



“ENERGISING INDIA USING SOLAR ENERGY PROJECTS”

Document Prepared By



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Summary:

M/s VKU Certification Pvt. Ltd. (here after referred as VKU) was commissioned by M/s Infinite Environmental Solutions LLP, has verified the greenhouse gas emission reductions reported for the project activity “Energising India using Solar Energy Projects (VCS ID 1931) in India, covering monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both start and end dates) under first crediting period from 19-September-2017 to 18-September-2027 (Inclusive of both dates) with regard to the relevant requirements for VCS Standard version 4.3/5/.

The purpose of the verification is to have an independent review of ex-post determination of the monitored reductions in GHG emission reductions and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data used to confirm the reductions in anthropogenic emissions by sources is sufficient, definitive and presented in a concise and transparent manner.

The verification scope of the project is:

- To verify that the project is implemented as described in the registered VCS Joint PD&MR/3/.
- To assess the project’s compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions without any double counting.

- 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.
- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- To verify that reported GHG emission data is sufficiently supported by evidence.

Verification was conducted using VKU's procedures in line with the requirements specified in the VCS Program Guide version 4.2/4/, VCS Standard Version 4.3/5/, VCS Validation and Verification Manual version 3.2/21/, CDM M&P, CDM Validation and Verification Standard 3.0/22/, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

VKU followed the rule-based approach to perform this verification. During the course of verification, related to operation, monitoring and GHG emission reduction calculation of the VCS project activity in relation to all relevant VCS requirements for the project activity and the applied baseline and monitoring methodology and a total of 08 findings were raised, which includes: 05 Corrective Action Request (CARs); 03 Clarification Requests (CLs). All the raised findings were raised and successfully resolved by the PP. The same has been discussed in Appendix B of this verification report.

The verification team ensured that the reported emission reductions are complete and accurate in accordance with applicable VCS requirements in order to be certified therefore the verification team has detected no further uncertainties.

The GHG emission reductions were calculated on the basis of the approved methodology (ACM0002) "Grid Connected Electricity Generation from Renewable Sources" Version 19.0/7/ and "Tool to calculate the emission factor for an electricity system"- Version 7.0 /8/ and the monitoring plan included in the registered VCS Joint PD&MR/3/ Version 03 dated 17-September-2019.

In conclusion, it is VKU's opinion that the project activity "Energising India using Solar Energy Projects (VCS ID 1931) in India, meets all relevant requirements for VCS standard and guidelines and correctly applies the baseline and monitoring methodology (ACM0002) "Grid Connected Electricity Generation from Renewable Sources" Version 19.0/7/. The monitoring system is in place and the emission reductions are calculated without material misstatement.

Hence, VKU is able to certify that the emission reductions from the project during the monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both start and end dates) under first crediting period from 19-September-2017 to 18-September-2027 (Including both dates) amount to 686,829 tCO_{2e}.

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1 INTRODUCTION

1.1 Objective

M/s Infinite Environmental Solutions LLP commissioned M/s VKU Certification Pvt Ltd (here after referred as VKU) to carry out the sixth verification of the project “Energising India using Solar Energy Projects” (VCS ID 1931) in India for the period from 01-January-2022 to 30-September-2022 (Inclusive of both start and end dates) under 1st crediting period from 19-September-2017 to 18-September-2027 (Including both dates).

This report summarizes the findings of the verification of the project, performed on the basis of VCS Requirements and UNFCCC criteria for CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The purpose of the verification is to have an independent evaluation of a project activity by an accredited validation and verification body against the requirements of the VCS Program Guide Version 4.2/4/, VCS Standard Version 4.3/5/ and GHG program applied, on the basis of the registered VCS Joint Project Description and Monitoring Report version 03 dated 17-September-2019/3/.

This is the sixth verification of the first crediting period and the total number of days included in this verification are 273 covering the monitoring period from 01-January-2022 to 30-September-2022 (inclusive of both start and end dates) under the first crediting period from 19-September-2017 to 18-September-2027 (Including both dates).

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 registered VCS Joint project description and monitoring report (VCS Joint PD&MR) 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/7/ and approved monitoring plan/3/
- The monitoring system is implemented and fully functional to generate Verified Carbon units (VCUs) without any double counting.
- 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:

- To verify that the project is implemented as described in the registered VCS Joint PD&MR/3/
- To assess the project's compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions without any double counting.
- 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 sheet/2/.
- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan /3/;
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- To verify that reported GHG emission data is sufficiently supported by evidence.

The project is assessed against the requirements of VCS Standard version 4.3/5/, VCS program guide version 4.2/4/, VCS Validation and Verification manual version 3.2/20/ and related rules and guidance.

VKU has, based on the recommendations in the latest version of CDM Validation and Verification Standard/21/, VCS Validation and Verification manual version 3.2/21/ employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

1.3 Level of Assurance

All the revisions of the verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent VKU's procedure, with a **Reasonable level of assurance**.

The technical review was performed by a technical reviewer qualified in accordance with VKU's qualification procedure.

The verification team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name
VCS Team Leader & Technical Expert 1.2	Kumar	Sanjay
Technical Reviewer & Technical Expert 1.2	Srivastava	Abhishek Kumar
Validator/Verifier-Trainee	Chauhan	Shivani
Project Trainee	Apoorva	Tripathi

1.4 Summary Description of the Project

The project activity is a step towards supporting the implementation and installation of grid connected renewable solar energy power plants in India and the electricity delivered by the project activity is exported to the unified Indian grid.

The project is a voluntary action and each SPV is the Project Proponent for their project activity. Azure Power India Pvt Ltd as a parent company formed different SPVs (Special Purpose Vehicles) for solar projects and projects are developed by name of SPVs. There are no mandatory laws or regulations existing in India requiring PP or any other party to develop a programme for renewable generation plants.

This project activity supports the development of new grid-connected renewable energy power plants in India and covers the solar energy technologies. It seeks to enable investment in large scale grid connected plants that export their generated output to the regional / national electricity grid in India.

The implementation of project activity ensures energy security, diversification of the grid generation mix and sustainable growth of the electricity generation sector in India. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and also plays beneficial role in the mitigation of climate change.

This 480 MW project is a bundled project activity that generates renewable electricity and displaces an equal amount of power from the grid, which is mostly supplied by fossil-fuel-fired power plants.

The project capacity and the states in which the SPVs are installed are mentioned in the table: -

Name of the SPVs	Capacity in MW	Connection with Grid	State	Usage of Electricity
Azure Power Jupiter Pvt Ltd	30	Indian Grid	Uttar Pradesh	Sale to grid

Azure Power Thirty-Seven Pvt Ltd	100		Telangana	Sale to grid
Azure Power Venus Pvt Ltd	40		Uttar Pradesh	Sale to grid
Azure Power Thirty-Six Pvt Ltd	50		Andhra Pradesh	Sale to grid
Azure Power Thirty-Three Pvt Ltd	260		Gujarat	Sale to grid
Total	480 MW			

The earliest date of commissioning of the solar power project is 19-September-2017 and the project runs satisfactorily since then except some scheduled shutdown for 159.52 hours for regular maintenance and service. The commissioning dates are validated against registered VCS Joint PD&MR/3/, commissioning certificates/14/ previous verification reports/29/.

The main purpose of this project activity is to harness clean form of energy to generate electricity through renewable solar energy source. As per MR, the electricity generated from the project is supplied to the unified Indian Grid which is confirmed from registered VCS Joint PD&MR/3/, previous Validation report /17/ previous verification reports/29/ and onsite personnel interviews with PP/24/.

This information was verified on-site and confirmed to be consistent with the information provided in the registered VCS Joint PD&MR /3/. The net power generated by the bundled project activity that was evacuated to the grid for current monitoring period is 733,167 MWh. The overall emission reductions obtained during this monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates) are 686,829 tCO_{2e}.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification was conducted using VKU's procedures in line with the requirements specified in the VCS Requirements, i.e., VCS Program Guide version 4.2/4/, VCS Standard version 4.3/5/. The GHG emission reductions are on the basis of the approved Baseline and monitoring methodology ACM0002, "Grid-connected electricity generation from renewable sources" (Version 19.0) /7/.

During onsite and remote visit/18/ verification team reviewed 100% data for all the PV Modules involved in this project at site and hence no sampling is involved.

The verification consisted of the following three phases

- Document review;
- On-site and remote site assessment including Interviews and actual project scenario;
- Resolution of any Material Discrepancy and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

2.2 Document Review

The monitoring report (MR) version 1.0 dated 12-September-2022, version 2.0 dated 25-January-2023 and final version 3.0 dated 16-February-2023; the emission reduction calculations spreadsheet version 1.0 dated /2/ and final version 2.0 dated 25-January-2023/2/, were assessed as part of the verification. In addition, the registered VCS Joint PD&MR/3/ in particular the baseline estimations and the monitoring plan for the project was reviewed.

The following table lists the documentation that were reviewed during the verification:

/1/	Infinite Environmental Solutions LLP: VCS Monitoring report for “Energising India using Solar Energy Projects”, for the current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates) • Version 1.0 dated 12-September-2022 • Version 2.0 dated 25-January-2023 • Version 3.0 dated 16-February-2023
/2/	Infinite Environmental Solutions LLP: Emission Reduction Calculation Spreadsheet, • Version 1.0 dated 12-September-2022 • Version 2.0 dated 25-January-2023
/3/	EKI: Registered VCS Joint PD&MR for the project “Energising India using Solar Energy Projects”, Version 3.0 dated 17-September-2019.
/4/	VCS: VCS Program Guide, Version 4.2 of 22-June-2022
/5/	VCS: VCS Standard, Version 4.3 of 22-June-2022
/6/	VCS: Monitoring Report Template VCS Version 4.1 of 20-January-2022
/7/	CDM Executive Board: Baseline and Monitoring Methodology (ACM0002).” Grid-connected electricity generation from renewable sources - Version 19.0
/8/	“Tool to calculate the emission factor for an electricity system”- Version 7.0
/9/	UNFCCC: Project search: https://cdm.unfccc.int/Projects/projsearch.html
/10/	Gold Standard Foundation: https://registry.goldstandard.org/projects?q=&page=1
/11/	Monthly JMR issued by • UPPCL (Uttar Pradesh Power Corporation Ltd.) for Azure Power Jupiter Pvt.Ltd. for entire monitoring period & Azure Power Venus Pvt.Ltd. from January 2022 to May 2022 • TSTRANCO (Transmission Corporation of Telangana Limited) for Azure Power Thirty Seven Pvt. Ltd. for the entire current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates) • GETCO (Gujarat Energy Transmission Corporation Limited) for Azure Power Thirty Three Pvt. Ltd. for the entire current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates) Monthly REA Statements issued by:

