activity and same value is considered for ER calculations as verified by the verification team through remote audit.																																
Frequency of monitoring-recording	Continuous measurement & monthly recording as verified by the verification team through remote assessment.																																
Value monitored	34,158 MWh Verification team has checked the JMR/14/ and the calculations in ER sheet /4/to confirm that the monitored value is accurate and acceptable.																																
Monitoring equipment	During the remote inspection /12/ and through document review, it has been confirmed that the data has been monitored continuously by metering devices /8/. The Calibration dates of the meters and their validity is as follows: Avaada Energy Private Limited (28 MW) <table><tr><th>Meter Serial number</th><th>Accuracy class</th><th>Calibration Date</th><th>Valid Until</th></tr><tr><td>XC477938 (Main meter)</td><td>0.2s</td><td>20/03/2018</td><td>19/03/2023</td></tr><tr><td>XC477939 (check meter)</td><td>0.2s</td><td>20/03/2018</td><td>19/03/2023</td></tr><tr><td>XC477940 (Standby meter)</td><td>0.2s</td><td>20/03/2018</td><td>19/03/2023</td></tr></table> The above meters were replaced by the following new meters in February, 2020 with pre-calibrated meters: <table><tr><th>Meter Serial number</th><th>Accuracy class</th><th>Calibration Date</th><th>Valid Until</th></tr><tr><td>028689319 (Main meter)</td><td>0.2s</td><td>28/11/2019</td><td>27/11/2024</td></tr><tr><td>02874835 (check meter)</td><td>0.2s</td><td>28/11/2019</td><td>27/11/2024</td></tr><tr><td>028689315 (Standby meter)</td><td>0.2s</td><td>28/11/2019</td><td>27/11/2024</td></tr></table> The meters are factory calibrated and tested at installation and tested periodically by the grid operator. The calibrations	Meter Serial number	Accuracy class	Calibration Date	Valid Until	XC477938 (Main meter)	0.2s	20/03/2018	19/03/2023	XC477939 (check meter)	0.2s	20/03/2018	19/03/2023	XC477940 (Standby meter)	0.2s	20/03/2018	19/03/2023	Meter Serial number	Accuracy class	Calibration Date	Valid Until	028689319 (Main meter)	0.2s	28/11/2019	27/11/2024	02874835 (check meter)	0.2s	28/11/2019	27/11/2024	028689315 (Standby meter)	0.2s	28/11/2019	27/11/2024
Meter Serial number	Accuracy class	Calibration Date	Valid Until																														
XC477938 (Main meter)	0.2s	20/03/2018	19/03/2023																														
XC477939 (check meter)	0.2s	20/03/2018	19/03/2023																														
XC477940 (Standby meter)	0.2s	20/03/2018	19/03/2023																														
Meter Serial number	Accuracy class	Calibration Date	Valid Until																														
028689319 (Main meter)	0.2s	28/11/2019	27/11/2024																														
02874835 (check meter)	0.2s	28/11/2019	27/11/2024																														
028689315 (Standby meter)	0.2s	28/11/2019	27/11/2024																														

	are valid for 5 years and the same has been confirmed through the registered VCS-PD and the validation report./5/ Both the meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period./13/
QA-QC procedures to be applied	There are two meters, main and check meter at each site as confirmed during remote inspection /12/ and through snapshot/8/. Imported electricity was also monitored by the operator using software for internal monitoring, which was again confirmed during the remote inspection/12/. The generation data has been cross-checked with the invoices/17/ and was found to be consistent. The calibration frequency for meters is defined to be once in 5 years in the registered PD.
Purpose of the data	Data has been used for the calculation of Baseline Emissions.
Calculation method	Direct Continuous Measurement Net electricity supplied to the grid by the project plant in a given month = Export, kWh – Import, kWh
Comments	As confirmed during the remote assessment/12/, the collected data will be kept during the crediting period and until two years after the last issuance of VERs for the project activity for that crediting period.

