



Solar Power project by Sai Sudhir Energy Limited



By KBS Certification Services Pvt. Ltd.

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Summary:

KBS Certification Services Pvt. Ltd. has been commissioned by, “Sai Sudhir Energy Limited” to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported from ‘Solar Power project by Sai Sudhir Energy Limited’ (VCS ID 1093) for the monitoring period 01-January-2018 to 31-December-2021 (Inclusive of both days), under the crediting period 05-January-2012 to 04-January-2022, in the monitoring report version 05 dated 02-January-2023, with regard to the relevant requirements of VCS Standard Version 4.4.

The project activity with a total capacity of 5 MW is located in T. Veerapuram village of Anantapur (also called as “Ananthapur”) district, in the State of Andhra Pradesh, India. The project supplies power to the grid and replaces the equal amount of power which would have otherwise been generated by grid connected carbon intensive power plants. The generated power from this project activity is supplied to the Southern grid. The project activity has been operational since commissioning (05-January-2012). The project activity uses solar photovoltaic CIS Thin film module for producing the power. The process of generating power through solar energy is a clean technology, as there is no fossil fuel fired or no green-house gases are emitted during the process. The project proponent has signed Power Purchase Agreement (PPA) for 25 years period, with NTPC Vidyut Vyapar Nigam Limited (NVTN), New Delhi, India. The project displaces the electricity produced by thermal-based power plants, and thereby contributes to sustainable development through reduction in greenhouse gas (GHG) emissions.

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, 03 Corrective Action Requests (CARs) and 03 Clarification Requests (CLs) have been raised. All the CARs and CLs have been closed out 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-2018 to 31-December-2021 (Inclusive of both days) based on the reported emission reductions in the final monitoring report version 05 dated 02-January-2023 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 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.

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

- The project fulfils criteria of VCS Standard Version 4.4 /4/.
- The project is in line with all relevant VCS requirements /5/.
- 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 AMS-I.D. Grid Connected Renewable Electricity Generation- Version 17

- Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 28,613 tCO₂e emission reductions during the monitoring period (01-January-2018 to 31-December-2021 (Inclusive of both days), under the crediting period (05-January-2012 to 04-January-2022).

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1 INTRODUCTION

1.1 Objective

KBS Certification Services Pvt. Ltd. has been commissioned by, " Sai Sudhir Energy Limited" to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported from 'Solar Power project by Sai Sudhir Energy Limited ' (VCS ID 1093) for the monitoring period 01-January-2018 to 31-December-2021 (Inclusive of both days), under the crediting period 05-January-2012 to 04-January-2022, in the initial monitoring report version 01 dated 08-July-2022, with regard to the relevant requirements of VCS Standard Version 4.4. 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 on-site assessment (interviews) of the project activity.

The project is assessed against the requirements of VCS standard version 4.4 and related rules and guidance/5/. KBS has based on the recommendations in the latest version of Verified Carbon standard, employed a rule-based approach (as criteria) in the verification, focusing 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 on site audit.
- 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 on site 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 /10/;
- 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 4.4. 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 4.3 & VCS Standard Version 4.4)
- Criteria of CDM approved methodology, AMS I-D- Version 17.0
- VCS Monitoring Report
- Monitoring Plan
- Background investigation and follow up interviews
- Stakeholder feedback
- Registered VCS-PD and Validation Report
- 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
- Technical specifications of PV modules, meters etc.
- Power Purchase Agreement
- Commissioning Certificate
- Onsite assessment (23-September-2022) for verification
- Invoices
- Export/Import data records- Joint meter readings
- Calibration Certificates

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

Through the onsite interview, 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 findings were 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 /4//5/ 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 project activity has commissioned a grid connected solar power project of 5MWp, which is located in T. Veerapuram village of Anantapur (also called as “Ananthapur”) district, in the State of Andhra Pradesh in India. The electricity generated is exported to the Indian electricity grid and replaces the equal amount of power which would have otherwise been generated by grid connected carbon intensive power plants.

The project activity has been operational since commissioning (5th January,2012) and during the monitoring period i.e., from 01-January-2018 to 31-December-2021 (Inclusive of both days), it has generated 31,239.5 MWh net electricity thereby resulting in emission reduction of 28,613 tCO₂e. The monitoring period subject to this monitoring report is inclusive of first and last day of period

During the onsite inspection /11/, 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 /03/ have been verified. The same was also crosschecked during the desk review of supporting documents like technical specifications/6/, single line diagram/7/, PPA/8/ and commissioning certificates/9/.

Project entity information as verified is presented below:

Item	Data
Project Entities	Sai Sudhir Energy Limited. The details of the PP have been confirmed from the power purchase agreement/8/ and the commissioning certificate/9/.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification process was carried out in line with the requirements of VCS Version 4.4 /4/. 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

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 an onsite inspection by the members of verification team. The verification protocol is filled by the verification team that is based on standard auditing practices and VCS requirements. The verification protocol provides transparent means to record the observations by the verification team members and the non-conformities, if any. The verification protocol is an internal document, and available on request.