	• SRPC (Southern Regional Power Committee) for Azure Power Thirty Six Pvt. Ltd for entire current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates) • UPREC (Uttar Pradesh Electricity Regulatory Commission) for Azure Power Venus Pvt.Ltd. from June 2022 to September 2022.
/12/	Certificate of Calibration for all the meters that belongs to project activity for the current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates)
/13/	Invoice issued by PP for the current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates) to: • Azure Power Jupiter Pvt.Ltd. to NTPC Limited (National Thermal Power Corporation Private Ltd.) • Azure Power Venus Pvt.Ltd to Solar Energy Corporation of India • Azure Power Thirty Seven Pvt.Ltd to NTPC Limited (National Thermal Power Corporation Private Ltd.) • Azure Power Thirty Six Pvt.Ltd to Solar Energy Corporation of India • Azure Power Thirty Three Pvt.Ltd to Gujarat Urja Vikas Nigam Ltd.,
/14/	Commissioning certificate of the project activity issued by state electricity authority for all 5 sites
/15/	Letter of declaration from PP regarding not having created or sought any other form of environmental credit or any other form of GHG credits dated 23-December-2022 for the current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates)
/16/	Central Electricity Authority (Installation and Operation of Meters) Regulations Notified on 17/03/2006 No. 502/70/CEA/DP&D Amendments Notified on 26-June-2010 No. 502/6/2009/DP&D/D-I
/17/	LGAI Technological Center S.A. (Applus+ Certification): <u>Registered Joint Validation & Verification report for “Energising India using Solar Energy Projects, dated 18-September-2019</u>
/18/	Site Visit Photographs, Videos and Attendance Sheet from 31-October-2022 to 04-November-2022 for physical site visit and 07-November-2022 for remote site visit.
/19/	Project Webpage: https://registry.terra.org/app/projectDetail/VCS/1931
/20/	VCS Validation and Verification manual Version 3.2 dated 19-October-2016
/21/	CDM Validation and Verification Standard Version 3.0 dated 09-September-2021
/22/	DGR Reports for all 5 sites provided by PP for the entire current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates)
/23/	Grievance Register photographs for all the five sites present on-site for the entire current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates)
/24/	Site personnel Interviews dated 31-October-2022 to 04-November-2022 for physical site visit and 07-November-2022 for remote site visit
/25/	GPS Map camera used for verifying the location of the project activity during site visit and Google Earth used during desk review.
/26/	REC website Renewable Energy Certificate Registry of INDIA https://www.recregistryindia.nic.in/index.php/publics/faqs
/27/	Technical Specification Details of Solar PV modules.
/28/	EIA NOTIFICATION dated 14-September-2006; https://moef.gov.in/wp-content/uploads/2018/03/so1533.pdf
/29/	Verification reports for the Previous Verifications:

- | | |
|--|---|
| | <ul style="list-style-type: none">• Joint Validation and Verification report dated 18-September-2019 covering the monitoring period of 19-September-2017 to 30-June-2019 (Inclusive of both dates)• Verification report dated 15-September-2020 covering the monitoring period of 01-July-2019 to 29-February-2020 (Inclusive of both dates)• Verification report dated 21-May-2021 covering the monitoring period of 01-March-2020 to 31-December-2020 (Inclusive of both dates)• Verification report dated 13-October-2021 covering the monitoring period of 01-January-2021 to 31-July-2021 (Inclusive of both dates)• Verification report dated 28-February-2022 covering the monitoring period of 01-August-2021 to 31-December-2021 (Inclusive of both dates) |
|--|---|

2.3 Interviews

An on-site inspection has been performed by the assessment team for multiple sites i.e., Andhra Pradesh, Uttar Pradesh, Gujarat and Telangana from 31-October-2022 to 04-November-2022 and remote site visit on 07- November-2022 respectively. During site visit the representatives of the PP and O&M contractors were interviewed personally by assessment team i.e., personnel responsible for monitoring of the project activity, data collection and management, and QA/QC procedure.

The details of the people interviewed at Vartol, Khedbrahma, Sabarkantha- Gujarat and Netramali, Idar, Sabarkantha- Gujarat on 31-October-2022 are mentioned in the table below: -

S.No.	Site	Name	Designation	Topic
1	Vartol Site	Mohan Solanki	SRS Shield Supervisor	Data archiving, breakdown details and maintenance of generation records Project Implementation and technical details of the Project like breakdown details, calibration of meters and monitoring of required monitored parameters and implementation of QA/QC Procedure.
2		Rajendra Solanki	SRS Shield Gaurd	
3		Digvijay Singh Vagela	SRS Shield Gaurd	
4		Bakabhai Makawana	SRS Shield Gaurd	
5		Maljibhai Solanki	Mitarsh Enenrgy Labor	
6		Maheshbhai Vamkar	Group 2 service labor	
7	Netramali Site	Diwan Singh	Supervisor	
8		Vishnu	At. Engineer	

The details of the people interviewed at Dhari, Jambusar, Bharuch, Gujarat and Dakor, Orai, Jalaun- Uttar Pradesh & Bibiyapur, Hardoi- Uttar Pradesh & Raniganj, Hamirpur- Uttar Pradesh on 07-November-2022 are mentioned in the table below: -

S. No.	Site	Name	Designation	Topic
1	UP Sites	Sonu Kumar	Site Incharge	Data archiving, breakdown details and maintenance of generation records
2		Sandeep Singh	Site Incharge	
3		Rajesh Gupta	Site Incharge	
4		Vivek Zaveri	Senior Manager at Infinite Solutions	
5	Dhari Site	Arjun Kasaudhan	Site Incharge	Project Implementation and technical details of the Project like breakdown details, calibration of meters and monitoring of required monitored parameters and implementation of QA/QC Procedure.
6		Mahesh Aparnathi	Site Incharge	
7		Bipin	Site Incharge	
8		Ankit Dubey	Site Incharge	
9		Pragnesh	Site Incharge	

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

The details of the stakeholders interviewed at Vartol, Khedbrahma, Sabarkantha- Gujarat and Netramali, Idar, Sabarkantha- Gujarat on 31-October-2022 are mentioned in the table below: -

S. No.	Site	Name	Category	Topic
1	Vartol Site	Mukesh Sharma	Local Stakeholder	- Project activity implementation and its impact on social, economic and environmental condition of the local people. - The ongoing communication procedure and the address of their grievance by the project proponent - The employment generation due to project activity implementation.
2		Ranjit Zalu		
3	Netramali Site	Manish Prajapati		

The details of the stakeholders interviewed at Dhari, Jambusar, Bharuch, Gujarat and Dakor, Orai, Jalaun- Uttar Pradesh & Bibiyapur, Hardoi- Uttar Pradesh & Raniganj, Hamirpur- Uttar Pradesh on 07-November-2022 are mentioned in the table below: -

S. No.	Site	Name	Category	Topic
1	UP Sites	Rajesh Yadav	Local Stakeholder	- Project activity implementation and its impact on social, economic and environmental condition of the local people. - The ongoing communication procedure and the address of their grievance by the project proponent - The employment generation due to project activity implementation.
2		Ram Khelawan		
3		Vinod Srivastava		
4	Dhari Site	Rakesh Patel		
5		Rukmini Signh		
6		Sapna Kumari		
7		Devendra Tiwari		
8		Billu Jadav		

There were no negative comments received during the stakeholder consultation interview conducted on site and more detail is enlisted in the section 4.2.2 below.

2.4 Site Inspections

An on-site inspection has been performed by the assessment team for multiple sites i.e., Andhra Pradesh, Uttar Pradesh, Gujarat and Telangana from 31-October-2022 to 04-November-2022 and remote site visit on 07- November-2022 respectively to carry out the following;

- An assessment of the implementation and operation of the registered project activity as per the registered VCS Joint PD&MR/3/ and VCS MR/1/;
- A review of information flows for generating, aggregating and reporting the monitoring parameters
- Interviews/24/ with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the registered VCS Joint PD&MR/3/.
- A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, JMRs, REA Statements or similar data sources;
- A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the VCS Joint PD&MR /3/the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline;

- f) A review of calculations and assumptions made in determining the GHG data and emission reductions;
- g) An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

2.5 Resolution of Findings

The objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for VKU's positive conclusion on the project description. To guarantee transparency a verification protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of verification and the results from verifying the identified criteria.

The verification protocol consists of three situations described below:

A corrective action request (CAR) is raised if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

In summary, 3 CLs and 5 CARs were raised during this verification which were closed successfully and details are given under Appendix B of this report.

2.5.1 Forward Action Requests

This is sixth periodic verification of the project activity and no FAR was raised during the Joint Validation and Verification /17/ and previous Verifications /29/.

2.6 Eligibility for Validation Activities

VKU has not undertaken any validation activities as a part of the verification and does not hold holds the accreditation for Validation of projects under this or any relevant Sectoral Scope. Hence this section is not applicable for present verification

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is neither registered nor seeking registration under any GHG program and it is only registered under VCS with project ID: 1931. Assessment Team has verified the same from Verra Registry and similar exercise was performed for other GHG programs such as CDM/GS/GCC/UCR/CR-I/REC/I-REC registries with similar project title/capacity and Project Proponents but the assessment team was not able to trace any such project registered under any of the above stated registries or under any other similar mechanisms. This was further confirmed through a declaration/15/ submitted by the PP in which they have mentioned that they will not claim same GHG emission reductions of the project from any other GHG program except VCS thus ensuring emission reduction generated from the project activity for current monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both dates) will not be double counted hence accepted by the assessment team.

Assessment team also checked the REC Mechanism database of India and found that the project activity is not accredited / registered under REC mechanism of India which was also verified from the REC website (Renewable Energy Certificate Registry of India) ([Renewable Energy Certificate Registry of INDIA - Registered RE Generator List \(recregistryindia.nic.in\)](https://www.recregistryindia.nic.in/) /26/ Further, declaration/15/ for the same is also submitted by PP which was examined by the assessment team and found correct.

The details of the registries checked are as follows:

- <https://www.recregistryindia.nic.in/>
- <http://cdm.unfccc.int/>
- <http://www.goldstandard.org/>
- <https://verra.org/verra-standards-and-programs/>
- <https://www.ucarbonregistry.io/>
- <https://projects.globalcarboncouncil.com/>
- <https://cri.nccf.in/>
- <https://www.irecstandard.org/>

The Project is not rejected by other GHG programs listed below. A declaration/15/ for the same is checked and found correct by the assessment team. Also, assessment team independently verified with the following registries and checked the project from the PP matching the same project design and found that no such project either exists or were rejected by the registries.

The details of the registries checked are as follows:

- <https://www.recregistryindia.nic.in/>
- <http://cdm.unfccc.int/>
- <http://www.goldstandard.org/>
- <https://verra.org/verra-standards-and-programs/>
- <https://www.ucarbonregistry.io/>
- <https://projects.globalcarboncouncil.com/>

- <https://cri.nccf.in/>
- <https://www.irecstandard.org/>

3.2 Methodology Deviations

No methodology deviation was observed in current monitoring period and also no methodology deviation was observed during the Joint Validation and Verification /17/ and previous Verifications /29/.

3.3 Project Description Deviations

Deviation 1:

This deviation is a monitoring deviation applicable only to Azure Power Thirty Six Pvt Ltd (50 MW) located at Andhra Pradesh. The monitoring practice is updated (November 2018) and it's shifted to Deviation Settlement Mechanism (DSM) in order to more strengthen the national grid. The export and import values are omitted. In DSM, PP have to forecast energy generation in a daytime block (In India, 15 minutes each, total 96 blocks) well in advance. The invoicing is done on the forecasted value. The actual generation deviation from the forecasted values is penalized, it depends upon the deviation magnitude. Therefore, instead of export and import values, the net values are directly obtained for the emission reduction calculation. Total Energy schedule and the Actual values (which is the actual Net delivered) is maintained by the Southern Regional Power Committee (SRPC) Secretariat, Central Electricity Authority, Government of India. Regional Energy Account (monthly net export) for every month in respect of Southern Region has been uploaded on the SRPC website, www.srpc.kar.nic.in. Since the document is provided by government nodal agency, therefore no cross-checking is required.