Remaining Issues from Validation or Previous Verification:

This is the 4th verification of the registered project activity. No FAR was raised during the review of validation report /5/ however, during 3rd verification, a FAR was raised as below;

The capacity of project installed is not in line with the registered PD, actual capacity is reduced. Verification VVB shall ensure that the impact of actual ERs on next verification on additionality and make sure the project's additionality remains intact. A CL was raised in this regard during current verification period. Refer to appendix 2 for further details.

This project activity was registered with VERRA in the year 2018, when there was no specific requirement for monitoring contribution of SDGs from the project activity. However, during current verification period project participant has provided details for SDG no.13 - Tonnes of Greenhouse Gas emissions avoided from the project activity which are acceptable as the data was 100% verified for the current verification period.

4.2 Safeguards

4.2.1 No Net Harm

PP has mentioned that there are no significant negative impacts due to the project activity. The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013 was reviewed and the verification team confirms that solar PV project activity operations does not result in direct air pollution, noise pollution. During the remote assessment /12/, PP confirmed that no such accident had occurred during the current monitoring period. No findings raised during current verification period.

4.2.2 Local Stakeholder Consultation

The local stakeholder consultation meeting for the project activity was conducted and it was validated during the registration of project activity in VCS. The project owner performed the consultation with the stakeholders and the stakeholders were invited through invitation letters. Evidence of these correspondences, indicating the dates, and the titles of the corresponding parties and the topic of the correspondences was validated in the VCS validation report /5/was verified to confirm the same. Also, the grievance register has been placed onsite by the respective project components/16/. The site manager is responsible for addressing the grievances received from the stakeholders.

During the monitoring period there were no complaints or demands from the project. The same was confirmed through the remote audit conducted during the monitoring period.

4.3 AFOLU-Specific Safeguards

This is not an AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The verification team has reviewed the emission reduction (ER) spread sheet /4/ and checked all the formulae and verified them to be correct and in line with the monitoring plan of the registered VCS PD and the applied monitoring methodology /5//11/.

All the monitored parameters are described above in section 4.1. All the ex-ante parameters which are used in the calculation of emission reduction are presented in section 4.1 of the MR /2/ transparently. It is confirmed that all the ex-ante parameters have been correctly used in the emission reduction calculation.

Baseline emissions:

The baseline emissions (BE_y) are calculated based on the following formula:

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

Where:

BE_y = Baseline emissions in year y (tCO_2e/yr)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh/yr)

$EF_{grid,CM,y}$ = Combined margin CO_2 emissions factor in year y (tCO_2e/MWh)

And

$$EG_{PJ,y} = EG_{Facility,y}$$

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

The Combined margin CO_2 emissions factor in year y (tCO_2e/MWh),

$EF_{grid,CM,y}$ is fixed ex-ante for the duration of the crediting period and is $0.9368 tCO_2e/MWh$.

Therefore,

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

$$BE_y = (204,491 MWh) \times 0.9368$$

$$BE_y = 191,567 tCO_2e/yr \text{ (rounded down)}$$

It is noted that the formula and calculation used for baseline emission calculation in the monitoring report and ER sheet /4/ is in compliance with the registered VCS PD/5/. The default values and data used in the monitoring report /2/ is in-line with the registered PD/5/. Hence, acceptable to the verification team.

Project Emissions:

As per the registered VCS PD and methodology used (ACM0002 version 19.0) /11/ the project activity involves harnessing solar energy and its conversion to electricity, thus there will be no project emissions in the project activity.

Leakage:

As per the methodology ACM0002, version 19.0 /11/ and as defined in the registered VCS PD/5/ no leakage is considered in the project activity and the same is followed in this monitoring period also. Thus, it is in compliance with the registered VCS PD/5/.