Duration of Verification:

Kick off meeting	12-September-2022
Desk review	15-September-2022
Onsite audit	23-September-2022
Draft Verification Report	15-November-2022
Final Verification Report	09-January-2023

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 Visits

The VVB has conducted the on-site visit on 23-September 2022 by following all the Covid-19 Travel guidelines notified by Verra & in accordance with local site requirements. As per the news published by Verra on “Verra to Resume Project Site Visits” dated August 12,2022: <https://verra.org/verra-to-resume-project-site-visits>, the VVB has notified the Verra in advance regarding its conduct of site visit by filling the “Notice of Validation/Verification Services(NOVS) form”

Along with desk review, audit team has conducted onsite audit interview as follows:

- A complete desk review of the MR, as well as all applicable country legal requirement and supportive evidences have been checked by the verification team.
- Verification team has performed on-site 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 key facilities which includes installed solar panels, SCADA Room, evacuation points, receiving substation 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:	23-September-2022		
Key points discussed:	Name of person, interviewed	Designation, Organization	Team member

VCS requirements, Operational data, Monitoring equipment, Calibration, Data collection, storage, Archiving QA/QC procedures Training of monitoring personnel Calculation of ERs Grievance procedure O &M procedures Stakeholder inputs, Ongoing grievances and communication with PP	Uma Bharathi	Plant In-Charge, Sai Sudhir Energy Limited.	Team Leader: Mr. Srinivasan Selvaraj
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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 judging items as CAR or CL are as follows:

Corrective action request (CAR):

- the project participants have 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):

- FARs is to be raised to highlight issues related to project implementation that require review during the first verification of the project activity. FARs does not relate to VCS requirements for registration.

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 & CLs issued by KBS. After reviewing the revised and resubmitted MR/1.2/; resolving the CARs & CLs raised and outstanding concerns, KBS issues this final verification report and opinion.

03 CLs and 03 CARs were found during verification and closed satisfactorily. 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/1.2/ with changes incorporated as per the issues raised were rechecked with the documentary evidence and found to be inline.

As a result, the initial version of MR /1.1/ underwent key changes as follows:

- Change in emission reduction values for the *monitoring* period because of PP limiting the monitoring period till 31-December-2021.

The changes are incorporated correctly in the revised VCS MR /1.2/.

2.5.1 Forward Action Requests

No FAR has been raised during this Verification and previous verification/validation.

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.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

As confirmed through the on site interviews and the review of various registries, the project is registered in CDM and project ID reference is 6317. However, the PP has not proceeded to claim CERs and has switched to VCS, since the start of the crediting period. PP has also provided an undertaking/16/ to confirm that there is no double accounting for current monitoring period.

The verification team also checked the CDM UNFCCC project webpage, to confirm if the PP has hosted a monitoring report for any duration under the crediting period. The verification team noted that the PP has not submitted any Emission reduction claims in CDM.

3.2 Methodology Deviations

The verification team confirms that the registered project, under the monitoring period (i.e. 01-January-2018 to 31-December-2021), complies with the requirements of the applied monitoring methodology AMS-I D (Version 17 /10/). Therefore, no methodology deviations are applied during the monitoring period.

Finding: No findings were raised

3.3 Project Description Deviations

No project deviation is applicable during the current monitoring period.

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 stage as evidenced by the on-site inspection /11/ of the site. All the physical components and project boundary are in conformity with the description in registered VCS PD /03/. The capacity of project equipments has been confirmed during the on – site inspection, also through the technical specifications /06/ and found in-compliance with the registered VCS PD/03/. The project activity was commissioned on 05-January-2012 as per commissioning certificates/09/.

On the basis of the on-site inspection and the reviewed project documentation like the technical specification, photographs of meters/6/, single line diagram/7/, power purchase agreement/8/, commissioning certificates/9/, calibration certificates of energy meters/13/, Joint Meter Readings /12/, invoices/14/, shut down & maintenance details/17/ and Daily generation reports/SCADA screenshots /18/ etc. the verification team confirms that the project was implemented and operated as described in the registered VCS PD/3/. Further, the verification team confirms that-

- There is no material discrepancy between project implementation and the project description in the registered VCS PD.
- The monitoring plan is completely implemented and is suitable with actual monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters)

- The project is registered in CDM but did not proceed to claim CERs. Further, it has not received or sought any other form of environmental credit since validation or previous verification.
- There is no methodology deviation applied to this project.

The total capacity of the power plant is 5 MW which was verified through the review of technological specifications, with the snapshots of the implemented technology/6/ and during the onsite inspection.

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 on-site auditing.

Ownership and other programs:

PP has declared that the project is registered in another GHG program, CDM (with UNFCCC Ref. No. 6317). However, PP confirmed that the project will only be going forward with VCS registry, as declared in VCS-PD /03/. 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 any other environmental/carbon credits under any other GHG emission reduction scheme for the crediting period under VCS and PP has provided declaration /16/ on the same during the validation. Hence, there is no possibility of double counting.

Sustainable Development Contributions:

As confirmed during the on-site 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 (31,239.5 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 significantly contributing towards the new investment in solar reach economy of scale & increasing the private sector participation in this project category thereby contributing to add more green power to the grid system.

Management and operational system:

Verification team was able to verify that authorities and responsibilities /15/ for monitoring and reporting of all data related to the emission reductions were clearly defined for the monitoring period from 01-January-2018 to 31-December-2021 (Inclusive of both days).

The allocation of the responsibilities is documented in a written form and is followed as described in the registered VCS PD/03/. Routines for the archiving of data are defined and documented.

The monitoring plan described in section 4.3 of the MR/1.2/ 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 /11/ who is 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 /11/ 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. The Project is a Solar power plant and doesn't involve in production, delivery, and sale of product or service to the consumer.