The Deviation 1 in Project Description is applied during second monitoring period (from 01- July-2019 to 29-February-2020; Inclusive of both dates). The nature of deviation is permanent and has already been approved during second verification

Deviation 2:

The commissioning date for Azure Power Thirty-Six Pvt Ltd was declared earlier Solar Energy Corporation of India (SECI) on 30-April-2018 but a physical inspection, commission committee declare final commissioning on 05-May-2018. Both dates are mentioned over the commissioning certificate. The deviation doesn't have any impact on additionality, methodology applicability, monitoring methodology and calculation of emission reductions.

The Deviation 2 in Project Description is applied previously during fifth monitoring period (01-August-2021 to 31- December-2021) and the nature of deviation is permanent and has been approved during the fifth verification.

Deviation 3:

PP has requested this deviation in current monitoring period which is a monitoring deviation applicable for all the SPV's except Azure Power Thirty Seven Pvt Ltd (100 MW) located at

Telangana. The monitoring practice is updated from JMR and is shifted to Deviation Settlement Mechanism (DSM) in order to strengthen the national grid. The export and import values are omitted. In DSM, PP have to forecast energy generation in a daytime block (In India, 15 minutes each, total 96 blocks) well in advance. The invoicing is done on the forecasted value. The actual generation deviation from the forecasted values is penalized, it depends upon the deviation magnitude. Therefore, instead of export and import values, the net values are directly obtained for the emission reduction calculation. Total Energy schedule and the Actual values (which is the actual Net delivered) is maintained by their respective Regional Power Committee (RPC) Secretariat, Central Electricity Authority, Government of India. Regional Energy Account (monthly net export) for every month in respect of any region in India has been uploaded on their respective Regional Power Committee websites. Since the document is provided by government nodal agency, therefore no cross-checking is required.

The nature of this deviation is permanent and will be practiced for monitoring mechanism of project activity throughout its lifetime and it is verified during the onsite and remote visit and through personnel interviews/24/, hence accepted by VKU Certification.

Deviation 4:

PP has requested deviation in in current monitoring period for the number of modules used at the sites mentioned in the Monitoring Report - Appendix-2 for Azure Power Thirty-Six Pvt Ltd. (Andhra Pradesh) and Azure Power Thirty-Three Pvt Ltd (Sanes, Gujrat) where PP has corrected the editorial mistakes in registered VCS Joint PD&MR section 1.8 (page No. 7-9). This editorial correction does not have any effect on the capacity of the respective project site as per the commissioning certificates submitted and verified by the assessment team. This deviation is of permanent nature and does not have any impact on project baseline and additionality; hence accepted by VKU Certification.

3.3 Grouped Project

As per registered VCS Joint PD&MR version 03 dated 17-September-2019, the project is not a grouped project. This can further be confirmed as per para 3.5.8 of VCS Standard Version 4.3/5/. Therefore, this section is not applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

After conducting the desk review along with the onsite audit, it was concluded that the project is implemented as per the requirement of the registered VCS Joint PD&MR/3/ and approved monitoring plan. During the current monitoring period, it was observed that there was no unforeseen incident/event evolved which can impact the operation of the project activity except

the scheduled maintenance and service breakdowns calculated as 159 hours 52 minutes. It is verified through DGR Reports submitted by PP/22/ and also mentioned in section 3 and Appendix section of MR by PP/1/. This does not have a significant impact on the ER calculation hence accepted by Assessment team.

The project underwent continuous as verified during the interview with PP personnel/24/ Senior engineers/Junior engineer/Assistant manager present at site during onsite visit. Moreover, there is no unforeseen incident which can affect the applicability of the methodology and thus the same is acceptable to the assessment team.

During the current monitoring period, the project activity has supplied 733,167 MWh of electricity, and thus contributing to 686.829 tCO₂e GHG reductions.

Project location is confirmed by the assessment team through the GPS Map camera during site visit and Google Earth during desk review /26/. Moreover, assessment team confirms that the latitudes and longitudes as mentioned in the registered VCS Joint PD&MR/3/ are correct.

The latitudes and longitudes of project activity are confirmed below.

Name of the SPVs	Village	Tehsil	District	State	Latitude	Longitude
Azure Power Jupiter Pvt Ltd	Bibiyapur	Hardoi	Hardoi	Uttar Pradesh	27°35'12.9"N	79°43'51.6"E
	Raniganj	Hamirpur	Hamirpur		25°54'18.4"N	79°55'10.1"E
Azure Power Thirty-Seven Pvt Ltd	Rachur, Marchal, & Veljal	Veldana, Kalwakurthy & Talakondapalli	Nagar Kurnool & RangaReddy	Telangana	16°31'11.0"N	77°53'49.0"E
Azure Power Venus Pvt Ltd	Dakor	Orai	Jalaun	Uttar Pradesh	25°51'07.1"N	79°25'42.4"E
Azure Power Thirty-Six Pvt Ltd	Gani & Sakunala	kurnool	kurnool	Andhra Pradesh	14°01'30.6"N	78°26'36.6"E
Azure Power Thirty-Three Pvt Ltd	Dhari	Jambusar	Bharuch	Gujarat	22°04'01.0"N	72°37'01.0"E
	Semaliya	Bayad	Aravalli		23°13'37.3"N	73°22'34.6"E
	Vadol	Kapadvanj	Kheda		22°57'47.7"N	73°12'59.1"E

	Sanes	Bhavnagar	Bhavnagar	21°54'11.6"N	72°06'38.9"E
	Vartol	Khedbrahma	Sabarkantha	24°05'32.7"N	73°04'19.3"E
	Netramali	Idar	Sabarkantha	23°46'13.2"N	72°59'42.4"E
	Muloj	Modasa	Aravalli	23°30'52.9"N	73°26'28.3"E

Start date of the operation of the project activity is 19-September-2017 which is the date of commissioning of first phase of the Project for SPV-Azure Power Jupiter Pvt Ltd.

Assessment team checked the commissioning certificate/14/ and confirmed that the date of commissioning for the Solar power plant is correct. Assessment team also confirm during the onsite audit and remote audit/24/ that there is no change in project design viz., capacity of the solar panels remained the same and the project is implemented as per the description provided in the registered VCS Joint PD&MR/3/. This has been further verified from the registered Joint Validation and Verification report/17/ and previous verification reports /29/.

Commissioning dates for project activity are given below:

S. No.	Name of the SPVs	Capacity (MW)	Commissioning Dates			
1.	Azure Power Jupiter Pvt Ltd	30	Site	Capacity (MW)	Commissioning Date	
			Hardoi	20	19-September-2017	
			Hamirpur	10	22-September-2017	
2.	Azure Power Thirty-Seven Pvt Ltd	100	12-January-2018			
3.	Azure Power Venus Pvt Ltd	40	14-April-2018			
4.	Azure Power Thirty-Six Pvt Ltd	50	05-May-2018			
5.	Azure Power Thirty-Three Pvt Ltd	260	Site	Capacity (MW)	Commissioning Date	
			Dhari	35	02-November-2018	
			Gabat	30	10-December-2018	
			Vadol	40	01-November-2018	
			Netramali	40	07-March-2019	

			Sanes	50	13-March-2019
			Muloj	40	22-February-2019
			Vartol	25	09-March-2019
Total		480			

The Technical parameters have been verified with the name plates as well as with the technical specifications of Solar Panels and also cross checked from the technical manual of the Manufacturers/27/. Assessment team confirms that the technical parameters are consistent with the registered VCS Joint PD&MR/3/.

The major technical specifications of the project activity are as follows: -

Specific ations	Azure Jupiter Pvt Ltd	Azure Power Thirty-Seven Pvt Ltd	Azure Power Venus Pvt Ltd	Azure Power Thirty-Six Pvt Ltd	Azure Power Thirty-Three Pvt Ltd
Make of Modules installed					
Location /Capacity (MW)	1.Hamirpur , UP (10 MW), 2.Chiluah, UP (10MW), 3. Bibiyarpur, Hradoi(10 MW)	Telangana (100MW)	Uttar Pradesh(40MW)	Andhra Pradesh (50)	1.Dhari, Gujrat (35MW), 2.Gabat, Semali (30MW), 3.Malaitadi, Vadol(40MW), 4.Netramali(40 MW), 5.Sanes(50MW) 6.Muloj (40MW), 7.Vartol (25MW) in Gujrat state.
Make/Type	Hanwah/Polycrystalline	Chint,Risen/Polycrystalline	Hanwah Solar One, Q Cells/Polycrystalline	Hanwha Q Cells, Renewsys, Warre, JA Solar/ Polycrystalline Mono BI-FACIAL	1.Risen, GCL, Talsun/ Polycrystalline 2.Risen, Talesun/ Polycrystalline 3.GCL, Rise&Talesun/ Polycrystalline 4.Waaree/ Polycrystalline 5.Waaree, Waaree/ Polycrystalline 6.JA, Waaree, Telesun, Risen/ Polycrystalline 7.Talesun, GCL/ Polycrystalline

Rating (Wp)	315/320/320	320,325	320	320,325,330,540	1.330/325/335 2.325/330 3.330/325 4.325/330 5.325/330 6.325/330 7.325/330/325
Quantity	31800/31400/31400	311108	148020	190634	1.61440/66240/7680 2.48300/67620 3.76860/77280 4.22800/160800 5.92160/136800 6.80640/183240 7.34560/11520/57960
Make of Modules installed					
Type/Make	PVS800 Central, PVS800-57, PVS800-57/ABB	Central/ABB	PVS800-57B,PVS980-58/ABB	Central/ABB, TBEA	1. Central, Strings/Central-Schneider, Strings-Sungrow 2. Central/TMEIC 3. Central/TMEIC 4. Central inverter/TMEIC-Central 5. PVH-12550E/ TMEIC 6. Central, Strings/ TMEIC-Central, Strings-Sungrow 7. Central inverter/TMEIC
Rating (Wp)	1MW,1000,1000	1MW	1732000,200000	1732MW,1MW,2.5MW	1. Central 20000,680, Stings-200 2. 2550 3. 2.55 4. 2550 5. 2500 6. 2550,200 7. 2550kw

Quantity	10,10,10	100	19,4	23 Nos, 1Nos,4 Nos	1. Central-17+2, Strings-13 2.12 3. 16 4. 16 5.20 6. TMEIC-15, SUNGROW-13 7.10
Invertor Cum Transformer Unit Details					
Number of Transformer	3 Nos (Details of solar inverter station (Invertor cum transformer unit))	20 nos. of 4 MVA transformers (33/0.40 0/0.400/0.400kV), 10 nos. of 2 MVA Transformers, 33/0.400 /0.400 kV	24 nos	6 Nos of 7 MVA, 33 kV/400 V, 1 Nos of 10 MVA, 33 kV/400 V	1. 4 Nos of 8 MVA, 11 kV/575 V, 1 Nos of 2 MVA, 11 kV/575 V, 1 Nos of 1.4 MVA, 11 kV/330 V 2. 3 Nos of 10 MVA, 11 kV/630 V 3. 2 Nos of 25 MVA, 11 kV/66 kV, 4 Nos of 10 MVA, 11 kV/630 V, 2 Nos of 5 MVA, 11 kV/630 V 4. 3 Nos of 10 MVA, 11 kV/630 V, 2 Nos of 10 MVA, 11 kV/630 V, 1 Nos of 40 MVA, 11 kV/66 kV

					5. 1 Nos of 50 MVA, 11 kV/66 kV, 5 Nos of 10 MVA, 11 kV/630 kV 6. 4 Nos of 10 MVA, 11 kV/630 V, 1 Nos of 40 MVA, 11 kV/66 kV 7. 7 Nos of 5 MVA, 11 kV/630 V
Make /Type	Schneider/ Inverter duty	Schneider/ Inverter duty	ABB and Schneider Electric	Schneider/ Inverter duty	Schneider/ Inverter duty

The assessment team confirmed through onsite visit photographs/18/ and interviews /24/ with PP representative that there is no proposed or actual change to the project design during this monitoring period. It was observed that the monitoring plan was implemented as per the registered VCS Joint PD&MR/3/ and applied methodology, (ACM0002), Version 19.0/7/. The organizational role and responsibility as mentioned in the registered VCS Joint PD&MR /3/ is followed onsite.