The following are the ex-ante parameters used in the ER calculation which are in compliance with registered VCS PD/5/:

Parameter	Description	Justification
$EF_{grid,OM,y}$	Operating Margin CO ₂ emission factor in year y	The value is used in the calculation of the Emission factor (0.9610 tCO _{2e} /MWh). The value data on the parameter is available in the validated VCS PD version 3, which has been checked. Hence, it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.
$EF_{grid,BM,y}$	Build Margin CO ₂ emission factor in year y	The value is used in the calculation of the Emission factor (0.8644 tCO _{2e} /MWh). The value data on the parameter is available in the validated VCS PD version 3, which has been checked. Hence, it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.
$EF_{grid,CM,y}$	Combined Margin CO ₂ emission factor in year y	The emission factor has already been calculated ex-ante as 0.9368 tCO _{2e} /MWh based on $EF_{grid,OM,y}$ and $EF_{grid,BM,y}$. The value data on the parameter is available in the validated VCS PD version 3, which has been checked. Hence, it is confirmed that the ex-ante details presented on the ex-ante parameter is found appropriate.

The annual estimated VER as per registered VCS PD = 329,720 tCO_{2e}/year for total installed capacity of 225 MW. However, as per the approved deviation, the revised installed capacity is 153 MW.

The annual estimated VER for 153 MW project capacity = 234,677 tCO_{2e}/year

The corresponding estimated VERs during current monitoring period

$$= (234,677 \times 243)/365$$

$$= 156,237 \text{ tCO}_2\text{e}$$

However, the VERs achieved during current monitoring period are 191,567 tCO_{2e} which are 22.61% higher than the ex-ante estimates. Even though the generation is higher by 22.61% over the ex-ante estimate for the current monitoring period, cumulatively, the project has generated average annual emission reductions (or electricity given that the emission factor remains constant) in excess of only 11.61% and the benchmark will be breached only when PLF crosses beyond 15.51% consistently throughout the project lifetime.

Comparison of cumulative ER (issued or verified)	Start	End	VCUs	No of days
02/03/2018-31/03/2019	02-03-2018	31-03-2019	2,48,528	395
01/04/2019-30/09/2020	01-04-2019	30-09-2020	4,10,120	549
01/10/2020-31/12/2020	01-10-2020	31-12-2020	67,591	92
01/01/2021-31/08/2021 (current MP)	01-01-2021	31-08-2021	1,91,567	243
Cumulative ER			9,17,806	1279
Average for 365 days			2,61,923	
Diff (actual - estimated)			11.61%	

The project achieved higher emission reductions during the current monitoring period. Availability of uninterrupted sunrays on project activity has lead to higher generation. This is beyond project owner's control. However, it was noted that current verification period is only for 8 months whereas the estimated value in registered VS-PD is on annual basis. Thus, this comparison is not appropriate when data verified is for only 8 months and not for 12 months. Hence Verification team has raised a FAR (01) for next verification when annual data for the year 2021 will be available for comparison and then Project participant has to demonstrate that the increase in the generation will not have any impact on financial additionality of the project that could breach the benchmark value.

According to the applied methodology /11/, the conservativeness of the achieved emission reduction was verified and the detailed emission reduction calculation has been transparently provided in the ER sheet /4/. All the formulae and the calculation procedure were checked by the verification team. In the opinion of verification team, the assumptions, emission factors and default values that were applied in the calculations have been justified. Also, the verification team confirms that there were no manual transposition errors between the data sets in the ER Sheet/4// during the current monitoring period. It is confirmed that the data has been measured directly from meters and recorded in the form JMR/14/ and was further cross checked with the corresponding invoices/17/ and was able to verify the same.

Finding: CL 01 and CL 02 were raised and successfully closed. Also, FAR 01 is raised. Refer to appendix 2 for further details.