Implementation status of the monitoring plan:

Verification team confirms through onsite inspection /11/ and from the document review (PPA/08/, Commissioning certificates/09/, calibration certificates of energy meters/13/, Joint Meter Readings /12/, invoices/14/, shut down & maintenance details/17/ and Daily generation reports/SCADA screenshots /18/) that the actual monitoring system complies with the monitoring plan mentioned in the registered VCS PD /3/ and there is no deviation in monitoring plan and procedures.

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.

The verification team noted that the PP decided to limit the Monitoring period till 31-December-2021 for this monitoring period. The verification team noted that the monitoring has occurred in January 2022 as per the registered VCS PD, but no GHG ER is claimed. Hence it can be categorized as conservative and prevent any potential double counting.

Therefore, from the document review and onsite 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/03/:

Data - Parameter	EGBL _y , export
Data unit	MWh
Description	Quantity of electricity exported to the grid during the year y.
Source of data	Verification team confirms that the data has been measured directly from the meters and monthly statements/JMR readings issued by APTRANSCO /12/.

Description of measurement methods and procedures to be applied	During the onsite inspection and through document review, it has been confirmed that the value of net electricity exported to the grid as per main & check meters readings taken on monthly basis by authorized officers at APTRANSCO & APCPDCL in the presence of PP. Based on these readings , the calculation of emissions reduction s was done ; which has been cross checked from the invoice raised by SSEL to NVVN.													
Frequency of monitoring-recording	Continuous measurement & monthly recording, as verified by the verification team through onsite assessment.													
Value monitored	<table><tr><th>Period</th><th>Quantity of electricity exported to the grid ($EG_{BL,y,export}$ in MWh)</th></tr><tr><td>01/01/2018 to 31/12/2018</td><td>8,420.70</td></tr><tr><td>01/01/2019 to 31/12/2019</td><td>8,064.50</td></tr><tr><td>01/01/2020 to 31/12/2020</td><td>7,723.20</td></tr><tr><td>01/01/2021 to 31/12/2021</td><td>7,376.60</td></tr><tr><td>Total</td><td>31,585.00</td></tr></table>	Period	Quantity of electricity exported to the grid ($EG_{BL,y,export}$ in MWh)	01/01/2018 to 31/12/2018	8,420.70	01/01/2019 to 31/12/2019	8,064.50	01/01/2020 to 31/12/2020	7,723.20	01/01/2021 to 31/12/2021	7,376.60	Total	31,585.00	
Period	Quantity of electricity exported to the grid ($EG_{BL,y,export}$ in MWh)													
01/01/2018 to 31/12/2018	8,420.70													
01/01/2019 to 31/12/2019	8,064.50													
01/01/2020 to 31/12/2020	7,723.20													
01/01/2021 to 31/12/2021	7,376.60													
Total	31,585.00													
Monitoring equipment	During the onsite inspection and through document review/12//13/14//18/, it has been confirmed that the data has been monitored continuously by meters of accuracy class 0.2s. There is one main meter & check meter installed (at substation) for this project activity & the joint meter readings of these meters are taken by the designated officials of the APTRANSCO & APCPDCL as confirmed from the onsite interview and through the review of JMRs/12/. Verification team has checked the JMRs/12/, Invoices/14/ and supplementary invoices/14/ to confirm the actual export and transmission losses and hence, confirms the calculation of the net electricity exported to the grid. The Calibration dates of the meters and their validity is as follows: <table><tr><td>Parameters</td><td>Main meter</td><td>Check Meter</td></tr><tr><td>Make</td><td>Secure</td><td>Secure</td></tr><tr><td>Type</td><td>E3M024</td><td>E3M024</td></tr><tr><td>Serial no</td><td>APX00365</td><td>APX00366</td></tr></table>		Parameters	Main meter	Check Meter	Make	Secure	Secure	Type	E3M024	E3M024	Serial no	APX00365	APX00366
Parameters	Main meter	Check Meter												
Make	Secure	Secure												
Type	E3M024	E3M024												
Serial no	APX00365	APX00366												

	Accuracy class	0.2s		0.2s	
	Calibration	Date of Calibration	Calibration due date	Date of Calibration	Calibration due date
		03-02-2017	03-02-2018	03-02-2017	03-02-2018
		30-01-2018	30-01-2019	30-01-2018	30-01-2019
		28-01-2019	28-01-2020	28-01-2019	28-01-2020
		28-01-2020	28-01-2021	28-01-2020	28-01-2021
		25-01-2021	25-01-2022	25-01-2021	25-01-2022
	The meters are calibrated annually by the government accredited agency. It is found to be in line with the registered VCS PD/03/. The meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period.				
QA-QC procedures to be applied	The presence of the above main & check meters was checked during onsite inspection and through photographs provided by PP/06/. The generation values have been also cross-checked with the invoices/14/ and was found to be consistent.				
Purpose of the data	Calculation of Baseline emissions				
Calculation method	-				
Comments	As confirmed during the onsite inspection /11/, the collected data will be kept by Project party during the crediting period. The data would be archived electronically and maintained for the entire crediting period plus two years.				