Assessment team concludes the following:

- There are no material discrepancies between project implementation and the project description found from the registered VCS Joint PD&MR /3/.
- The monitoring plan is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters) is appropriate.
- There are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology/7/.
- The GHG emission reductions or removals generated by the project have not been included in any other emissions trading program or any other mechanism that includes GHG trading except VCS/15/.
- The project has not received or sought any other form of environmental credit, or has become eligible to do so since previous verification which is confirmed through declaration/15/.
- The project is registered under VCS only and PP is seeking to get GHG emission reduction from VCS only.

- g) The project activity complies with indicators for sustainable development in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India as discussed under section 1.11 of MR.

In which SDG indicator taken by PP are;

- **SDG 7- 7.2 i.e. (Renewable energy share in the total final energy consumption)** As a part of this project activity lifetime, 3,993,255 MWh renewable electricity has been supplied to Indian grid that helps to strengthen the renewable energy share in the energy mix. VVB has referred previous verification reports and found the above claimed renewable electricity supplied to Indian grid correct which have been verified during previous verifications and listed in table below.
- **SDG 13.0 i.e. (Tonnes of greenhouse gas emissions avoided or removed)** Due to installation of this project activity PP has prevented the release of 3,470,882 tCO_{2e} into the atmosphere over the project lifetime. Thus, proving that the project generates eco-friendly, GHG free power which contributes to sustainable development of the region

S. No.	Energy supplied by the project activity to grid during its lifetime (MWh)	GHG emissions avoided by the project activity during its lifetime (tCO ₂ e)	Monitoring Period dates ¹ (Inclusive of both dates)
1	733,449	687,095	1 st Monitoring Period <u>19-September-2017 to 30-June-2019</u>
2	526,908.90	493,604	2 nd Monitoring Period <u>01-July-2019 to 29-February-2020</u>
3	783,055	733,563	3 rd Monitoring Period <u>01-March-2020 to 31-December-2020</u>
4	581,576.91	544,818	4 th Monitoring Period <u>01-January-2021 to 31-July-2021</u>
5	346,899.42	324,973	5 th Monitoring Period <u>01-August-2021 to 31-December-2021</u>
6	733,167	686,829	Current Monitoring Period 01-January-2022 to 30-September-2022
Total	3,993,255	3,740,882	

In view of the information¹ as verified above the assessment team is able to conclude that the project has been implemented as described in the project description.

4.2 Safeguards

4.2.1 No Net Harm

Being a solar power project, it does not involve any significant impacts due to implementation of project activity on air, water, soil quality and ambience. The project activity does not even require any major construction activity as it only requires the installation of the solar PV panels,

¹ <https://registry.verra.org/app/projectDetail/VCS/1931>

interfacing the generators with the State Electricity Board by setting up HT transmission lines and installation of other accessories, thus no major impacts are foreseen at this stage.

The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013². This report clearly mentioned that solar PV project activity operations do not result in direct air pollution, noise pollution.

The project activity has no significant impact on the environment. Solar power projects are not included in the Schedule I of the EIA notification S.O.1533 (E) dated 14th September 2006³ and thus an EIA is not required. Ministry of Environment & forests vide their OM J-11013/41/2006 - IA II (I) dated 13th May 2011, has re-affirmed this and exempted solar power plants from EIA and Environmental Consent requirement.

Thus, there are no any significant impacts due to implementation of project activity on air, water, soil quality and ambience are envisaged due to the project activity.

4.2.2 Local Stakeholder Consultation

The Project is already registered with VCS and registered VCS Joint PD&MR/3/; sections 2.2 describes the Local Stakeholder Consultation Process as in-line with VCS requirement. The Local Stakeholder Meetings were organized for local stakeholder consultation and informed local stakeholder regarding the meeting.

The followings were the local stakeholders for the project activity:

- Local community
- Local village administration
- Technology suppliers
- Local vendors

All the stakeholders have been invited through public notice to attend the stakeholders meeting. The details of the Stakeholder Meetings are as follows:

S.NO.	SPVs Name	Invitation Notice Dates	LSHM ⁴ Meeting Dates
1	Azure Power Jupiter Pvt Ltd	06-March-2017	20-March-2017

²<http://164.100.94.214/sites/default/files/uploads/report-on-developmental-impacts-of-RE.pdf>

³ <http://www.environmentwb.gov.in/pdf/EIA%20Notification,%202006.pdf>

⁴ Local Stakeholder meeting

2	Azure Power Thirty-Seven Pvt Ltd	31-December-2016	15-January-2017
3	Azure Power Venus Pvt Ltd	06-March -2017	21-March-2017
4	Azure Power Thirty-Six Pvt Ltd	15-January-2016	27-January-2016
5	Azure Power Thirty-Three Pvt Ltd	11-May-2017	21-May-2017

During onsite and remote site visit it was observed that the ongoing process of interacting with local stakeholders is established. Project Proponent has kept a grievance register/24/ As a part of continual improvement process, feedback from the associated stakeholders is vital, therefore a dedicated Visitor register cum grievance register has been placed at the project site which is accessible to stakeholders to provide their feedback on the project. It is appropriate publicly accessible location at which local stakeholders can provide their feedback on the project. This location is also conducive to continuous and regular checks for stakeholder comments. For the global stakeholders, the suggestion and the grievance can be submitted to <http://www.azurepower.com/contact-us>

The verification team has interacted with local stakeholders during on-site assessment and details for the same are summarized in section 2.3 of this report. There was no negative comment or feedback from local stakeholders recorded by the verification team for the current verification period.

4.3 AFOLU-Specific Safeguards

As the project comes under the category of NON-AFOLU projects therefore this section not Applicable

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS Joint PD&MR /3/ and the monitoring report/1/. The monitoring plan laid in the registered VCS Joint PD&MR/3/ is being followed at the site/23/. The assessment team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the MR/1/. The emission reductions are purely based on the net electricity generated and exported from the machines. PP has provided all the sufficient data for current monitoring period. The values of the parameter net electricity generation supplied to the grid by

each phase used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/2/ provided by PP.

The verification of each monitoring parameter has been discussed later in section 4.5.

The project activity is expected to reduce emissions by 637,727 tCO₂e for the current monitoring period, whereas the actual emission reductions achieved were 686,829 tCO₂e which is 7.70% higher than the estimated value due to high PLF achieved during current monitoring period. This has been achieved because current monitoring duration mainly comprised of peak seasons of solar radiation which is not within the control of the project participant which led to higher generation of electricity. However, the higher PLF achieved is within the sensitivity range of +-10%. Therefore, the higher emission reduction of 7.70% is acceptable.

In section 4.5 of this report and section 5.4 of MR /1/ calculations has been stated which can be verified from the ER sheet/2/ which has been cross verified by the assessment team from JMRs & REA Statements issued to PP by State Utility/10/& Invoices issued by PP to NTPC limited and Solar Energy Corporation of India /12/ submitted to VVB by PP. Hence VKU verified that the calculation method and formulae used in calculating baseline emissions is in compliance with the methodology used i.e., ACM0002 Version 19 /7/. There are no project emissions and leakage emissions considered for this project activity which is in line with the methodology used /7/.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

During the verification, 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 verification. 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 only monitoring parameter applicable in the project activity is “Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid during the monitoring period” **EG_{facility, y} (MWh)**.

The below table describes how the parameter **EG_{facility, y} (MWh)** is to be measured according to the monitoring plan and that the calibration requirements are met: -

Parameter	Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid during the monitoring period, EG_{facility, y} (MWh)
Means of verification	

	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	Continuous monitoring, and at least monthly recording for net electricity generation supplied by the project plant/unit to the grid in year y in MWh. Net electricity generated and supplied by the project (Solar) plant/unit to the grid = Electricity Export to the grid - Electricity Import from the grid.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered VCS Joint PD&MR /3/ and monitoring methodology/7/. This was verified by assessment team during desk review and by assessment team during onsite and remote site visit and interviews with site personnel /24/
	Monitoring equipment	Monitoring equipment- Energy Meter (Main, Check) Accuracy Class of meters: 0.2s
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	The accuracy of the monitoring equipment is 0.2s, which is as per the registered VCS Joint PD&MR /3/ which is as per the norm /16/.
	Is the accuracy valid for the entire measuring range or do	Yes. The accuracy of monitoring equipment's is valid for the entire range which is as per

	different accuracy levels apply to different measuring ranges?	registered VCS Joint PD&MR/3/.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years as per the registered VCS Joint PD&MR monitoring plan /3/.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	Yes. The calibration frequency is once in 5 years as outlined in the registered VCS Joint PD&MR /3/ which is in accordance with the national standards/17/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Calibration of the measuring equipment's is carried out by the state utilities.
	Is(are) calibration(s) valid for the whole reporting period?	Calibration of energy meters is valid for the entire current monitoring period as verified from MR/1/ and calibration certificates /12/ submitted.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes. The calibration is carried out appropriately which is with is the range as verified from the calibration certificates submitted by state utility/12/.
	How were the values in the monitoring report verified?	Cumulative value of EG facility, y for entire monitoring period is reported in the monitoring report/1/, and monthly values in the ER sheet/2/. The monthly values were verified from the JMRs/REA statements issued by state utility /11/ and cross checked with Invoices /13/ issued to NTPC Limited and

		Solar Energy Corporation of India and found to be consistent. Value of this parameter for the current monitoring period was verified as 733,167 MWh.
	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of $EG_{facility, y}$ were further cross checked with the monthly invoices /13/ raised by the PP to NTPC Limited and Solar Energy Corporation of India and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	On site and remote personnel interviews/24/ with the project stakeholder of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL#01, CL#02, CAR#01, CAR#03 and CAR#05 were raised and resolved	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The emission reduction calculation for the project activity is estimated based on the electricity supplied by the SPVs. Since 100% data was verified, the team can ascertain that the values taken for emission reduction calculation are free from material errors.	

Parameters fixed ex ante:

S. No.	Parameter	Unit	Description	Value
1	EF _{BM, grid, y}	tCO ₂ /MWh	Build Margin CO ₂ Emission Factor in year y	0.9610 tCO ₂ /MWh is consistent with the registered VCS Joint PD& MR/3/.
2	EF _{OM, grid, y}	tCO ₂ /MWh	Operating Margin CO ₂ Emission Factor in year y	0.8644 tCO ₂ /MWh is consistent with the registered VCS Joint PD& MR/3/.
3	EF _{CM, grid, y}	tCO ₂ /MWh	Combined Margin CO ₂ Emission Factor in year y	0.9368 tCO ₂ /MWh is consistent with the registered VCS Joint PD& MR/3/.

