



BUNDLED SOLAR PHOTOVOLTAIC PROJECT BY ACME



Document Prepared By

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

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Summary:

Verification Purpose: LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed^{/2/} by “ACME Cleantech Solution Private Limited” to perform the 6th verification of grouped project activity the “BUNDLED SOLAR PHOTOVOLTAIC PROJECT BY ACME” (VCS ID 1753)^{/4/} through various SPVs involves the generation of electricity through solar photovoltaic plant with a combined capacity of 1,107.50 MW in the state of Telangana, Andhra Pradesh, Karnataka, Rajasthan and Uttarakhand India. Solar based activity having 16 project activity instances with 15 small scale project activity and 01 large scale project activity with combined installed capacity of 1,107.50 MW.

Project Activity instance	PP (SPV) Name	Location(state)	MW
1	Sunworld Solar Power Pvt Ltd	Telangana	30 ¹
	ReNew Ranga Reddy Solar Power Pvt Ltd		30 ²
	ReNew Medak Solar Energy Pvt Ltd		45
	ReNew Nizamabad Solar Energy Pvt Ltd		50 ³
	ACME PV Powertech Private Limited (Sadashivpet)		50
	ACME Solar Power Technology Private Limited		50
	Athena Bhiwadi Solar Power Pvt Ltd	Andhra Pradesh	50
	Athena Hisar Solar Power Private Limited		50
	Athena Karnal Solar Power Private Limited		50
	ACME Kaithal Solar Power Private Limited	Karnataka	40 ⁴
	ACME Babadham Solar Power Private Limited		40 ⁵
	ACME Koppal Solar Energy Private Limited		40
	ACME Vijayapura Solar Energy Pvt Ltd		40 ⁶
	ACME Rewa Solar Energy Pvt Ltd	Rajasthan	100
	Ayana Chittorgarh Solar Energy Pvt. Ltd	Rajasthan	250 ⁷
2	ReNew Karimnagar Solar Power Pvt Ltd	Telangana	15
3	ReNew Purvanchal Solar Power Pvt Ltd		15
4	ReNew Rewanchal Solar Power Pvt Ltd		15
5	ReNew Neemuch Solar Power Pvt Ltd		15
6	ReNew Fazilka Power Pvt Ltd Nandipet)		15
7	ReNew Narwana Solar Power Pvt Ltd (Lingampet)		15
8	ReNew Warangal Solar Power Pvt Ltd		15
9	Devishi Renewable Energy Pvt Ltd	Uttarakhand	12.5
10	Devishi Solar Power Pvt Ltd		12.5
11	Sunworld Energy Pvt Ltd	Uttarakhand	10
12	ACME Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)	Telangana	10
13	ACME Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)		10

¹ Total Capacity: 30 MW and the 20 MW was commissioned on 15-November-2017 and 20 MW was commissioned on 16-November-2017.

² The earliest date of project commissioned is 02-June-2017. (10 MW was commissioned on 02-June-2017, 5 MW was commissioned on 03-June-2017, 5 MW was commissioned on 06-June-2017, 5 MW was commissioned on 16-June-2017, 5 MW was commissioned on 06-June-2017.

³ Total capacity is 50 MW and 10 MW was commissioned on 11-September-2017, 20 MW 13-September-2017, and balance 20 MW was commissioned on 15-September-2017.

⁴ Total capacity is 40 MW. 20 MW was commissioned on 24-January-2018 and Rest 20 WM capacity was commissioned on 14-March-2018. Earliest commissioning date is being considered.

⁵ Total capacity is 40 MW. 20 MW was commissioned on 22-January-2018 and Rest 20 WM capacity was commissioned on 09-March-2018. Earliest commissioning date is being considered.

⁶ Total projects capacity is 40 MW. 20 MW was commissioned on 23-January-2018 and Rest 20 WM capacity was commissioned on 15-March-2018. Earliest commissioning date is being considered.

⁷ Total projects capacity is 250 MW. 100 MW was commissioned on 26-October-2019 and 130 MW was commissioned on 25-October-2019, Rest 20 WM capacity was commissioned on 01-January-2020. Earliest commissioning date is being considered.