Data - Parameter	EG _{BL,y} , Import
Data unit	MWh

Description	Quantity of electricity imported from the grid during the year y.		
Source of data	Verification team confirms that the data has been measured directly from the meters and monthly statements/JMR readings issued by APTRANSCO /12/.		
Description of measurement methods and procedures to be applied	During the onsite inspection and through document review, it has been confirmed that the value of net electricity imported from the grid as per main & check meters readings taken on monthly basis by authorized officers at APTRANSCO & APCPDCL in the presence of PP. Based on these readings, the calculation of emissions reductions was done ; which has been cross checked from the invoice raised by SSEL to NVVN.		
Frequency of monitoring-recording	Continuous measurement & monthly recording, as verified by the verification team through onsite assessment.		
Value monitored	Period	Quantity of electricity imported from the grid, E _{GBL,y,import} in (in MWh)	
	01/01/2018 to 31/12/2018	86.50	
	01/01/2019 to 31/12/2019	86.80	
	01/01/2020 to 31/12/2020	88.00	
	01/01/2021 to 31/12/2021	84.20	
	Total	345.50	
Monitoring equipment	During the onsite inspection and through document review/12//13/14//18/, it has been confirmed that the data has been monitored continuously by meters of accuracy class 0.2s. There is one main meter & check meter installed (at substation) for this project activity & the joint meter readings of these meters are taken by the designated officials of the APTRANSCO & APCPDCL as confirmed from the onsite interview and through the review of JMRs/12/. Verification team has checked the JMRs/12/, Invoices/14/ and supplementary invoices/14/ to confirm the actual import and transmission losses and hence, confirms the calculation of the net electricity imported from the grid. The Calibration dates of the meters and their validity is as follows:		
	Parameters	Main meter	Check Meter

	Make	Secure		Secure	
	Type	E3M024		E3M024	
	Serial no	APX00365		APX00366	
	Accuracy class	0.2s		0.2s	
	Calibration	Date of Calibration	Calibration due date	Date of Calibration	Calibration due date
		03-02-2017	03-02-2018	03-02-2017	03-02-2018
		30-01-2018	30-01-2019	30-01-2018	30-01-2019
		28-01-2019	28-01-2020	28-01-2019	28-01-2020
		28-01-2020	28-01-2021	28-01-2020	28-01-2021
		25-01-2021	25-01-2022	25-01-2021	25-01-2022
	The meters are calibrated annually by the government accredited agency. It is found to be in line with the registered VCS PD/03/. The meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period.				
	QA-QC procedures to be applied	The presence of the above main & check meters was checked during onsite inspection and through photographs provided by PP/06/.The generation values have been also cross-checked with the invoices/14/ and was found to be consistent.			
	Purpose of the data	Calculation of Baseline emissions			
	Calculation method	-			
	Comments	As confirmed during the onsite inspection /11/, the collected data will be kept by Project party during the crediting period. The data would be			

	archived electronically and maintained for the entire crediting period plus two years.
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Data - Parameter	EGBL,y														
Data unit	MWh														
Description	Net Quantity of electricity exported to the grid during the year y.														
Source of data	Verification team confirms that the data has been measured directly from the meters and monthly statements/JMR readings issued by APTRANSCO /12/.														
Description of measurement methods and procedures to be applied	During the onsite inspection and through document review, it has been confirmed that the value of net electricity exported & imported from the grid as per main & check meters readings taken on monthly basis by authorized officers of APCPDCL(Central Power Distribution Company of AP Limited) in the presence of PP. Also, the meter reading will be taken jointly and signed by the representatives of the APCPDCL & SSEL. Based on these readings, the calculation of emissions reductions was done ; which has been cross checked from the invoice raised by SSEL to NVVN. Net electricity supplied to the grid would be calculated based on export & import data (EGBL,y = EGBL,y, export – EGBL,y, import).														
Frequency of monitoring-recording	Continuous measurement & monthly recording, as verified by the verification team through onsite assessment.														
Value monitored		<table><tr><th>Period</th><th>Net quantity of electricity exported to the grid, EGBL,y in (in MWh)</th></tr><tr><td>01/01/2018 to 31/12/2018</td><td>8334.2</td></tr><tr><td>01/01/2019 to 31/12/2019</td><td>7977.7</td></tr><tr><td>01/01/2020 to 31/12/2020</td><td>7635.2</td></tr><tr><td>01/01/2021 to 31/12/2021</td><td>7292.4</td></tr><tr><td>Total</td><td>31239.50</td></tr></table>	Period	Net quantity of electricity exported to the grid, EGBL,y in (in MWh)	01/01/2018 to 31/12/2018	8334.2	01/01/2019 to 31/12/2019	7977.7	01/01/2020 to 31/12/2020	7635.2	01/01/2021 to 31/12/2021	7292.4	Total	31239.50	
Period	Net quantity of electricity exported to the grid, EGBL,y in (in MWh)														
01/01/2018 to 31/12/2018	8334.2														
01/01/2019 to 31/12/2019	7977.7														
01/01/2020 to 31/12/2020	7635.2														
01/01/2021 to 31/12/2021	7292.4														
Total	31239.50														
Monitoring equipment	During the onsite inspection and through document review/12//13/14//18/, it has been confirmed that the data has been monitored continuously by meters of accuracy class 0.2s. There is one main meter & check meter installed (at substation) for this project activity & the joint meter readings of these meters are taken by the designated officials of the APTRANSCO & APCPDCL as confirmed from the onsite interview and through the review of JMRs/12/.														