Calibration of meters:

During the verification assessment of the project activity, accuracy of the installed meter has been checked and found appropriate. The installation and working conditions of the meters were checked during the site inspection and were found to be satisfactory.

Details of the Energy Meters details used for the respective SPV are tabulated below:

Name of the SPVs	Site	Capacity (MW)	Main Meter Details	Check Meter Details	Calibration Date ⁵	Due date
Azure Power Jupiter Pvt Ltd	Hardoi	20	SL. No.: UP-0202-A Make: L&T Accuracy class: 0.2s	SL. No.: UP-0203-A Make: L&T Accuracy class: 0.2s	18-September-2019	17-September-2024
	Hamirpur	10	SL. No.: 0015197361 Make: L&T Accuracy class: 0.2s	SL. No.: UP-0008-A Make: L&T Accuracy class: 0.2s	30-April-2019	29-April-2024

Azure Power Thirty Seven Pvt Ltd	Rachu, Marchal and Veljal	100	SL. No.: APZ00498 Make: Secure Accuracy class: 0.2s	SL. No.: APZ00499 Make: Secure Accuracy class: 0.2s	27-July-2019	26-July-2024
Azure Power Venus Pvt Ltd	Dakore	40	Aata Substation Circuit-I Main Meter SL. No.: UP3383A Make: Secure Accuracy class: 0.2 s Aata Substation Circuit-II Main Meter: SL. No.: UP3381A Make: Secure Accuracy class:0.2s	Aata Substation Circuit-I Check Meter: SL. No.: UP3384A Make: Secure Accuracy class: 0.2s Aata Substation Circuit-II Check Meter: SL. No: UP3382A Make: Secure Accuracy class:0.2s	25-October-2017	24-October-2022
Azure Power Thirty-Six Pvt Ltd	Anantpura m	50	SL. No.: APZ00507 Make: Secure Accuracy class: 0.2s	SL. No.: APZ00508 Make: Secure Accuracy class: 0.2s	28-April-2019	27-April-2024
Azure Power Thirty Three Pvt Ltd	Dhari	35	SL. No.: GJ-3977-A Make: EDM I Accuracy class: 0.2s	SL. No.: GJ-3979-A Make: EDM I Accuracy class: 0.2s	01-November-2018	31-October-2023
	Semaliya	30	SL. No.: GJ-4049-A Make: EDM I Accuracy class: 0.2s	SL. No.: GJ-4050-A Make: EDM I Accuracy class: 0.2s	22-February-2019	21-February-2024
	Vadol	40	<u>Line 1</u> SL. No. : GJ-3981-A Make: EDM I Accuracy class: 0.2s <u>Line 2</u> SL. No. : GJ-3983-A Make: EDM I	<u>Line 1</u> SL. No. : GJ-3980-A Make: EDM I Accuracy class: 0.2s <u>Line 2</u> SL. No. : GJ-3982-A Make: EDM I	01-November-2018	31-October-2023

	Netramali	40	SL. No.: GJ-4096-A Make: EDM Accuracy class: 0.2s	SL. No.: GJ-4095-A Make: EDM Accuracy class: 0.2s	07-March-2019	06-March-2024
	Sanes	50	SL. No.: GJ-4146-A Make: SECURE Accuracy class: 0.2s	SL. No.: GJ-4627-A Make: SECURE Accuracy class: 0.2s	01-October-2020	30-September-2025
	Muloj	40	SL. No.: GJ-4093-A Make: EDM Accuracy class: 0.2s	SL. No.: GJ-4094-A Make: EDM Accuracy class: 0.2s	22-February-2019	21-February-2024
	Vartol	25	SL. No.: GJ-4047-A Make: EDM Accuracy class: 0.2s	SL. No.: GJ-4048-A Make: EDM Accuracy class: 0.2s	22-February-2019	21-February-2024

Assessment on Calibration of meters:

As the calibration frequency of the meters is once in five years as sated in MR/1/ and registered VCS Joint PD&MR/3/, the calibration certificates/12/ are valid for the entire current monitoring period and there is no delay in the calibration found. From the verification of above table, verification team also confirms that the energy meter calibrations are valid for the complete monitoring period i.e., from 01-January-2022 to 30-September-2022 (inclusive of both start and end date).

The verification team has checked all the meters and confirmed that the meters were working satisfactorily. Also, the calibration of meters is completely under purview of state utility and PP has no control over the same as confirmed through interviews of site personnel /24/.

Hence it can be concluded that the approach followed by the PP is conservative and in line with the guidelines provided under paragraph 3.4.2 of Validation and verification manual version 4.2/20/. The registered VCS Joint PD&MR/3/ & MR /1/ onsite and remote site audit observations confirm that the metering equipment are sealed and maintained by the state utility.

The assessment team has verified the monthly JMRs and REA Statements /11/ issued by the state utilities and regional power committees and confirmed that only the data recorded through main meters is used to calculate net electricity supplied to the grid consequently for ER calculations. This data is also cross checked with the help of Invoices issued by PP/13/. The appropriate calculation and formulas are used by PP in the ER sheet to calculate the same which is verified by the assessment team and found to be consistent with the registered monitoring plan/3/ and as per the methodology/7/.

In view of the above discussion the assessment team is able to confirm that evidence used to determine the GHG reductions and removals are sufficient and appropriate with respect to quality and quantity.

GHG Calculations:

The emission reduction as per the applied methodology equals the baseline emissions (project emissions and leakage emissions for this project activity are considered zero).

The formula provided for the calculation of baseline emissions is:

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

Where:

BE_y = Baseline emissions in year y (tCO₂/yr)

$EG_{\text{facility, y}}$ = Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid during the monitoring period (MWh)

$EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using version 7.0 of the “Tool to calculate the emission factor for an electricity system” (tCO₂/MWh) /8/.

The baseline emissions for the project activity for the current monitoring period are as follows.

Baseline Emission factor = 0.9368 tCO₂/MWh

Parameter	Unit	Value
$EG_{facility,y}$	MWh	733,167
$EF_{grid,CM,y}$	tCO ₂ e	0.9368
BE _y	=	733,167 MWh x 0.9368
	=	686,829 tCO₂e (Round down value)

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

The actual emission reduction achieved is 7.70% higher than the estimated figure to match the monitoring period as per registered VCS Joint PD&MR/3/, which is due to the high PLF achieved by the project activity during the current monitoring period as our current monitoring period from 01-January-2022 to 30-September-2022 (inclusive of both start and end date) falls under peak season peak seasons of solar radiation thus leading to higher generation of electricity which is not within the control of the project participant which led to higher generation of electricity.

The PLF for all five sites is listed below:

SPV Name	PLF as per PDD	PLF for current monitoring period	Percentage Change in PLF
Azure Power Jupiter Private Limited	21.50%	18.72%	-12.94%
Azure Power Thirty Seven Pvt. Ltd.	21.55%	21.94%	1.82%
Azure Power Venus Pvt. Ltd.	19.68%	20.45%	3.91%
Azure Power Thirty Six Pvt. Ltd	21.50%	20.00%	-6.98%
Azure Power Thirty Three Private Limited	22.03%	25.45%	15.51%

After Assessment, the team confirms that the project results in 7.70% higher PLF achievement for current monitoring period which is within the sensitivity range of +/-10%. Therefore, the higher emission reduction of 7.70% is acceptable.

This comparison is submitted in the ER sheet/2/ which has been cross verified by the assessment team from JMRs & REA Statements issued to PP by State Utilities and Regional power committees /11/& Invoices issued by PP to NTPC limited and Solar Energy Corporation of India /13/ submitted to VVB by PP along with a justification confirming that this event of higher power generation was an unforeseen situation and also not under the direct control of PP.

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

VKU is of the opinion that this method of calculation of emission reductions is accurate and results in conservative estimation of emission reduction and is in line with the applicable VCS standard requirements/5/ and it is in compliance with the methodology used i.e., ACM0002 Version 19 /7/.

4.6 Non-Permanence Risk Analysis

There is no non-permanence risk that could lead to material errors, omissions or misstatements rating determined by the project proponent for the project activity and no risk was identified in the audit/verification plan hence not applicable.

5 VERIFICATION CONCLUSION

VKU Certification Pvt. Ltd. has performed the sixth verification of the project activity “Energising India using Solar Energy Projects” in India (VCS 1931) under first crediting period from 19-September-2017 to 18-September-2027 (Including both dates), for the period 01-January-2022 to 30-September-2022 (Inclusive of both start and end dates), with regard to the relevant requirements for VCS Standard version 4.3 /5/

The project proponents of the project “Energising India using Solar Energy Projects” is responsible for:

- The preparation of greenhouses gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered VCS Joint PD&MR Version 03 dated 17- September-2019/3/.
- The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project.

It is the responsibility of VKU to express an independent verification opinion about the project’s conformity with the requirements of VCS Standard version 4.3/5/ and GHG program applied, on the reported greenhouse gas emission reductions from the project.

Based on documented evidence and by an on-site assessment, VKU can confirm that:

- The project has been implemented and operated as per the registered VCS Joint PD&MR/3/;
- The monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard Version 4.3/5/.
- The monitoring plan in the registered VCS Joint PD&MR/3/ is as per the applied baseline and monitoring methodology/7/ and tool/8/.

VKU Certification; verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls is in place to mitigate these. VKU Certification planned and performed the verification by obtaining evidence and other information and explanations that VKU Certification considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

It is VKU’s opinion that the GHG emission reduction stated in the monitoring report version 3.0 dated 16-February-2023/1/ for the “Energising India using Solar Energy Projects” in India for the period 01-January-2022 to 30-September-2022 (Inclusive of both start and end dates) are fairly stated. The GHG emission reductions are calculated on the basis of approved methodology

ACM0002 version 19.0 /7/ and the monitoring plan included in the registered VCS Joint PD&MR, Version 03 dated 17-September-2019/3/

Hence VKU is able to certify that the emission reduction from the project during the monitoring period from 01-January-2022 to 30-September-2022 (Inclusive of both start and end dates) amounts to 686,829 tCO₂e.

Verified GHG emission reductions and removals in the above verification period: from 01-January-2022 to 30-September-2022 (Inclusive of both start and end dates).