Opinion: The verification team confirms;

- The monitoring plan has been implemented as per the registered PD /5/;
- The monitoring complies with the requirement of the applied methodology/11/;
- The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included above under each parameter and confirms to the requirement of the PD /5/;

The values included in the monitoring report /2/and corresponding emission reduction sheet /4/are verified and included under each monitoring parameter, wherever appropriate.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

All relevant documents were checked to assess the correctness and quality of data submitted by the project participants, which are used to determine emission reductions.

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant lack of evidence and missing data were detected during remote audit discussion and video inspection /12/. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures. The monitoring parameters have been measured / determined without material misstatements and is in line with all applicable standards and relevant requirements. The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included in section 4.1 under each parameter and confirms to the requirement of the VCS PD /5/. The export and import data is measured by the electricity meters, recorded continuously on the registered VCS PD and the JMRs and invoices are generated monthly/14//17/.

It was also verified through remote audit inspection/12/ that the plant's team involved in the monitoring of project activity is well experienced. Hence, the verification team concludes that competent staff is employed by the project proponent to carry out the relevant tasks with sufficient accuracy. Furthermore, it was confirmed during remote audit discussion that internal training program for the monitoring staff are conducted on regular basis.

4.6 Non-Permanence Risk Analysis

Not applicable to the project activity.

5 VERIFICATION CONCLUSION

KBS Certification Services Pvt. Ltd. has been contracted by, "Emergent Ventures India Pvt. Ltd." to undertake 4th verification and certification for the greenhouse gas (GHG) emission reductions reported from 'Solar Photovoltaic Project by Giriraj Renewables Private Limited' for the monitoring period 01-January-2021 to 31-August-2021, under the crediting period 02-March-2018 to 01-March-2028, in the initial monitoring report version 1.0 dated 06-December-2021/1/, with regard to the relevant requirements of VCS Standard Version 4.2/6/.

The management of the 'Emergent Ventures India Pvt. Ltd.' is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project final Monitoring Report Version 1.2 dated 24-February-2022/2/. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the 'Emergent Ventures India Pvt. Ltd.' The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report Version 1.3 dated 30-May-2022/2/.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01-January-2021 to 31-August-2021 based on the reported emission reductions in the final Monitoring Report Version 1.3 dated 30-May-2022/2/ for the same period.

As a result of the verification, the verification team confirms that:

- All operations of the project are implemented and installed as planned and described in the project description.
- The monitoring system is in place and functional.
- The installed equipment essential for generating emission reductions runs reliably.
- The GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, KBS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

Verification period: From 01-January-2021 to 31-August-2021

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01-January-2021 to 31-August-2021	191,567	0	0	191,567
Total	191,567	0	0	191,567

Location: Faridabad

Date: 14-June-2022



Authorized Signatory: Kaushal Goyal

Designation: Managing Director

KBS Certification Services Pvt. Ltd.

APPENDIX 1: REFERENCES

/1/	Monitoring Report, Version 1.0, dated 06-December-2021 (Initial Version)
/2/	Monitoring Report, Version 1.2 dated 24-February-2022 (Final Version) Monitoring Report, Version 1.3 dated 30-May-2022 (revised version based on Verra Review)
/3/	Emission Reduction calculation sheet, Version 1 dated 06-December-2021 (corresponding to initial Version of VCS MR)
/4/	Emissions Reduction calculation Sheet, Version 4 dated 30-May-2022 (corresponding to final Version of VCS MR v1.3)
/5/	- Registered VCS-PD (Joint PD and MR), Version 3 dated 15-May-2020 - Joint Validation and Verification report, Version 03 dated 19-May-2020
/6/	VCS Standard Version 4.2
/7/	VCS Programme guide Version 4.1
/8/	Technical specifications/photographs of name plates of solar panels, meters etc.
/9/	Single line diagram and meter location / Layout
/10/	Commissioning Certificates
/11/	ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable sources --- Version 19.0
/12/	Remote auditing (14-December-2021) for verification of measuring and monitoring procedure, - Video recordings & snapshots of the project site/equipment's - Interviews and data/log review
/13/	Calibration Certificates for main meters and check meters
/14/	Monthly Electricity Export/Import records- Joint meter readings covering the monitoring period 01-January-2021 to 31-August-2021
/15/	Tool to calculate the emission factor for an electricity system, Version 7
/16/	Copy of grievance registers
/17/	Invoices covering the monitoring period 01-January-2021 to 31-August-2021
/18/	Undertaking from Avaada Energy Pvt Ltd regarding 72 MW project excluded from project activity and not claiming any Carbon Credits from the same
/19/	Declaration from Project participant on No Double counting under any other GHG Program
/20/	Final MR and corresponding verification report for previous MP2 and MP3.