	Verification team has checked the JMRs/12/, Invoices/14/ and supplementary invoices/14/ to confirm the actual export and import values and hence, confirms the calculation of the net electricity exported to the grid. The Calibration dates of the meters and their validity is as follows:			
	Parameters	Main meter		Check Meter
	Make	Secure		Secure
	Type	E3M024		E3M024
	Serial no	APX00365		APX00366
	Accuracy class	0.2s		0.2s
	Calibration	Date of Calibration	Calibration due date	Date of Calibration
		03-02-2017	03-02-2018	03-02-2017
		30-01-2018	30-01-2019	30-01-2018
		28-01-2019	28-01-2020	28-01-2019
		28-01-2020	28-01-2021	28-01-2020
		25-01-2021	25-01-2022	25-01-2021
	The meters are calibrated annually by the government accredited agency. It is found to be in line with the registered VCS PD/03/. The meters are in compliance with the host country calibration regulations and had valid calibrations during the entire monitoring period.			
QA-QC procedures to be applied	The presence of the above main & check meters was checked during onsite inspection and through photographs provided by PP/06/.The generation values have been also cross-checked with the invoices/14/ and was found to be consistent.			

Purpose of the data	Calculation of Baseline emissions
Calculation method	-
Comments	As confirmed during the onsite inspection /11/, the collected data will be kept by Project party during the crediting period. The data would be archived electronically and maintained for the entire crediting period plus two years.

The assessment of the audit history is provided below.

Audit Type	Period	Program	VVB Name	Number of years
Validation/ Verification	04-March-2013	VCS	TUV NORD	NA
Monitoring Report 1	05-January- 2012 – 30-May- 2012	VCS	TUV NORD CERT GmbH	0.4 Years
Monitoring Report 2	31-May-2012 – 31-December- 2017	VCS	Earthood services private limited	5.59 Years
Monitoring Report 3	01-January- 2018 – 31- December-2021	VCS	KBS Certification	4 Years
Total	05-January- 2012 – 31- December-2021	-	-	10 Years

The verification team confirmed the above details from the VCS website and found to be accurate.

Remaining Issues from Validation or Previous Verification:

This verification of the registered project activity and from the review of validation report and the previous verification reports, verification team confirms that no FAR was to be addressed during this verification.

Finding: CL 01, CL 02, CL 03, CAR 01, CAR 02, CAR 03 were raised and successfully closed. Refer to appendix 2 for further details.

Opinion:

The verification team confirms that

- The project activity has been implemented and operated as per the registered VCS PD /3/ 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 PP and onsite audit /11/;
- The monitoring complies with the requirement of the applied methodology /10/;
- 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 /3/;

The values included in the monitoring report /1.2/ and corresponding emission reduction sheets /2.2/ are verified and included under each monitoring parameter.

4.2 Safeguards

4.2.1 No Net Harm

The project activity is the generation of electricity from a clean renewable energy source i.e. solar and does not involve any construction activity during the current monitoring period. During the commissioning of the project, installation of solar PV panels, other accessories and interfacing of the generators by setting up HT transmission lines was carried out. The social impact of the project activity is positive as it contributes to the increased employment opportunities in the region, which alleviates the living standards of the locals. Further, the operation of project does not cause any environmental pollution or emissions. Therefore, the project does not involve any potential negative environmental and socio-economic impacts during the current monitoring period, which has been confirmed based on the local and sectoral expertise of the verification team and also through the notification from MoEF dated September 14, 2006¹ and its amendment notification S.O.- 3067(E) dated 1/12/2009, which mentions the list of projects that requires prior environmental clearance.

4.2.2 Local Stakeholder Consultation

The local stakeholder consultation meeting for the project activity was conducted on project site on 29-September-2011 and the process was validated during the registration of project activity in CDM & VCS. VCS validation report /3/ was verified to confirm the same. The PP had invited identified stakeholders well in advance in by invitation letters and newspaper advertisements to local villagers, panchayat members and representatives of Sai Sudhir Energy Limited with details of venue and time of meeting. Also, PP has grievance register maintained at site for complaints (if any).

During the monitoring period there were no complaints about or demands from the project. The same was confirmed through the cross check of grievance register maintained at the site and confirmed during the onsite audit..

4.3 AFOLU-Specific Safeguards

This is not an AFOLU project.

¹ http://environmentclearance.nic.in/writereaddata/EIA_Notifications/1_S01533E_14092006.pdf

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The verification team has reviewed the emission reduction (ER) spread sheet /2.2/ 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 /10/.

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 /1.2/ 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:

$$BE_y = EG_{BL,y,export} \times EF_{CO2,grid,y}$$

Where:

EG_{BL,y,export} - Quantity of electricity supplied to the grid as a result of the implementation of the project activity during the monitoring period.

EF_{CO2,grid,y} - Emission factor of Southern grid (0.916 tCO₂e/MWh) (Fixed for crediting period)

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

Therefore,

$$BE_y = EG_{BL,y,export} \times EF_{CO2,grid,y}$$

$$BE_y = 31,239.50 \times 0.916$$

$$BE_y = 28,613 \text{ tCO}_2\text{e}$$

It is noted that the formula and calculation used for baseline emission calculation in the monitoring report and ER sheet /2.2/ is in compliance with the registered VCS PD/3/. The default values and data used in the monitoring report /1.2/ is in-line with the registered PD/3/. Hence, acceptable to the verification team.

Project Emissions:

As per the para 20 of methodology /10/ the PE_y in case of a solar power(renewable) project is considered zero.

Hence, PE_y = 0 is acceptable to the verification team.

Leakage:

As per the methodology AMS I D, version 17.0 /10/ and as defined in the registered VCS PD/3/ 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/3/.