14	ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)		10
15	ACME Mahbubnagar Solar Energy Pvt Ltd-3 (PADMAJIWADI)		10
16	ACME Mahbubnagar Solar Energy Pvt Ltd-1 (MANTHANI)		10
Total Capacity			1,107.50 MW

There is no addition of any new project instance during this verification in line with the VCS Standard Version 4.5. The main purpose of this verification activity is to have an independent third party for the assessment of the project design, monitoring report to ensure a thorough assessment of the implemented project activity against the applicable CDM and VCS requirements.

The purpose of the project activities to generate energy electricity by the utilization of solar energy and supply the generated energy to the National power grid i.e., Indian Grid. In this process there is no consumption of any fossil fuel and hence it does not lead to any greenhouse gas emissions. Thus, electricity would be generated through sustainable means without causing any negative impact on the environment.

Start date of the project activity is the 10-February-2017 (As per earliest date of commissioning of first SPV's company. During current monitoring period 26-April-2022 to 31-January-2023 (including both days) project activity achieved 1,638,125 tCO₂e emission reductions during this monitoring period and supplied 1,728,924.68 MWh amount of electricity to the Indian Grid, which is mainly dominated by thermal/fossil fuel-based power plant.

The scope of verification includes confirming the implementation of the monitoring plan in the registered PD (Ver. 02 dated 29-January-2019) and the application of methodology ACM0002: Grid-connected electricity generation from renewable sources, Version 19.0 and AMS-I.D. Grid connected renewable electricity generation, Version 18.0.

The verification was based on the guidance given in the CDM validation and verification standard for project activities, version 03.0/¹⁶/, review against registered VCS PD/⁴/ and Final Validation report, VCS program guide Version 4.4 and VCS Standard Version 4.5 /¹⁰/.

A risk-based approach has been followed to perform this verification activity. In the course of verification, 04 Corrective Action request (CAR) and 03 Clarification Requests (CLs) were raised and successfully closed. No FAR was raised during this verification. The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and PP have provided LGAI Technological Center S.A. (Applus+ Certification) with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

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

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

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

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1 INTRODUCTION

1.1 Objective

LGA Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed by “ACME Cleantech Solution Private Limited” to perform the 6th verification of the “BUNDLED SOLAR PHOTOVOLTAIC PROJECT BY ACME” under guideline Version 4.4 and VCS standard Version 4.5/^{10/}. The objective of this verification activity is to have an independent third party for the assessment of the project design, Monitoring Report and Final Verification report and to ensure a thorough assessment of the implemented project activity against the applicable CDM and VCS requirements. In particular;

- The project's baseline is assessed against “ACM0002 of Version 19.0” & “AMS I.D version 18.0”
- The project’s monitoring plan is assessed against “ACM0002 of Version 19.0” & “AMS I.D version 18.0”
- the projects compliance with the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country legislation and sustainability criteria along with VCS guideline Version 4.4 and standard Version 4.5/^{10/}
- CDM validation and verification standard for project activities, Version 03.0/^{16/}
- VCS program guideline version. 4.3/^{10/}
- VCS standard version 4.5/^{10/}

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

1.2 Scope and Criteria

The scope is defined as an independent and objective review of the Monitoring report (MR)/^{6/} prepared as per the registered PD/^{4/} and registered approved methodology: -

- ACM0002: Grid-connected electricity generation from renewable sources, Version 19.0/^{18/}.
- AMS- I.D. Grid connected renewable electricity generation, Version 18.0 /^{18/}.

The MR is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board and VCS standard Version 4.5 and guideline Version 4.4, including the approved baseline and monitoring methodology ACM0002 of Version 19.0, AMS I.D version 18.0. The verification was based on the requirements in the CDM validation and verification standard for project activities, Version 03.0/^{16/} and VCS program guide Version 4.4 and VCS Standard Version 4.5.