The following table shows the Net Emission Reduction from 01-January-2022 to 30-September-2022 (Inclusive of both start and end dates)

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 2022 (01-January-2022 to 30-September-2022)	686,829	0	0	686,829
Total	686,829	0	0	686,829

APPENDIX A: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH ₄	Methane
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MoV	Means of Verification
MR	Monitoring Report
NGO	Non-governmental Organization
PD	Project Description
PE	Project Emission
PP(s)	Project Participant(s)
Ref.	Document Reference
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VCU	Verified Carbon Unit
VER	Verified Emission Reduction
VKU	VKU Certification Ltd.
VCS	Verified Carbon Standard
VVS	Validation and Verification Standard
VVB	Validation and verification body

APPENDIX B: AUDIT FINDINGS

Type	Date	07-November-2022
CL#1	Reference	Section of Ver protocol: Section 1 & Section 3, Section 4
Description of the Non-Conformance		
1. PP is requested to substantiate by official declaration in line with the information given in section 1.9 and 1.10. 2. PP is requested to submit the billing meters and the connected substation details. Section in section 4.3 to verify the location. 3. PP is requested to clarify how is the project contribution in GHG emissions removal and renewable electricity supply since commissioning and during current monitoring period same? PP is also requested to provide the reference of the values mentioned in section 1.11 of MR.		
1 st Response from PP	Date	14-December-2022
1. PP is submitting a declaration for NO DOUBLE ACCOUNTING for the response to the information given in section 1.9 and 1.10. 2. PP has revised the section 4.3 of monitoring report with details of billing meters along with the location of their connected substation. 3. PP has revised the section 1.11 (Table: -1) of monitoring report and confirms the project contribution during current monitoring period and during life time is not same. The same has been revised with values referred from emission reduction calculation sheet.		
1 st Assessment by Audit Team	Status	Open
Date	16-January-2023	
1. Assessment team confirms that PP has not submitted the declaration for NO DOUBLE ACCOUNTING in the supporting document, kindly provide the same and also requested to provide some explanation along with justification if the project is registered or seeking registration in I-REC or REC mechanisms in section 1.10 of revised MR.(OPEN) 2. PP has submitted the billing meters and connected substation meters and inserted a table as well for all the meters used in the project activity. Hence accepted. 3. PP has updated and revised the section 1.11 in MR however, PP is requested to mention the separate monitoring period ERs and electricity supplied separately for better clarification. (OPEN) 4. PP is requested to clarify how the net impact on SDG indicator against 13.0 SDG target is increasing in section 1.11 Hence CL#01 is Open		
2 nd Response from PP	Date	24-January-2023
1. We are submitting NO DOUBLE ACCOUNTING certificate along with the supporting documents and also an explanation along with justification that the project is not registered or seeking registration in I-REC or REC mechanisms, to meet the requirements set out in section 3.23.6 of VCS standard version 4.3, has been mentioned in section 1.10 of the MR.		

2. In reference to VCS MR template version 4.1, we have added details related to the current project contribution and contribution over the project lifetime is provided separately in respective columns of Table 1 of section 1.11 of the monitoring report. 3. In reference to VCS MR template version 4.1, we want to clarify that the net impact on SDG indicator against SDG 13, it shows the cumulative contribution of GHG emission reduction from commissioning of the Project activity till the end date of the current monitoring period and therefore it will always have net increasing impact.				
2nd Assessment by Audit Team	Status	Closed	Date	13-February-2023
1. Assessment team confirms that PP has submitted the NO DOUBLE ACCOUNTING certificate along with the supporting documents and also an explanation along with justification that the project is not registered or seeking registration in I-REC or REC mechanisms in section 1.9 and 1.10 of revised MR version 02. Hence accepted. 2. Assessment team confirms that PP have added details related to the current project contribution and contribution over the project lifetime is provided separately in respective columns of Table 1 of section 1.11 of revised MR version 02. Hence accepted. 3. The cumulative contribution of GHG emission reduction from commissioning of the Project activity till the end date of the current monitoring period will increase continuously as far as the project is working thus leading to increase in contribution of the SDG indicator against SDG 13. Hence; CL#01 is Closed				

Type	Date	07-November-2022
CL#2	Reference	Section of Ver protocol: Section 1 & Section 3
Description of the Non-Conformance		
1. PP is requested to provide the breakdown details in appendix section applicable for current monitoring period to verify the same in section 3.1 of MR. 2. PP is requested to clarify the commissioning date of the Azure Power Thirty-Six Pvt Ltd 50 MW plant mentioned in MR v03 is not consistent with registered VCS PD.		
1stResponse from PP	Date	14-December-2022
1. PP has submitted the Breakdown Details for the respective sites in the Appendix 3 section of the monitoring report for the current monitoring period for verification. 2. PP wants to clarify that the commissioning date for Azure Power Thirty-Six Pvt Ltd was declared earlier by Solar Energy Corporation of India (SECI) on 30-April-2018 but a physical inspection, commission committee declare final commissioning on 05-May-2018. Both dates are mentioned over the commissioning certificate. The deviation doesn't have any impact on additionality, methodology applicability, monitoring methodology and calculation of emission reductions. It has already been covered during the fifth monitoring period of the project activity. The same can also be reflected in the section 3.2 of the monitoring report.		

1 st Assessment by Audit Team	Status	Open	Date	16-January-2023
1. PP has submitted the breakdown details in Appendix 3 of the revised monitoring report however, PP is requested to mention the total sum of breakdown hours applicable for current monitoring period specifying the reason for the same and its impact on operation of the project activity. (OPEN) Hence CL#02 is Open				
2 nd Response from PP			Date	24-January-2023
In reference to VCS MR template version 4.1, we have mentioned the total breakdown hours in the current monitoring period is 159 hours which is part of planned/scheduled maintenance activity for the O&M. Though it does not have any significant impact on GHG quantifications since it has been already envisaged while estimating the GHG emission reductions from operation of the project activity at the time of validation.				
2 nd Assessment by Audit Team	Status	Closed	Date	13-February-2023
Assessment team confirms that PP has updated the appendix-3 in the revised MR version 02 and also updated the section 3.1 of MR version 02 which is found to be acceptable with the DGR reports submitted by PP. Hence accepted. Hence; CL#02 is Closed				

Type	Date	07-November-2022
CL#3	Reference	Section of Ver protocol: Section 1 & Section 3
Description of the Non-Conformance		
1. PP is requested to provide documents towards the calibration frequency of the meters installed within the switch yard at Azure's plant end and the meters placed at the sub-station end. 2. PP is requested to provide the process involved in monitoring of the measurement parameter viz., net electricity supplied to grid. Also explain how the uncertainty involved towards the measurement of net electricity supplied to grid is negligible or within acceptable limits 3. PP is requested to refer all guidelines that are mandated to be followed as part of the methodology and the requirements under VCS in the MR in the relevant sections. 4. PP is requested to explain the measurement procedure that exist in the plant, in the event of meter failures in section 4.3 of MR 5. PP has stated that during this monitoring period the ER saw an increase in PLF of 12.32% from the estimated PLF as per the registered PD. 5.1. PP needs to clarify whether the comparison of PLF is made between equivalent periods between the registered PD and MR. 5.2. Also, PP is requested to clarify whether this increase in PLF affects the IRR submitted at the time of validation, as it has bearing on the additionality of the project.		

5.3 The column J under ER summary tab of the ER sheet, shows an average PLF of 22.09% against 24.31% mentioned in cell D16 in the same sheet. Please clarify					
1 st Response from PP			Date	14-December-2022	
1. PP is submitting the calibration certificates of the meters conforming to calibration frequency. 2. PP wants to clarify that since all sites included in the project activity used to keep a record of net electricity supplied to grid either from JMR of meters (meter reading shall be taken on monthly basis by authorized officer of SEB in the presence of PP or representative of PP) or REA statement (on public portal instead of export and import values), therefore the net values are directly obtained for the emission reduction calculation. Based on the Meter Reading Statement, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity. Since the document is provided by government nodal agency, therefore uncertainty involved towards the measurement of net electricity supplied to grid is negligible or within acceptable limits 3. PP wants to clarify that all the section in the MR has been revised and made consistent as per the guidelines, templates & Methodologies. 4. PP wants to clarify in the event of failure of main meter, the check meter will be used in monitoring the electricity data. PP is experienced in implementing and maintaining the monitoring system and is managing O&M of numerous other Solar farm projects. 5. PP wants to clarify that it has been revised with correct values and thus increase in PLF becomes 7.70% 5.1 PP wants to clarify that comparison of PLF has been made between equivalent periods between the registered PD and MR. 5.2 PP wants to clarify that that increase in PLF (7.70%) which is less than 10% in sensitivity done in IRR submitted at the time of validation therefore the increase in PLF doesn't impact the additionality of the project. 5.3 The average PLF from Column J will not reflect the correct generation as the capacity of each project activity in the bundle is not equal or same and therefore weighted average of PLF is reflected in cell D16 representing the actual generation.					
1 st Assessment Team	by Audit	Status	Open	Date	16-January-2023
1. Assessment team confirms that PP has submitted the calibration certificates of the meters of all sites conforming to calibration frequency. Hence accepted. 2. Assessment team confirms that PP is following proper monitoring of the measurement parameter viz., net electricity supplied to grid and there is negligible to low uncertainty involved towards the measurement of net electricity supplied to grid. However, in section 4.2 table only invoices and JMRS are discussed which is not in line with the explanation provided by PP in the response above, hence PP is kindly requested to update the monitoring process and include the REA statement in all the sections applicable. As a result, deviation becomes a logical extension of the change in monitoring process/plan. (OPEN) 3. Assessment team confirms that PP has updated all the section in the MR has been revised and made consistent as per the guidelines, templates & Methodologies. Hence accepted. 4. PP has not included the measurement procedure that exist in the plant, in the event of meter failures in section 4.3 of MR. (OPEN) 5. Assessment team confirms that PP has updated the ER sheet and increase in ER for current monitoring period is 7.70% which is within the sensitivity analysis benchmark of +-10%. Additionally, PP has provided a clear comparison between PLF and explained the reason for the same in section 5.4 of the revised MR version 02. However, the IRR sheet is not publicly available, so PP is requested to substantiate the same by providing the assessment team with the IRR sheet, for the assessment to cross verify the same. (OPEN)					

CL#03 is Open				
2 nd Response from PP			Date	27-January-2023
2. In reference to para 2 of section 3.20.2 of the VCS standard version 4.3, we want to clarify that all the required monitoring sections of the MR is updated with REA statement along with Invoices and JMR for proper explanation to the above statements that do not have an impact on the applicability of the methodology, additionality, or the appropriateness of the baseline scenario. 4. In reference to meet the requirement in section 4.3 of the VCS MR template version 4.1, we have elaborated emergency preparedness in case of meters failure. Each plant is equipped with a Local Control System wherein the generation details are recorded in case of failure of primary monitoring. Monitoring system generation data can also be available from Local Control System reading which is being archived on a daily, monthly and yearly basis. For exceptional circumstances related to the failure of the metering system, immediate replacement would be carried out by the state level utility. Under such exceptional condition the secondary data monitored would be used up for energy accounting. The defective main energy meter will be replaced by the electricity utility accredited representative in presence of the operation and maintenance team personnel by a spare energy meter. Under condition of malfunctioning of both meters even if the solar panels continue to generate electricity the project participant cannot claim emission reduction/removal from the project activity for such duration as a conservative approach. 5. We are submitting the IRR sheet to the assessment team to cross verify the results.				
2 nd Assessment by Audit Team	Status	Closed	Date	13-February-2023
2. Assessment team confirms that PP has updated the section 4.3 of the revised MR version 02 as per the current practice, where the deviation is not applicable as per the section 3.20.2 of the VCS standard version 4.3. Hence accepted. 4. PP has updated the section 4.3 of the VCS MR version 02 for the emergency preparedness by taking a deviation. Hence accepted. 5. Assessment team confirms that PP has submitted the IRR sheet and it was confirmed that the increase in ER for current monitoring period is 7.70% which is within the sensitivity analysis benchmark of +-10%. Additionally, PP has provided a clear comparison between PLF and explained the reason for the same in section 5.4 of the revised MR version 02. Hence accepted. Hence CL#03 is Closed				

Type	Date	07-November-2022
CAR#1	Reference	Section of Ver protocol: Section 1 & Section 2
Description of the Non-Conformance		
1. PP is requested to update the font size and font style throughout the MR as per the guidance and requirement of the MR template version 4.1		