The following are the ex-ante parameters used in the ER calculation which are in compliance with registered VCS PD/3/:

Parameter	Description	Source/Justification
$EF_{grid,OM,y}$ tCO ₂ /MWh	Operating margin of the Southern Grid	Calculated as per “Tool to calculate the emission factor for an electricity system, version 02.2.1” as 3-year generation weighted average using data for the years 2007-08, 2008-09 and 2009-10. The data are obtained from “CO₂ Baseline Database for Indian Power Sector” version 06.0, published by the Central Electricity Authority, Ministry of Power, Government of India. The value 0.967 is used for calculation of baseline Emission and is found to be consistent with the registered VCS-PD/03/.
$EF_{grid,BM,y}$ tCO ₂ /MWh	Build margin of the Southern Grid	Calculated as per “Tool to calculate the emission factor for an electricity system, version 02.2.1” for the year 2009-10 The data is obtained from “CO₂ Baseline Database for Indian Power Sector” version 06.0, published by the Central Electricity Authority, Ministry of Power, Government of India The value 0.763 is used for calculation of baseline Emission and is found to be consistent with the registered VCS PD/03/.
$EF_{grid,CM,y}$ tCO ₂ /MWh	Combined Margin of the Southern Grid	The combined margin emissions factor is calculated as follows: $EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$ Where: $EF_{grid,BM,y}$ = Build margin CO₂ emission factor in year y (tCO₂/MWh) $EF_{grid,OM,y}$ = Operating margin CO₂ emission factor in year y (tCO₂/MWh) W_{OM} = Weighting of operating margin emissions factor (%) = 75% W_{BM} = Weighting of build margin emissions factor (%) = 25% The value 0.916 is used for calculation of baseline Emission and is found to be consistent with the registered VCS PD/03/.

According to the applied methodology /10/, the conservativeness of the achieved emission reduction was checked and the detailed net emission reduction calculation, values was checked in MR, supporting documents & ER sheet /2.2/. 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/2.2/ during the current monitoring period. It is confirmed that the data has been measured directly from meters and it was cross checked from the JMR and the invoices raised to NVVN and was able to verify the same.

The verification team noted that the PP decided to limit the Monitoring period till 31-December-2021 for this monitoring period. The verification team noted that the monitoring has occurred in January 2022 as per the registered VCS PD, but no GHG ERR is claimed. Hence it can be categorized as conservative and prevent any potential double counting.

Finding: CL 03, CAR 03, was raised and successfully closed. Refer to appendix 2 for further details.

Opinion: The verification team confirms;

- The monitoring plan has been implemented as per the registered PD /3/;
- The monitoring complies with the requirement of the applied methodology/10/;
- 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 /3/;
- The values included in the monitoring report /1.2/ and corresponding emission reduction sheet /2.2/ 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 /3/. No significant lack of evidence and missing data were detected during onsite audit discussion /11/. 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 PD /3/. The export and import data is measured by the electricity meters, recorded continuously on the registered VCS PD and the invoices are generated monthly/14/. The data is then reported annually on the VCS Monitoring Report as verified by the verification team through onsite assessment.

It was also verified through onsite audit inspection/11/ 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 onsite audit discussion that internal training program for the monitoring staff is 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 commissioned by 'Sai Sudhir Energy Limited' to perform verification of its registered VCS project 'Solar Power project by Sai Sudhir Energy Limited' for the monitoring period 01-January-2018 to 31-December-2021 (Inclusive of both days), under the crediting period 05-January-2012 to 04-January-2022, with regard to the relevant requirements of VCS Standard Version 4.4.

The management of the 'Sai Sudhir Energy Limited' is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project final Monitoring Report Version 05 dated 02-January-2023. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the 'Sai Sudhir Energy Limited'. The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report Version 05 dated 02-January-2023.

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-2018 to 31-December-2021 (Inclusive of both days) based on the reported emission reductions in the final Monitoring Report Version 05 dated 02-January-2023 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. The verified and certified emission reductions for the MP from 01-January-2018 to 31-

December-2021 is 28,613 tCO₂e. Since the total claim of 28,613 tCO₂e emission reductions is conservative, VVB hereby approves the same.

Verification period: From 01-January-2018 to 31-December 2021 (Inclusive of both days).

Verified GHG emission reductions and removals in the above verification period, broken down by calendar year.

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)
Year 7 (01-January-2018 - 31-December-2018)	7,634	0	0	7,634
Year 8 (01- January - 2019-- 31-December -2019)	7,307	0	0	7,307
Year 9 (01- January - 2020-- 31-December -2020)	6,993	0	0	6,993
Year 10 (01- January -2021- 31-December -2021)	6,679	0	0	6,679
Total	28,613	0	0	28,613

The estimated ex-ante GHG emission reductions and removals and the achieved emission reductions and removals for this monitoring period and the percentage difference and justification for the difference are stated below.

Year	Ex-ante emissions reduction s/removals	Achieved emissions reductions/removals	Percent difference	Justification for the difference
Year 7 (01-January-2018 - 31-December-2018)	7,992	7,634	-4.4%	Based on interview with the site personnel, verification team noted that there was lower generation during this year due to lower PLF

				arising from change in weather conditions.
Year 8 (01-January -2019– 31- December - 2019)	7,911	7,307	-7.6%	Based on interview with the site personnel, verification team noted that there was lower generation during this year due to lower PLF arising from change in weather conditions.
Year 9 (01-January -2020– 31- December - 2020)	7,832	6,993	-10.71%	Based on interview with the site personnel, verification team noted that there was lower generation during this year due to lower PLF arising from change in weather conditions.
Year 10 (01-January -2021- 31-December - 2021)	7,753	6,679	-13.85%	Based on interview with the site personnel, verification team noted that there was lower generation during this year due to lower PLF arising from change in weather conditions.
Total	31,488	28,613	-9.13%	Based on interview with the site personnel, verification team noted that there was lower generation during this period due to lower PLF arising from change in weather conditions

Location: Faridabad

Date: 09-January-2023



Authorized Signatory: Kaushal Goyal

Designation: Managing Director

KBS Certification Services Pvt. Ltd.