The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the Monitoring report. In line with Guidelines for Application of materiality in verifications, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. It follows the paper trail back to the raw data such as meter reading records and invoices. The verification of the project activity is based on the PD and estimated GHG emission reduction calculations. There are no material errors, overestimation of ER, omission or misstatement. The verification team has reviewed all the documents like commissioning certificates/^{01/}, technical specification/^{3/}, JMR/^{11/}, invoices/^{11/}, grievance register/^{15/}etc.

1.3 Level of Assurance

Applus+ Certification has planned and performed the verification by obtaining evidence and other information and explanations that assessment team considers necessary to give reasonable assurance that reported estimated GHG emission reductions are fairly stated. All documentary evidences were checked, a remote audit was conducted by the assessment team and technical details and metering/monitoring arrangement verified through photos/certificate shared by PP to arrive at a verification conclusion by the assessment team. Remote audit for the project activity performed in view of multiple locations which cannot be covered under given time interval during CR conclusion is not sufficient VERRA explicitly does not mandate physical site visit.

Risk analysis has been done during current monitoring period and VVB team checked all supporting to verify continuous operation of project activity.

In our opinion, the estimated GHG emissions reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002 of Version 19.0, AMS I.D version 18.0” and the VCS Standard Version 4.5/^{10/}

1.4 Summary Description of the Project

The project activity is a solar-based power generation project involves project activity solar based power generation is a grouped project having 16 project activity instances with 15 small scale project activity and 01 large scale project activity with combined installed capacity of 1,107.50 MW in the state of Telangana, Andhra Pradesh, Karnataka, Rajasthan and Uttarakhand, India.

This is a greenfield project activity and supply the generated electricity to the National power grid i.e., Indian Grid. The commissioning details of the solar project and their location are mentioned in the table below:

Table 1: Details of the project locations

Activity Instances	Village	District	State	Name of the SPVs	Latitude	Longitude
01	Jagathiyal	Karimnagar	Telangana	Sunworld Solar Power Pvt Ltd	18.82203 N	79.10108 E
	Siricilla	Karimnagar	Telangana	ReNew Ranga Reddy Solar Power Pvt Ltd	18.30450 N	78.88827 E
	Annathsagar,	Medak	Telangana	ReNew Medak Solar Energy Pvt Ltd	18.14728 N	78.29110 E
	Beeravelly	Adilabad	Telangana	ReNew Nizamabad Solar Energy Pvt Ltd	19.13129 N	78.251088 E
	AnanthaSagar	Medak	Telangana	ACME PV Powertech Private Limited (Sadashivpet)	17.701571 N	77.813153 E
	Bhongir	Nalgonda	Telangana	ACME Solar Power Technology Private Limited	17.721751 N	78.975642 E
	Bhiwadi	Kadapa	Andhra Pradesh	Athena Bhiwadi Solar Power Pvt Ltd	14.086597 N	78.461025 E
	Hisar	Kadapa	Andhra Pradesh	Athena Hisar Solar Power Private Limited	14.104121 N	78.465313 E
	Karnal	Kadapa	Andhra Pradesh	Athena Karnal Solar Power Private Limited	14.120740 N	78.452512 E
	Chitaguppa	Kaithal	Karnataka	ACME Kaithal Solar Power Private Limited	17.732182 N	77.217419 E
	Amaravati	Raichur	Karnataka	ACME Babadham Solar Power Private Limited	15.98979 N	76.93002 E
	Bidi	Belagavi	Karnataka	ACME Koppal Solar Energy Private Limited	17.212184 N	76.777021 E
	Malchapur	Bidar	Karnataka	ACME Vijayapura Solar Energy Pvt Ltd	17.918732 N	77.372409 E
	Bhadla	Jodhpur	Rajasthan	ACME Rewa Solar Energy Pvt Ltd	27.477468 N	71.990588 E
	Bap, Bhadla	Jodhpur	Rajasthan	Ayana Chittorgarh Solar Energy Pvt. Ltd	27.350000 N	72.140000 E
02	Kalvasrampur	Karimnagar	Telangana	ReNew Karimnagar Solar Power Pvt Ltd	18.521019 N	79.554364 E
03	Manthini	Karimnagar	Telangana	ReNew Purvanchal Solar Power Pvt Ltd	18.689688 N	79.632532 E
04	Jangaon	Karimnagar	Telangana	ReNew Rewanchal Solar Power Pvt Ltd	17.800414 N	79.153588 E
05	Gudhur	Karimnagar	Telangana	ReNew Neemuch Solar Power Pvt Ltd	18.79589 N	78.63609 E
06	Nandipet	Karimnagar	Telangana	ReNew Fazilka Power Pvt Ltd (Nandipet)	18.859975 N	78.18131 E