2. PP is requested to update the table format in all tables throughout MR and make it consistent with the VCS MR template version 4.1. 3. PP is requested to insert the page numbers according to the VCS MR template version 4.1. 4. PP is requested to complete the statement. 5. PP is requested to clarify whether the coordinates of "Gani & Sakunala " Site mentioned in the MR is consistent with the PD&MR. 6. In the ER sheet, the location of the project sites against the respective company's name are not mentioned. Please clarify 6.1. In Azure Power Thirty-Seven Pvt Ltd located in Telangana, in the July 2022/January 2022 data, it is mentioned that “apportioning” of energy meter readings are done, due to difference in MP end date and date of taking JMR by Telangana state utility. However, the method employed to perform the apportioning has not been given in the ER sheet. Please clarify 6.2. In Azure Power Venus Pvt Ltd, tab of the ER sheet, Bhadrakiri circuit 2 shows no reading for the entire MP except for import readings for January and February. Please clarify					
1 st Response from PP			Date	14-December-2022	
1. PP wants to clarify that the font size and font style is updated throughout in the current MR as per the MR template version 4.1. 2. PP wants to clarify that the table formats in the current MR is updated and made consistent as per the MR template version 4.1. 3. PP wants to clarify that all the pages in the current MR are numbered as per the MR template version 4.1. 4. PP has completed the statement as per the registered PD. 5. PP wants to clarify that the coordinates of “Gani & Sakunala” site is corrected in the current MR and made consistent with the registered PD & MR. 6. Location of the project sites against each SPV is mentioned separately in other tabs of worksheet from which the reference is used in the ER summary for final emission reduction calculation in the current monitoring period. 5.1 PP wants to clarify that for difference in end date of current monitoring period and date of taking JMR by Telangana state utility is catered through the daily generation records (DGR) rather apportioning. The method has been mentioned in the revised ER sheet. 5.2 PP wants to clarify that in Azure Power Venus Pvt Ltd., there are two transmission lines, i.e., Bhadrakiri Circuit 1 and Bhadrakiri Circuit 2. SPV is capable of exporting or importing power to/from the grid either through Circuit 1 or Circuit 2 or from both. For months like January-March we have no data of Export from Circuit 2 because all the transmission of power to grid were done through Circuit 1.					
1 st Assessment by Audit Team		Status	Open	Date	16-January-2023
1. Assessment team confirms that PP has updated the font style but still the font style and size is not consistent throughout the revised MR version 02 dated 17-December-2022. Hence, PP is requested to update the font style as per the VCS MR template version 4.1. (OPEN) 2. Assessment team confirms that PP has updated the table format throughout the revised MR version 02 dated 17-December-2022 and found consistent with the MR template version 4.1. Hence accepted. 3. Assessment team confirms that PP has updated the page numbers throughout the revised MR version 02 dated 17-December-2022 and found consistent with the MR template version 4.1. Hence accepted 4. PP is requested to substantiate assessment team by providing PPA to confirm the statement mentioned by PP. (OPEN)					
2 nd Response from PP			Date	27-January-2023	

1. We want to clarify that all the section of the MR has been updated with the font size and font style as per VCS MR template version 4.1. 4. We want to clarify that the said statement regarding electricity supplied to grid can be substantiate from JMR/REA statements which is more appropriate and the supporting documents are already submitted for the same.				
2nd Assessment by Audit Team	Status	Closed	Date	13-February-2023
1. Assessment team confirms that PP has updated all the sections in entire MR with the font size and font style as per VCS MR template version 4.1. Hence accepted. 4. Assessment team confirms that PP has updated the said statement regarding electricity supplied to grid can be substantiate from JMR/REA statements in sections 1 of. Hence accepted. Hence CAR#01 is Closed				

Type	Date	07-November-2022
CAR#02	Reference	Section of Ver protocol: Section 3, Section 1, Section 4 & Section 5
Description of the Non-Conformance		
1. PP is requested to mention the current status of the project activity as per the guidance, and explain the process involved in the measurement of energy generation in section 3.1, according to section 3.1 guideline of latest VCS MR template version 4.1 viz., modules, CBs used, number of inverters, step up transformers, transmission losses, evacuation power quality 2. PP is requested to update the technical specification of Azure Power Thirty Six Pvt. Ltd since it is not consistent with the PD/MR Version 03 in Section 3.1of MR. 3. The number of solar panels against the respective solar panel rating mentioned in the MR v03 is not consistent with the field observations. The same discrepancy was observed with respect to inverter rating and its respective numbers. PP is requested to clarify these discrepancies and is also requested to present the data in a tabular form (or equivalent) in the MR for simplicity and ease of comprehension. 4. PP is requested to clarify the statement.		
1stResponse from PP	Date	14-December-2022
1. PP has updated section 3.1 of monitoring report as per the latest VCS MR template v 4.1. PP is also submitting an excel sheet with technical specification for all the SPV's to verify the current status of the project activity and added a copy of it is inserted in the Appendix 2 section of the monitoring report. 2. PP wants to clarify that the technical details of Azure Power Thirty-Six Pvt Ltd is corrected in section 3.1 of MR and made consistent with the registered VCS PD&MR. 3. PP wants to clarify that the discrepancies are due to installation of different make, capacity and type of panels & inverters and during the site visit, plant personnel has stated tentative numbers. The MR has been revised & data is presented in tabular form under Appendix 2. 4. PP wants to clarify that the meter readings are taken by the main meter as mentioned in Appendix 1 section		

1 st Assessment by Audit Team	Status	Open	Date	16-January-2023
1. Assessment team confirms that PP has updated the section 3.1 of the MR and provided the technical specifications in Appendix 2 of the revised MR version 02. Hence accepted. 2. PP has updated the technical specification of Azure Power Thirty-Six Pvt. Ltd in Section 3.1of revised MR version 02. Hence accepted. 3. Assessment team confirms that PP has updated the number of solar modules against the respective solar panel rating mentioned in section 3.1 of MR but it was not done for all sites and it is also not found to be consistent with the Appendix-2 provided in MR. They are still not consistent with the capacity and as per the observations made during the site visit. PP is requested to ensure that consistency is maintained between registered PD and MR in section 3.1. (OPEN) 4. PP is requested to clarify purpose of the apportioning procedure that is referred to section 4.2 Hence CAR#02 is Open				
2 nd Response from PP	Date	27-January-2023		
3. In reference to para 2 of section 3.20.2 of the VCS standard version 4.3, we want to clarify that it was a typo error and now the number of modules used in all the sites are corrected and the same has been provided in Appendix-2 for which deviation-4 is included in the section 3.2 of the monitoring report and since the capacity of the project is not changed, therefore it does not have any impact on the applicability of the methodology, additionality, or the appropriateness of the baseline scenario. 4. We want to clarify that the apportioning is done for Azure Power Thirty-Seven Pvt Ltd. because for that particular site the billing cycle as per JMR is from 26th day months but our monitoring period start date is from 01st day of the next month and the note for the same has been added in ER sheet.				
2 nd Assessment by Audit Team	Status	Open/Closed	Date	13-February-2023
3. Assessment team confirms that PP has updated the number of modules and other details in Appendix-2 and this was confirmed with the provided commissioning certificates. This was also taken as deviation by PP in the revised MR version 02. Hence accepted. 4. PP has clarified the purpose of apportioning followed for billing cycle and monitoring period. Hence accepted. Hence CAR#02 is Closed				

Type	Date	07-November-2022
CAR#03	Reference	Section of Ver protocol: Section 3, Section 1, Section 4 & Section 5
Description of the Non-Conformance		

1. Under section 2.1.2 of the MR v03, the PP has taken deviation for Azure Power Thirty Six Pvt Ltd in the monitoring plan to include Demand Settlement Mechanism (DSM). However, during the field observation and as per the discussions with the respective site personnel it was informed that DSM is followed in all the power plants included in the bundle. PP is requested to clarify why deviation is not applicable to the rest of the sites in Telangana and Gujarat like the Andhra Pradesh site. 2. The PP is requested to elaborate on the monitoring and measurement system adopted in the bundled project activity towards measurement of net energy supplied to grid considering the transmission losses reported is between 0.1% to 4% within the bundle. Also include the SLD for each of the project activity in the bundle. 3. PP is requested to provide monitoring mechanism which is available at site, in the event of meter readings not being measured/noted or unforeseen.					
1 st Response from PP			Date	14-December-2022	
1. PP wants to clarify that the deviation on the same is included under section 2.1.2 of the MR for all power plants in the bundle. 2. PP wants to clarify that in current scenario, net electricity supplied to grid from REA statement in public portal instead of export and import values, therefore the net values are directly obtained for the emission reduction calculation. Since the document is provided by government nodal agency, therefore uncertainty involved towards the measurement (considering the transmission losses reported between 0.1% to 4% which is based on the distance between) within the bundle is negligible or within acceptable limits. Also, SLD is included for each project activity in the bundle. 3. PP wants to clarify that in the event of failure of main meter, the check meter will be used in monitoring the electricity data. PP is experienced in implementing and maintaining the monitoring system and is managing O&M of numerous other Solar farm projects.					
1 st Assessment by Audit Team		Status	Open	Date	16-January-2023
1. During assessment, team found that PP has updated the section 2.1.2 related to Deviation-3 and proper DSM is followed at each site. However, Telangana is not included in this mechanism, please clarify. (OPEN) 2. PP has included the SLD of each project site separately and monitoring process is presented clearly. The monitoring process includes only JMRs and Invoices which are not available at some sites because of different process being followed there, kindly include this as well in the monitoring plan. (OPEN) 3. PP is requested to elaborate the emergency procedure in order to ensure that there is no data uncertainty while estimating the ERs from the project activity due to breakdown of both the meters or situation representing such situation. This explanation would warrant deviation to the project description as per para 3.19.2 of VCS Standard Version 4.3.					
Hence CAR#03 is Open					
2 nd Response from PP			Date	27-January-2023	
1. We want to clarify that DSM is followed at all the sites except Azure Power Thirty Seven Pvt Ltd (Telangana) and the same has also been addressed in Deviation-3 in section 3.2 of the MR. 2. We want to clarify that the term “REA statement” is added in all the required section 3.2 and 4.2 of the monitoring report which justify the monitoring process of the project activity. 3. We have added elaborated note on emergency preparedness in case of meters failure has been added in the section 4.3 of the monitoring report. Since this is part of the emergency procedures and not methodology deviations and therefore meet the requirements of para 3.19.2 of VCS Standard Version 4.3 and therefore no deviation is required.					