APPENDIX 2: FINDINGS

Summary of findings	CL	CAR	FAR
	03	01	01

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

No remaining FAR from validation and/or previous verifications.

FAR ID	xx	Section no.	xx	Date: DD/MM/YYYY
Description of FAR				
Project participant response				Date: DD/MM/YYYY

Documentation provided by project participant	
VVB assessment	Date: DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	Section no.	2.5, 3.3, 4.4	Date: 14/12/2021
Description of CL				
- In section 1.7, GPS co-ordinates of “Solarsys Non-Conventional Energy Pvt Ltd (both 30MW & 60 MW)” do not match with project site location when checked on Google Maps. Please clarify the discrepancy observed. - In ER sheet, Power gen & ER tab, - For SNEPL-30, the values mentioned for Feb-21 and May-21 does not match with supporting documents and - For GRPL-28, Credit not for Jan-21 not provided. - PP shall submit complete set of invoices raised to state electricity boards for all project locations to cross check the values and JMR/Form-B document for values considered for Jan-21.				
Project participant response				Date: 08/01/2022
- GPS co-ordinates of “Solarsys Non-Conventional Energy Pvt Ltd (both 30MW & 60 MW)” were verified again and found to be correct. - In ER sheet, Power gen & ER tab, - For SNEPL-30, the values mentioned for Feb-21 and May-21 are now corrected - For GRPL-28, Credit note for Jan-21 is now provided. - PP is furnishing the supporting documents for cross verification.				
Documentation provided by project participant				
- Screen shots of the geolocation of projects shared. - Credit note for Jan-21 - Supporting documents for cross verification				
VVB assessment				Date: 14/01/2022
- PP shall re-check the co-ordinates provided in the screenshot and MR provided to the verification team as same are not matching (for both 30 MW and 60 MW). Hence, this part of CL is open. - In ER sheet, Power gen and ER tab, - For SNEPL-30 and SNEPL-60, the values mentioned for the net export data for entire monitoring period is not matching with the corresponding B-Forms. Hence, this part of CL is open. - For GRPL-28, credit note for Jan-21 is now provided and found to be acceptable. Hence, this part of CL is closed. - PP has submitted random invoice copies which were used to cross check the JMR values and found to be inconsistent. The entire set of invoices for Maharashtra and Karnataka sites to be provided. Hence, this part of CL is open.				
Project participant response				Date: 20/01/2022
- The geo-coordinates for projects are now corrected. - For SNEPL-30 and SNEPL-60, the values mentioned for the net export data for entire monitoring period have been checked and revised. - For GRPL-28, credit note for Jan-21 now provided. Invoices shared during remote audit on 19-Jan 2022.				

VVB assessment	Date: 28/01/2022
- Geo coordinates for Karnataka are corrected in the revised MR section 3.1 and also included it in section 3.2.2 under project description deviations. - The values of net export for SNEPL -30 and SNEPL-60 are now made consistent with the Form B for the corresponding months and also cross checked with invoicing details and found to be correct. - Invoices for Maharashtra for entire monitoring period are now provided. In case of Karnataka, the invoicing values were cross checked with the Consolidated invoicing details provided by project participant. Based on adequate justification and submission of revised documentation CL 01 is closed.	