07	Lingampet Bayampally	Nizamabad	Telangana	ReNew Narwana Solar Power Pvt Ltd (Lingampet)	18.27893 N	78.10435 E
08	Mallaram	Karimnagar	Telangana	ReNew Warangal Solar Power Pvt Ltd	18.575534 N	78.860413 E
09	Kailashpuri, Gadarpur	Udham Singh Nagar	Uttarakhand	Devishi Renewable Energy Pvt Ltd	29.0497399 N	79.222841 E
10	Kailashpuri, Gadarpur	Udham Singh Nagar	Uttarakhand	Devishi Solar Power Pvt Ltd	29.0497399 N	79.222841 E
11	Ratanpura	Udham Singh Nagar	Uttarakhand	Sunworld Energy Pvt Ltd	29.208627 N	79.086677 E
12	Kalwakurthy	Mehboobnagar	Telangana	Acme Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)	16.966462 N	77.651767 E
13	Mothkur	Yadadri	Telangana	Acme Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)	17.434986 N	79.284074 E
14	Kalwakurthy	Mehboobnagar	Telangana	ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)	18.796471 N	78.634222 E
15	Kalwakurthy	Mehboobnagar	Telangana	ACME Mahbubnagar Solar Energy Pvt Ltd-3 (PADMAJIWADI)	18.413841 N	78.215127 E
16	Nagaram	Peddapally	Telangana	ACME Mahbubnagar Solar Energy Pvt Ltd-1 (MANTHANI)	18.688100 N	79.629544 E

Start date of the project activity is the 10-February-2017 (As per earliest date of commissioning of 1st Solar Power Plant covered under Project activity). The monitoring period this VCS verification covered from 26-April-2022 to 31-January-2023 (inclusive of both dates) and the project activity achieved 1,638,125 tCO_{2e} emission reductions during this monitoring period.

Assessment team checked the Commissioning status of the project activity with the commissioning certificates and found correct. The project is mentioned as per the description in the registered PD. No event observed during the current monitoring period which can alter or deviate from the methodology requirement. The project location was verified by the assessment team through Google earth and KML file of Geo-coordinates^{/08/} during desk review and it is found correct.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification Process: The project assessment is based on the “CDM validation and verification standard for project activities, Version 03.0/^{16/} and “VCS standard Version 4.5, program guide Version 4.4” and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed.

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

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

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

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced.

Appointment of the assessment team

According to the sectoral scope / technical area and experience in the sectoral or national business environment,

Applus+Certification has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of Applus+certification. The composition of audit team shall be approved by the Applus+Certification ensuring that the required skills are covered by the team.

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

- Lead Auditor (LA)/ Technical Expert (TE).
- Auditor (A)
- Observer (OBS)
- Technical Reviewer (TR).

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

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Dr. Atul Takarkhede	LA/TE	YES	YES	NA	YES
Mr. Ishan Shrivastava	A	YES	YES	NA	YES
Ms. Trapti Joshi	OBS	NO	NO	NA	YES
Mr. Simon Shen	TR	YES	YES	NA	NO

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

Document review

The Monitoring report version 01/06/ submitted by the PP was reviewed against the approved methodology^{18/}, registered PD /04/, final validation report and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in this report below in Appendix 1.

Follow-up Interviews

A remote audit is conducted by LGAI Technological Center S.A. (Applus+ Certification) assessment team who performed interviews, telephone conferences, and remote inspection with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report in the below sections.