If any such case of failures of either meters or any unforeseen circumstances arises, each plant is equipped with a Local Control System wherein the generation details are recorded in case of failure of primary monitoring. Monitoring system generation data can also be available from Local Control System reading which is being archived on a daily, monthly and yearly basis. For exceptional circumstances related to the failure of the metering system, immediate replacement would be carried out by the state level utility. Under such exceptional condition the secondary data monitored would be used up for energy accounting. The defective main energy meter will be replaced by the electricity utility accredited representative in presence of the operation and maintenance team personnel by a spare energy meter. Under condition of malfunctioning of both meters even if the solar panels continue to generate electricity the project participant cannot claim emission reduction/removal from the project activity for such duration.				
2nd Assessment by Audit Team	Status	Closed	Date	13-February-2023
1. Assessment team confirms that since DSM deviation for Telangana is already taken in deviation 1 thus it was not addressed in deviation 4 taken by PP for other sites in current monitoring period. Hence Accepted. 2. Assessment team confirms that PP has included the SLD of each project site separately and monitoring process is presented clearly in revised MR version 02. Hence Accepted. 3. Assessment team confirms that PP has elaborated the emergency procedure in order to ensure that there is no data uncertainty while estimating the ERs from the project activity due to breakdown of both the meters or situation representing such situation. This explanation is added in section 4.3 of revised MR after taking a deviation to the project description as per para 3.19.2 of VCS Standard Version 4.3. Hence Accepted Hence CAR#03 is Closed				

Type	Date	16-January-2023
CAR#04	Reference	Section of Ver protocol: Section 3, Section 4 & Section 5
Description of the Non-Conformance		
1. PP is requested to further elaborate on the potential environmental and social impacts of the project according to VCS Standard V 4.3 section 3.17.2 which requires a project to identify the potential negative impact. Hence PP is requested to include them in section 2.1 of revised MR version 02. 2. Technical specifications are provided in Appendix-2 for all sites including the different sites of "Azure Power Thirty Three Pvt Ltd". However, it is also duplicated in section 3.1 of the MR. PP is requested to clarify. 3. PP is requested to mention the date of the local stakeholder meeting that took place initially as per the VCS MR template version 4.1 in section 2.2 of revised MR version 02. 4. PP is requested to provide the grievance register photographs for Azure Venus site as it is missing in the documents submitted.		

From the desk review of the grievance register photographs submitted, it can be assessed that some sites have grievance register. PP is requested to provide them and elaborate on the means adopted to address the grievances raised during current monitoring period.					
5. Since PP has changed the monitoring structure of the project activity and it is no longer consistent with the registered VCS PD, PP is requested to take a deviation as per para 3.19.2 of VCS Standard Version 4.3 in section 4.3 of MR. 6. PP is requested to mention the reference section /para number of the methodology used for not having any project emission and leakage emission in the project activity in section 5.2 and 5.3 of MR version 02. 7. PP is requested to clarify how the solar panels are cleaned and in the same vein, PP is also requested to clarify if the cleaning process involves any GHG source. 8. PP is requested to mention the dates of the period and not merely year in the table of section 5.4 of MR version 02, as per the guidance document to fill the VCS-MR.					
1 st Response from PP			Date	27-January-2023	
1. In reference to VCS Standard V 4.3 section 3.17.2, we want to clarify that that the same has been updated in the section 2.1 of the MR mentioning that solar power project activity is white category project and has no significant impact on the environment. Solar projects activities are not included in the Schedule I of the EIA notification S.O.1533 (E) dated 14th September 2006 there is no negative impact on the environment. 2. We want to clarify that technical specifications of modules and inverters to meet the requirement of section 3.1 of VCS monitoring report template version 4.1 is mentioned in Appendix-2 of the monitoring report. 3. We want to clarify that the dates of LSHM for all the sites that took place initially is added in the section 2.2 of the monitoring report. 4. We are submitting grievance register for the Azure Venus site along with the supporting documents. Also, no grievance was observed during the current monitoring period. 5. We want to clarify that it was a typo error and now the monitoring structure for the project activity is made in consistent with the registered VCS PDMR so no further deviation is required. 6. We want to clarify that the reference from the methodology has been added in the footnote (pg. No. 32) of the monitoring report which justify the above statement mentioned in section 5.2 and 5.3 of the MR. 7. We want to clarify that though the frequency of panels cleaning is adequate enough and result into insignificant fossil fuel consumption in comparison to GHG emission reduction/removal from the project activity 8. We want to clarify that as per the VCS MR template version 4.1, page No. 14 &15, the Net GHG emission reductions and removals is presented vintage wise separately now.					
1 st Assessment by Audit Team		Status	Closed	Date	13-February-2023
1. Assessment team confirms that PP has updated section 2.1 of MR in reference to VCS Standard V 4.3 section 3.17.2. Hence accepted. 2. Assessment team confirms that PP has now updated the technical details properly and no major repition is found in revised MR version 02. Hence accepted. 3. Assessment team confirms that PP has updated section 2.2 of MR in reference to VCS MR template version 4.1. Hence accepted. 4. Assessment team confirms that PP has submitted the grievance register for all the sites and found to correct. Hence accepted.					

5. Assessment team confirms that PP has updated the monitoring structure for the project activity and no deviation is required by PP for this change as this change does not have any impact on additionality and other requirement as per VCS standard section 3.19.2. Hence accepted.
6. Assessment team confirms that PP has updated the reference of the methodology in the footnote (pg. No. 32) of the monitoring report which justify the above statement mentioned in section 5.2 and 5.3 of the MR. Hence accepted.
7. Assessment team confirms that since the project emissions are negligible hence they are not considered by PP. Hence accepted.
8. Assessment team confirms that PP has updated the section 5.4 of MR as per the VCS MR template version 4.1. Hence accepted.

Hence CAR#04 is Closed.

Type	Date	16-January-2023
CAR#05	Reference	Section of Ver protocol: ER Sheet & Appendix
Description of the Non-Conformance		
1. PP is requested to give a sample explanation on how to refer the value from the JMRs submitted for "Azure Power Thirty-Seven" site. Kindly give reference as all the values of export and import could not be verified from the JMRs submitted for assessment. 2. PP is requested to submit the correct JMRs for the entire monitoring period of "Azure Power Jupiter Pvt. Ltd." as during assessment of documents it was found that the documents submitted for this project site were from "Azure Power Venus Pvt. Ltd.". Kindly submit the correct documents applicable for this site. 3. PP is requested to include the Transformer details for each site as other specifications in the table for better and easy traceability with reference to the Appendix-2. 4. PP is requested to clarify on the inconsistencies in the number of solar modules as it is not consistent with the commissioning certificates submitted to assessment team. For example; a. Azure Power Jupiter Pvt. Ltd.- for site Bibiyapur, Hardoi actual number of modules mentioned in commissioning certificate are 31400 whereas in the sheet they are 31380. Also, for site Hamirpur and Chilua, the commissioning certificates are not available. b. Azure Power Thirty Seven Pvt. Ltd- Actual number mentioned in commissioning certificate are 311,108 whereas in the sheet they are 395,520. c. Commissioning certificates for "Azure Power Venus Pvt. Ltd " & "Azure Power Thirty Six Pvt. Ltd." are incomplete, kindly provide the complete certificates. d. Azure Power Thirty three Pvt. Ltd.- Assessment team could not find all the commissioning certificates and the quantity of modules. e. 5. PP is requested to mention the summation of the total breakdown hours row at the end of table in Appendix-3.		
1 st Response from PP	Date	27-January-2023

1. We want to clarify that in the JMR for the "Azure Power Thirty-Seven" site, the billing cycle is from 26 to 26 of every month. So, Daily Generation data is referred to streamline the first and last 4 days of monitoring period that is subtracted reading from 26/12/2021 to 31/12/2021 and added readings from 26/09/2022 to 30/09/2022 for respective months in all sites.
2. We are submitting the correct JMR/REA statements for Azure Power Jupiter Pvt Ltd for reference of the assessment team.
3. We want to clarify that in the section 3.1 of the MR transformer details of all the sites are mentioned.
4. We want to clarify that it was a typo error and now the numbers are corrected for all the sites.
 - 1) For Azure Power Jupiter Pvt Ltd actual number of modules has been corrected and also the commissioning certificates for all the sites is been submitted with the supporting documents.
 - 2) For Azure Power Thirty Seven Pvt. Ltd. the inconsistency in the number of modules used between MR and commissioning certificate are corrected as it was a typo error.
 - 3) We want to clarify that the commissioning certificate for "Azure Power Venus Pvt. Ltd " & "Azure Power Thirty Six Pvt. Ltd." are complete.
 - 4) We want to clarify that for Azure Power Thirty three Pvt. Ltd. the commissioning certificates are provided and the quantity of modules used is mentioned in the same.
5. We want to clarify that a row is being added at the end of table in Appendix-3 section which contains the summation of the total breakdown hours in the current monitoring period.

1st Assessment by Audit Team

Status

Closed

Date

13-February-2023

1. PP has provided the explanation for referring the values from the JMRs submitted for "Azure Power Thirty-Seven" site. Hence accepted.
2. Assessment team confirms that PP has submitted the correct JMR/REA statements for Azure Power Jupiter Pvt Ltd. for reference and found to be correct. Hence accepted.
3. Assessment team confirms that PP has updated the section 3.1 of the MR transformer details of all the sites. Hence accepted.
4. Assessment team confirms that PP has updated the number of modules for all the sites and found to be correct with the commissioning certificates. Hence accepted.
5. Assessment team confirms that PP has added the row at the end of table in Appendix-3 which contains the summation of the total breakdown hours in the current monitoring period in revised MR version 02. Hence accepted.

Hence CAR#05 is Closed

APPENDIX C: COMPETENCE STATEMENT

Team Leader-



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Sanjay Kumar
Nationality	Indian
Countries of Experience	India
Education Qualification	B.E. (Civil Engineering) M. Tech (Environmental Engineering)
Year of Experience	20 Years +
Area of Expertise	Climate Change & Environment Sustainable Development GHG Footprints
Eligible Sectoral Scope	TA 1.1 - Thermal energy generation and Renewables TA 1.2 - Renewables TA 3.1 - Energy Demand TA 6.1 - Construction TA 13.1 - Solid waste and wastewater TA 13.2 - Manure

Roles

Team Leader	YES
Validator	YES
Verifier	YES
Financial Expert	YES
Technical Reviewer	YES
TA Expert (1.1, 1.2, 3.1, 6.1, 13.1, 13.2)	YES

Validator/Verifier-Trainee-



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Shivani Chauhan
Nationality	Indian
Countries of Experience	India
Education Qualification	B.Sc. (Environmental Science) M.Sc. (Environmental Science)
Year of Experience	2 years as Intern and 6 months as Employee
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	NA

Roles

Project Trainee	NO
Validator/Verifier Trainee	YES
Validator	NO
Verifier	NO
Team Leader	NO
Technical Reviewer	NO
Local Expert (Mozambique)	NO
TA Expert (X.X)	NO
Financial Expert	NO

Reviewed by	Vandana Gupta (Quality Manager)	Date	02.02.2023
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	02.02.2023

Project Trainee-



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Apoorva Tripathi
Nationality	Indian
Countries of Experience	India
Education Qualification	B.Sc. (BCZ) M.Sc. (Environmental Science)
Year of Experience	NA, Fresher
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	NA

Roles

Project Trainee	YES
Validator/Verifier Trainee	NO
Validator	NO
Verifier	NO
Team Leader	NO
Technical Reviewer	NO
Local Expert (Country Wise)	NO
TA Expert (X.X)	NO
Financial Expert	NO

Reviewed by	Vandana Gupta (Quality Manager)	Date	06/12/2022
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	06/12/2022

Technical Reviewer-



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Abhishek Kumar Srivastava
Nationality	India
Countries of Experience	India, Uganda
Education Qualification	M. Tech- Energy Management M. Sc. -Physics
Year of Experience	14 Years
Area of Expertise	Climate Change & Environment / Industry
Eligible Sectoral Scope	1. GHG emission reductions from fuel combustion

Roles

Team Leader	YES
Validator	YES
Verifier	YES
Financial Expert	YES
Technical Reviewer	YES
TA Expert (TA1.1, TA1.2 and TA3.1)	YES

Reviewed by	Ayushi Garg (Quality Manager)	Date	25/04/2022
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	26/04/2022