CL ID	02(FAR 01 from MP3)	Section no.	2.5, 2.5.1, 4.1,4.4	Date: 14/12/2021
Description of CL				
The capacity of project installed is not in line with the registered PD, actual capacity is reduced. Verification VVB shall ensure that the impact of actual ERs on next verification on additionality and make sure the project's additionality remains intact. (Based on VERRA review)				
Project participant response				Date: 08/01/2022
Of the originally planned 100MW capacity by Giriraj Renewables Pvt. Ltd. (as per the registered Joint PD-MR Version 03 dated 15-May-2020), 28MW was installed on 16-April-2018. The remaining 72 MW however has also been installed but under a separate SPV M/s Avaada Satara MH Pvt. Ltd. on 09-November-2020. A commissioning certificate issued by MSEDCL for the same is submitted to VVB. Project proponent is not claiming GHG emission reductions on account of this 72MW capacity.				
Documentation provided by project participant				
Undertaking issued by M/s Avaada Energy Pvt Ltd, commissioning certificate				
VVB assessment				Date: 14/01/2022
In the document submitted, commissioning certificate for 72MW under separate SPV M/s Avaada Satara MH Pvt. Ltd. is not found to be provided. Further PP to clarify how the project additionality remains intact as asked in the VERRA review with the reduction in the project capacity. Also, PP to provide a declaration that PP is not claiming GHG emission reductions on account of this 72MW capacity. Hence, the CL is open				
Project participant response				Date: 20/01/2022
- Of the originally planned 100MW capacity by Giriraj Renewables Pvt. Ltd. (as per the registered Joint PD-MR Version 03 dated 15-May-2020), 28MW was installed on 16-April-2018. The remaining 72 MW however has also been installed but under a separate SPV M/s Avaada Satara MH Pvt. Ltd. on 09-November-2020. A commissioning certificate issued by MSEDCL for the same is submitted to VVB. Project proponent is not claiming GHG emission reductions on account of this 72MW capacity. - The additionality remains intact for the project is only generating CER revenue for 28MW capacity, not for the originally planned capacity of 100MWs. - Commissioning certificate for 72MW under separate SPV M/s Avaada Satara MH Pvt. Ltd. is now provided. - A declaration certificate that PP is not claiming GHG emission reductions on account of this 72MW capacity is shared.				

VVB assessment	Date: 28/01/2022
The project participant has now provided a commissioning certificate for remaining 72 MW project which is in the name of M/s Avaada Satara MH Pvt. Ltd. It is separate SPV formed and commissioning certificate confirms the same. The VCS project registered was initially with the capacity of 100MW in Maharashtra under M/s Giriraj Renewables Pvt. Ltd, however only 28MW was commissioned under this name in the year 16 April 2018. The remaining capacity of 72 MW was later on commissioned by separate entity M/s Avaada Satara MH Pvt. Ltd. Its generation is not part of current registered project, it was confirmed from the undertaking provided by the project participant and also the generation data referred in the monitoring period is only for 28MW project JMR issued by MSEDCL which is government body. Hence verification team could confirm that the total project capacity has been reduced to 153MW for the remaining crediting period instead of earlier registered 225MW. Thus CL 02 is closed.	

CL ID	03	Section no.	2.5, 4.1	Date: 14/01/2022
Description of CL				
PP's Declaration for No Double Counting during monitoring period for project under verification is still not provided.				
Project participant response				Date: 09/02/2022
Declaration for No Double Counting during monitoring period for project under verification is now provided.				
Documentation provided by project participant				
PP's Declaration for No Double Counting				
VVB assessment				Date: 09/02/2022
PP has provided the Declaration for No Double Counting during monitoring period for project under verification, which is found to be acceptable.				
Hence, CL 03 is closed.				