Resolution of Clarification and Corrective Action Request

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

The final MR Version 04/06/ submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Internal quality control

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

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

Interview date: - 12-July-2023						
No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Singh	Mr. Ashutosh	Manager (ACME Cleantech Solutions Private Limited)	12-July-2023 (Through video conference call)	Project Implementation, JMR & invoicing procedure, calibration, grievance mechanism, Management practices, data storage, QA/QC	Dr. Atul Takarkhede (Lead Auditor and Technical Expert) & Mr. Ishan Shrivastava (Auditor)
2.	Chouhan	Mr. Prachi	PP representative (ACME Cleantech Solutions Private Limited)			
3.	Singhal	Mr. Virendra	PP representative (ACME Cleantech Solutions Private Limited)			
4.	Sahu	Mr. Vipul	Manager (EKI Energy Services Limited)		GHG calculations, MR and ER preparation, Data collection, data storage, QA/QC	
5.	Ladukar	Mr. Anant	Senior Manager (EKI Energy Services Limited)			
6.	Takarkhede	Dr. Atul	Lead Auditor (True Quality Certifications Pvt. Ltd.)			
7.	Shrivastava	Mr. Ishan	Auditor (True Quality Certifications Pvt. Ltd.)			

Interview date: - 12-July-2023						
No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
8.	Joshi	Ms. Trapti	Observer (True Quality Certifications Pvt. Ltd.)			
9.	Reddy	Mr. Suman	Local Stakeholder		local stakeholder consultation	
10.	Jain	Ms. Subha				
11.	Ram	Mr. Joga				
12.	Khan	Mr. Basir	Local villagers		Local villagers	
13.	Rao	Mr. Chandar				
14.	Rai	Mr. Srinivas				
15.	Reddy	Mr. Jeevan				

2.2 Document Review

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

2.3 Interviews

A remote audit was conducted on 12-July-2023 through Skype video call which covers all the sites (includes all the locations) in the state of Telangana, Andhra Pradesh, Karnataka, Rajasthan and Uttarakhand in India. No sampling procedures were adopted either in document verification and all the documents were cross checked to ensure conservative estimation of emission reduction.

The VCS Program does not explicitly mandate site visits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.5).

During the remote audit, the PP representatives were questioned about the implementation of

the project activity. Several topics like the verification of commissioning date of meters, the generation, recording, and monitoring of the data and the error accountability were discussed. To cross check the information provided by PP, various documents like technical specifications, commissioning certificates/^{1/}, PPA/^{9/}, JMR sheets/^{11/}, invoice/^{11/}, calibration certificates/^{5/}, etc. were also verified. metering arrangements/specification of solar power Plants, monthly generation data/ photographs/^{18/}and name plates of solar power plants, calibration certificates of meters, validation and verification report of various issuance. The names of the persons interviewed during remote audit through Skype & telephonic interview is given below;

During the remote audit, the PP representatives, O&M personals were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of meters, the generation, recording, and monitoring of the data and the error accountability were discussed. Various documents like the generation records, Invoices, on-site Photographs includes name plates, meter specifications, key technical specifications of the major equipment etc. provided to assessment team were verified to establish the current status and the implementation of the Project Activity. Also, stakeholders' interviews were carried out to conform grievance mechanism and output during this monitoring period.

2.4 Site Visits

Duration of on-site visit: NA				
No.	Activity performed on-site	Site location	Date	Team member
	NA	NA	NA	NA

No physical verification was conducted by the VVB for this verification. The VCS program does not explicitly mandate site visits as part of the validation and verification process during such circumstances, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per section 4.1.2 of the VCS Standard, v4.5).

The DOE has taken alternative measures to reach reasonable level of assurance and conducted Remote audit through video call on 12-July-2023 with the representative of PP and consultants. Further, during interview with PPs, the implementation of project activity and monitoring procedure and systems in place was confirmed. Technical specifications of the plant verified through the photographs of power plant shared by PP and the same was cross checked with the previous verification report.

After teleconference with PP representatives and verifying the photographs of SPVs & meters and Calibration Certificates of meters, verification team confirmed that monitoring procedure is followed as per registered VCS PD and there is no change in technical specifications of plants since installation and all the meters are calibrated in accordance with VCS PD and host country metering guidelines.