APPENDIX 1: REFERENCES

/1/	/1.1/ Monitoring Report, Version 01, dated 08-July-2022 (Initial Version) /1.2/ Monitoring Report, Version 05 dated 02-January-2023 (Final Version)
/2/	/2.1/ Emission Reduction calculation sheet dated 07-July-2022 (corresponding to initial Version of VCS MR) /2.2/ Emissions Reduction calculation Sheet, dated 10-October-2022 (corresponding to final Version of VCS MR)
/3/	- Registered VCS-PD version 01 dated 04-March-2013 - CDM Validation report from RINA, version 1.2 dated 07-May-2012 - VCS Verification report for the monitoring period (05/01/2012 to 30/05/2012) from TUV Nord, version 01 dated 04-March-2013 - VCS Verification report for the monitoring period (31/05/2012 to 31/12/2017) from Earthood Services Private Limited, version 01 dated 28-April-2022
/4/	VCS Standard Version 4.4
/5/	VCS Programme guide Version 4.3
/6/	Technical specifications/photographs of solar PV modules, electricity meters etc.
/7/	Single line diagram and meter location / Layout
/8/	Power purchase agreement
/9/	Commissioning Certificates
/10/	AMS-I.D. Grid Connected Renewable Electricity Generation- Version 17
/11/	Onsite auditing (23- September-2022) for verification of measuring and monitoring procedure, Interviews and data/log review
/12/	Joint meter readings for the current monitoring period 01-January-2018 to 31-December-2021
/13/	Calibration Certificates for main meters and check meters
/14/	Invoices & supplementary invoices raised during the monitoring period (01-January-2018 to 31-December-2021) to the grid.
/15/	Organization structure/chart
/16/	VCS declaration for avoidance for double counting
/17/	Shut down and maintenance details
/18/	Daily generation/ SCADA screenshots
/19/	Complaints register

APPENDIX 2: FINDINGS

Project title: Solar Power Project by Sai Sudhir Energy Limited

Monitoring period: 01-January-2018 to 31-December-2021

Summary of findings	CL	CAR	FAR
	03	03	00

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

No FAR raised during validation and previous verifications.

FAR ID	Section no.	-	Date:
Description of FAR			
Project participant response			Date:
Documentation provided by project participant			
VVB assessment			Date:

Table 2. CL from this verification

CL ID	01	Section no.	1.2 & 1.6 Section of MR	Date: 26/09/2022
Description of CL				
In Section 1.6 of MR, the VCS Crediting period mentioned is inconsistent with section 1.6 & 1.7 of VCS PD, Version 01 dated 04/03/2013. Kindly clarify the inconsistency observed.				
Project participant response				Date: 10/10/2022

CDM crediting period: Ten years (from 31st May 2012 to 30th May 2022).

Earlier VCS crediting period: 05th January 2012 to 30th May 2012

Revised Crediting period: 05th January 2012 to 04th January 2022

The crediting period is revised as the PP has opted to avail Emission reductions only from VCS (VERRA) during the revised crediting period. Also, the change in the crediting period doesn't have any impact on the additionality of the project. Apart from this there has been no project description deviation applied during validation & previous verifications as well as in the current monitoring period for the project activity.

This deviation is also approved in the previous MR approved by VERRA.

Refer the link below for latest MR:

https://registry.verra.org/mymodule/ProjectDoc/Project_ViewFile.asp?FileID=68479&IDKEY=0iofj09234rm9oq4jndsma80vcalksdjf98cxkjaf90823nmq3a94432541

Documentation provided by project participant

-

VVB assessment

Date: 27/10/2022

The verification team noted from the monitoring report and the verification report for the previous monitoring period "31/05/2012 to 31/12/2017", the PP has applied for project deviation regarding change in crediting period. Following statements are evidenced from the previous verification report, VCS.VER.22.23, version 01 dated 28/04/2022 "The crediting period was revised as the PP had opted to avail Emission reductions only from VCS (VERRA) during the revised crediting period. Verification team has confirmed the claim by cross-verifying with other CDM website also with other GHG program registries. Therefore, the change in the crediting period doesn't have any impact on the additionality and baseline of the project activity. It is also confirmed assessing with the previous verification report/20/ that there is no other project description deviation applied for the project activity. Hence, the project deviation is valid and appropriate as per latest version of VCS standard and VCS program guidelines". Hence the verification team concluded that the change in revised crediting period - 05th January 2012 to 04th January 2022 is valid for the current monitoring period. The PP has accordingly calculated the emission reduction calculations.

Hence this CL 01 is closed.