Table 3.CAR from this verification

CAR ID	01	Section no.	1.3, 2.5.1, 4.1	Date: 14/12/2021
Description of CL				
- In section 3.1, breakdown details, if any, for current monitoring period are not provided. - In section 3.1 of MR, Solar PV Project Technology details/Technical Specifications of the Project are not provided.				
Project participant response				Date: 08/01/2022
- In section 3.1, breakdown information is now added. - In section 3.1 of MR, Solar PV Project Technology details/Technical Specifications of the Project are now provided.				
Documentation provided by project participant				
Revised MR document.				

VVB assessment	Date: 14/01/2022
1. Section 3.1 of revised MR was checked but breakdown information was not found to be included in the same. Hence, this part of CAR is still open. 2. PP has provided the Solar PV Project Technology details/Technical Specifications of the Project in section 3.1 of revised MR. However, the total capacity of project and the capacity of AEPL-28(Satara) site mentioned in this section is incorrect vis-à-vis the capacity verified during remote assessment and FAR raised in the previous verification. Hence, this part of CAR is still open.	
Project participant response	Date: 20/01/2022
1. In section 3.1, breakdown information is now added and project wise details provided in Annexure 2. In section 3.1 of MR, Solar PV Project Technology details/Technical Specifications of the Project are now provided. Project capacity for AEPL 28 MW is now corrected.	
VVB assessment	Date: 28/01/2022
1. The revised MR is now updated with all relevant details. Hence point 1 is closed. 2. The revised MR is now updated with technical specifications for 28 MW and not 100MW for AEPL-28 at Satara site. During Remote assessment, it was noted that site capacity for Maharashtra is only 28 MW instead of earlier registered capacity of 100MW, for which project participant has now provided an undertaking that remaining 72MW is not included in the project and is formed as separate entity and will not be part of this registered project. Hence the total capacity of the registered project is now 153MW instead of 225MW. Hence point 2 is closed. Based on adequate responses and supporting documents from project participant, CAR 01 is closed.	

Table 4. FAR from this verification

FAR ID	01	Section no.	2.5.1, 4.1, 4.4	Date: 28/01/2022
Description of FAR				
During verification of ER data for current monitoring period (01-01-2021 – 31-08-2021), it was observed that there was increase in emission reductions achieved as compared to the estimated emission reductions stated in the registered PD. The project participant has provided justification for the increase in the generation by the project activity. It was noted that the emission reduction data verified was for only 8 months and the estimate provided in the registered PD was 12 months. Hence during the next verification, verifying VVB should check for the generation for the entire year 2021 and confirm if the project has outperformed generation or is within the limit of sensitivity analysis.				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
VVB assessment				Date: DD/MM/YYYY

APPENDIX 3: COMPETENCE OF TEAM MEMBERS

Personnel Name:		Sapana Pednekar	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☐	Financial Expert	☐
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources		
Approved by	Manager C & T		
Approval date:	18/11/2021		

Personnel Name:		Deepak Pundlik	
Qualified to work as:			
Team Leader	☐	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
	TA 1.2: Energy generation from renewable energy sources		
SS 13: Waste handling and disposal	TA 13.1 Waste Handling and Disposal		
	TA 13.2 Manure		
Approved by (Manager C & T)	Manager C & T		
Approval date:	20/12/2021		

Personnel Name:		Saurabh Gaikwad	
Qualified to work as:			
Team Leader	☐	Technical Expert	☐
Validator/Verifier (Trainee)	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
-	-		
Approved by (Manager C & T)	Manager C & T		
Approval date:	18/11/2021		

Personnel Name:		Anjana Sharma	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		

SS: 01: Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar
	TA 1.2: Energy generation from renewable energy sources
SS 3: Energy demand	TA 3.1. Energy Demand
SS 5: Chemical industry	TA 5.1 Chemical industry
SS 12: Solvents use	TA 12.1 Chemical industry
SS 13: Waste handling and disposal	TA 13.1 Waste Handling and Disposal
	TA 13.2 Manure
Approved by (Manager C & T)	Manager C & T
Approval date:	05/08/2021