2.5 Resolution of Findings

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

The final MR Version 04/06/ submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Areas of validation and verification findings	No. of CL	No. of CAR	No. of FAR
Project design document and Monitoring report	01	01	00
Description of project activity	01	01	00
Application of selected baseline and monitoring methodology and selected standardized baseline	00	00	00
Applicability of methodology and standardized baseline	00	00	00
Deviation from methodology	00	00	00
Clarification on applicability of methodology, tool and/or standardized baseline	00	00	00
Project boundary	00	00	00
Establishment and description of baseline scenario	00	00	00

Areas of validation and verification findings	No. of CL	No. of CAR	No. of FAR
Demonstration of additionality	00	00	00
Emission reductions	01	00	00
Calibration details	00	00	00
Monitoring plan	00	00	00
No Net harm assessment	00	00	00
Local stakeholder consultation	00	01	00
Others (double counting)	00	01	00
Total	03	04	00

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

2.5.1 Forward Action Requests

This is 6th verification of the project activity and no FAR was raised from previous verification. Same has been verified from previous verification report.

2.6 Eligibility for Validation Activities

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

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project activity has not availed GHG emission reduction from any other GHG program and there will not be any double counting for the same. Moreover, PP has also submitted an officially attested declaration letter dated 13-September-2023/^{12/} to assessment team regarding no participation in other GHG program for the concerned monitoring period and found acceptable. CAR 03 was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.

3.2 Methodology Deviations

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

3.3 Project Description Deviations

The following Deviations from 1 to 12 have been approved in previous verifications.

Deviation 1:

This deviation is a permanent monitoring deviation. The meter reading practice in India is upgrading to optimum level which based on robust technology and requires minimum human intervention. The deviation is for Andhra Pradesh state project having SPV name ACME Bhiwadi Solar Power Pvt Ltd, ACME Hisar Solar Power Private Limited and ACME Karnal Solar Power Private Limited but not limited to further upgradation at another states of India. This deviation is already approved in previous verifications.

The monitoring practice is updated (October 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 and no longer provided, only net export values are being provided for the invoicing to respective boards/government institutions. In DSM, PP have to forecast electrical energy generation in day time blocks (In India, 15 minutes each block, 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 (either by including deviation to the schedule values or directly considering the actual values from the SRPC report) for the emission reduction calculation. The approach doesn't alter the emission reduction and its calculations.

For most of the Indian Southern Region, 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 any cross-checking is required.

- The nature of deviation is permanent and already approved in the second verification during monitoring period 01-March-2018 to 31-January-2020 (Inclusive of both days).

Deviation 2:

Continuation of deviation 1, ACME Rewari Solar Power Pvt Ltd and ACME Kurukshetra Solar Energy Pvt Ltd, the Deviation Settlement Mechanism (DSM) is also applicable to mentioned SPVs. Therefore, instead of export and import values, the net values are directly obtained (either by including deviation to the schedule values or directly considering the actual values from the SRPC report) for the emission reduction calculation. The approach doesn't alter the emission reduction and its calculations. The nature of deviation is permanent.

Deviation 3:

The commissioning date of ACME Bhiwadi Solar Power Pvt Ltd is revised from 01-July-2018 to 05-July-2018. This was the typo error and the nature of deviation is permanent.

Deviation 4:

Mentioned SPVs geodetic coordinates are corrected for better identification of over satellite. There has been no change in the design and specification of the SPVs:

Sunworld Solar Power Pvt Ltd	18.57 N	78.86 E
ACME PV Powertech Private Limited (Sadashivpet)	17.58 N	77.89 E
ACME Solar Power Technology Private Limited	16.80 N	78.89 E
ACME Bhiwadi Solar Power Pvt Ltd	14.11 N	78.45 E
ACME Hisar Solar Power Private Limited	14.11 N	78.78 E
Athena Karnal Solar Power Private Limited	14.02 N	78.44 E
Athena Babadham Solar Power Private Limited	15.9 N	76.9 E
Athena Koppal Solar Energy Private Limited	17.21 N	76.77 E
Ayana Chittorgarh Solar Energy Pvt. Ltd	27.35 N	72.14 E
ReNew Narwana Solar Power Pvt Ltd (Lingampet)	18.86 N	78.18 E
ReNew Warangal Solar Power Pvt Ltd	18.57 N	78.86 E
Acme Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)	16.69 N	78.42 E
Acme Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)	17.43 N	79.28 E
ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)	16.71 N	78.47 E
ACME Mahbubnagar Solar Energy Pvt Ltd-3 (PADMAJIWADI)	18.40 N	78.21 E