CL ID	02	Section no.	4.2	Date: 26/09/2022
Description of CL				

In Section 4.2 of MR, PP to kindly clarify “why the parameter EGbl,y, export & EGbl,y,import is not monitored separately, However, both parameters are monitored separately as per the CDM PDD version 02.3 dated 27/03/2012	
Project participant response	Date: 10/10/2022
PP is monitoring both component and Both the parameter is now introduced in the revised Monitoring Report in line with the registered PDD	
Documentation provided by project participant	
1. MR Version 02	
VVB assessment	Date: 27/10/2022
Both the monitored parameters are now included separately. The values are cross checked with the Monthly Statement by APTRANSCO and found consistent.	
Hence this CL 02 is closed.	

CL ID	03	Section no.	ER Sheet	Date: 26/09/2022
Description of CL				
a. In ER sheet, for October 2021, the joint meter reading certificate is missing. Hence, PP to kindly provide the same. b. In ER Sheet, daily generation data is used for apportioning values for 4 days (01/01/2022 to 04/01/2022) during the month of Jan 2022. Please provide the daily generation data for the month of Jan 2022.				
Project participant response				Date: 10/10/2022
Both the required document is now provided to DOE				
Documentation provided by project participant				
1. JMR report of October 2021 2. Daily generation data of January 2022				
VVB assessment				Date: 27/10/2022

a. Joint meter reading certificate for October 2021 is submitted. The values used in ER calculations sheet is found to be matching, hence CL 03 (a) is closed. b. The apportioning method applied in Jan 2022 using daily generation data is not mentioned in the VCS PD, which is a project description deviation. Please clarify if this deviation will achieve the same level of accuracy or is more conservative than what is set out in the methodology/ monitoring plan in the registered VCS PD. Hence CL 03 (b) is open.	
Project Participant response	Date: 31/10/2022
Although the apportioning has been approved in the previous Monitoring report by VERRA, it is decided to claim VCU only till 31st Dec 2021 due to meagre amount of credits in January 2022 and further to ease out the calculation.	
Documentation provided by the project participant	
Revised MR Revised ER calculation sheet.	
VVB Assessment	Date: 31/10/2022
The verification team noted that the PP decided to limit the Monitoring period till 31-December-2021 for this monitoring period. The verification team noted that the monitoring has occurred in January 2022 as per the registered VCS PD, but no GHG ERR is claimed. Hence it can be categorized as conservative and prevent any potential double counting. Hence, CL 03 is closed.	

Table 3. CAR from this verification

CAR ID	01	Section no.	MR(Throughout)	Date: 26/09/2022
Description of CAR				
a. In section 1.2 of the MR, following are to be indicated - sectoral scope(s) applicable to the project, project category and activity type (if applicable) and whether the project is a grouped project. b. The notations of parameter “EFgrid,OM,y & EFgrid,BM,y” is inconsistent with CDM PDD version 02.3 dated 27/03/2012, which is referred in the Registered VCS PD. c. PP to ensure all the web links mentioned in MR are working. Eg- In Section 1.7 of MR, the link of “map of India states & union territories” is not working.				
Project participant response				Date: 18/10/2021

a. Section 1.2 is corrected in revised MR. b. The notations of parameter “EFgrid,OM,y & EFgrid,BM,y” is consistent with CDM PDD. c. The web links are revised with the correct link.	
Documentation provided by project participant	
MR Version 03	
VVB assessment	Date: 31/10/2022
Section 1.2 is corrected in revised MR. The required details are as per MR Template are now provided. The notations of parameter “EFgrid,OM,y & EFgrid,BM,y” are corrected and are now consistent with CDM PDD. The web links are revised with the correct link in the revised MR. Hence, CAR 01 is closed	

CAR ID	02	Section no.	4.2 of MR	Date: 26/09/2022
Description of CAR				
In Section 4.2 of MR, under the table of parameter “EGBL,y” following inconsistency was observed. The Calibration due dates mentioned in the table are not matching the calibration frequency (once in a year) stated in the registered PD, for the year 2018 and 2019.				
Project participant response				Date: 10/10/2022
The Calibration date is corrected and now inline with the report submitted				
Documentation provided by project participant				
MR Version 03				
VVB assessment				Date: 27/10/2022
The PP has corrected the calibration due dates in the revised MR. The dates are verified with the calibration certificates for all years in this monitoring period. The dates are found to be matching. Hence, CAR 02 is closed.				

CAR ID	03	Section no.	5.4 of MR	Date: 26/09/2022
Description of CAR				
In 5.2 Section of MR, the Net GHG emission reduction & baseline emission values applied in the table are inconsistent with ER sheet.				

Project participant response	Date: 10/10/2022
The ER values are corrected in the revised MR and now in consistent with the revised ER sheet	
Documentation provided by project participant	
<i>ER calculation sheet.</i>	
VVB assessment	Date: 31/10/2022
The value of Emission reduction is 28,613 in tCO2e for the current monitoring period. This value is consistently mentioned in the MR and the emission reduction calculation sheet. Hence this CAR 03 is closed.	

Table 4. FAR from this verification

No FAR raised during current verification.

FAR ID		Section No.		Date:
Description of FAR				
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:		Srinivasan Selvaraj	
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 1.2: Energy generation from renewable energy sources		
SS 05: 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)		Shikha Sharma	
Approval date:		16/03/2022	

Personnel Name:		Mr. Shubham.S.Patil	
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 and T)		Shikha Sharma	
Approval date:		18/11/2021	

Personnel Name:		Sudheendra K	
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
Energy distribution	TA 2.1: Energy distribution
Energy demand	TA 3.1. Energy Demand
Approved By	Shikha Sharma
Approval date:	18/06/2021