The above-mentioned deviation is already approved during previous verifications.

- Deviations 2, Deviations 3, and Deviations 4 have been approved in the third verification (Monitoring period: 01-February-2020 to 24-April-2021 (Inclusive of both days)).

Deviation 5:

ACME Bhiwadi Solar Power Pvt Ltd, ACME Hisar Solar Power Private Limited and ACME Karnal Solar Power Private Limited changed to Athena Bhiwadi Solar Power Pvt Ltd, Athena Hisar Solar Power Private Limited and Athena Karnal Solar Power Private Limited respectively. This is only due to the asset transfer between the ACME group and Athena group. The applicable date is 31/03/2021 on which PPA addendum took place. Athena group has been added as project proponent. The design change doesn't alter the project design, monitoring approach, additionality, emission reduction and its calculations. The nature of deviation is permanent.

Deviation 6:

In order to align the monitoring start date and end date with billing cycle, various start and end date of billing cycle has been apportioned using Daily Generation Report of respective SPVs. The apportioning is done on the basis of generation ratio (Generation ratio: DGR's generation for the period covered in the monitoring period/ DGR's Total generation for the month, the ratio is then multiplied with the export and import values). The details are provided in the emission reduction calculation spreadsheet. The design change doesn't alter the project design, monitoring approach and additionality. Through this deviation, the emission reduction and its calculations are aligned to the generation covered in the monitoring period. The nature of deviation is permanent.

Deviation 7:

ACME Rewari Solar Power Pvt Ltd. (50 MW) and ACME Kurukshetra Solar Energy Pvt Ltd. (50 MW) are not a part of the grouped project activity. These SPVs are not being verified and eligible since 01-July-2020. The design change doesn't alter the project design, monitoring approach, additionality, and emission reduction calculations. The nature of deviation is permanent.

- Deviations 5, Deviations 6, and Deviations 7 have been approved in the fourth verification (Monitoring period: 25-April-2021 to 24-September-2021 (Inclusive of both days)).

Deviation 8:

An asset transfer materialized between ACME Cleantech Solutions Private Limited and ReNew Power Private Limited, ACME Cleantech Solutions Private Limited and Ayana Renewable Power Private Limited for the transfer of assets. The new and old assets owners are tabulated below. However, in the contractual agreement between new and old SPV, the rights of environmental credits hold with ACME Cleantech Solutions Private Limited. Therefore, the accession and revised communication agreement is not required. The contract has been shared with VVB. The design change doesn't alter the project design, monitoring approach, additionality and emission reduction calculations. The nature of deviation is permanent.

Old SPV Owners	New SPV Owners	Asset Transfer date
ACME Fazilka Power Pvt Ltd	ReNew Fazilka Power Pvt Ltd	03-Novemeber-2021
ACME Karimnagar Solar Power Pvt Ltd	ReNew Karimnagar Solar Power Pvt Ltd	03-Novemeber-2021
ACME Warangal Solar Power Pvst Ltd	ReNew Warangal Solar Power Pvt Ltd	03-Novemeber-2021
ACME Narwana Solar Power Pvt Ltd	ReNew Narwana Solar Power Pvt Ltd	03-Novemeber-2021
ACME Ranga Reddy Solar Power Pvt Ltd	ReNew Ranga Reddy Solar Power Pvt Ltd	03-Novemeber-2021
ACME Nizamabad Solar Energy Pvt Ltd	ReNew Nizamabad Solar Energy Pvt Ltd	03-Novemeber-2021
ACME Medak Solar Energy Pvt Ltd	ReNew Medak Solar Energy Pvt Ltd	03-Novemeber-2021
Purvanchal Solar Power Pvt Ltd	ReNew Purvanchal Solar Power Pvt Ltd	03-Novemeber-2021
Rewanchal Solar Power Pvt Ltd	ReNew Rewanchal Solar Power Pvt Ltd	03-Novemeber-2021
Neemuch Solar Power Pvt Ltd	ReNew Neemuch Solar Power Pvt Ltd	03-Novemeber-2021
ACME Chittorgarh Solar Energy Pvt. Ltd	Ayana Renewable Power Private Limited	18-Novemeber-2021

Deviation-9:

Few changes observed in the plant technical details and specifications of equipment's mentioned in Section **¡Error! No se encuentra el origen de la referencia.** Implementation status of project activity. The plant technical equipment configuration in **¡Error! No se encuentra el origen de la referencia.** is updated due to maintenance and upgradation activity. The equipment reconfigurations don't alter project capacity, design changes, calculation of emission reduction, and any impact on additionality, capacity, and PLF of the project. Changes regarding the plant specifications (Inverter and module specifications) are being mentioned in **¡Error! No se encuentra el origen de la referencia..**

The Nature of Deviation is permanent.

Deviation-10:

The meters replacement/Monitoring procedure/calibration of the billing meter are completely under State electricity board of Karnataka. The monitoring procedure have been recently updated and the net electricity export have been calculated using “Export- 115% Import”, the same net electricity values are reflected in the crosscheck invoices. PP don’t have anything to engage with metering and monitoring procedures. The meter is completely taken care of by State Electricity Board. Following SPVs are located in the state of Karnataka.

1. ACME Kaithal Solar Power Private Limited
2. ACME Babadham Solar Power Private Limited
3. ACME Koppal Solar Energy Private Limited
4. ACME Vijayapura Solar Energy Pvt Ltd

The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals and the deviations relate only to the criteria and procedures for monitoring or measurement, and do not relate to any other part of the methodology. Deviation does not alter additionality, calculation of emission reduction and the project design. The nature of this deviation is permanent.

Deviation-11:

Few Typo error observed in the *Appendix 1: Input Parameters for Additionality Assessment for Respective Project Activities* of the registered VCS Joint PD & MR. Error related to sensitivity analysis values of Sunworld Solar Power Pvt Ltd and ACME Kaithal Solar Power Private Limited. In the registered Joint Project description & Monitoring report, the following table are mentioned of sensitivity analysis.

- Sunworld Solar Power Pvt Ltd:

Sensitivity Analysis	Equity IRR			
Variation %	-10%	Normal	10%	Breaching Value
PLF	6.90%	4.68%	13.15%	16.55%
O&M	10.34%	4.68%	9.37%	-92.54%
Project Cost	12.65%	4.68%	7.80%	-18.29%
Tariff Rate	6.90%	4.68%	13.15%	16.55%

- ACME Kaithal Solar Power Private Limited:

Sensitivity Analysis	Equity IRR			
Variation %	-10%	Normal	10%	Breaching Value
PLF	7.35%	6.87%	14.09%	14.11%
O&M	11.49%	6.87%	9.92%	-68.47%
Project Cost	13.31%	6.87%	8.42%	-17.13%
Tariff Rate	7.35%	6.87%	14.09%	14.12%

The sensitivity has been reassessed with the same values and the table are mentioned below. The revised sheets are being submitted to VVB for reviews.

- Sunworld Solar Power Pvt Ltd:

Equity IRR without CDM: 4.68%

Benchmark (Equity IRR): 15.32%

Sensitivity Analysis	Equity IRR			
Variation %	-10%	Normal	10%	Breaching Value
PLF	2.35%	4.68%	7.22%	38.16%
O&M	5.31%	4.68%	4.03%	-177.34%
Project Cost	6.70%	4.68%	3.11%	-35.79%
Tariff Rate	2.35%	4.68%	7.22%	38.16%

- ACME Kaithal Solar Power Private Limited:

Equity IRR without CDM: 6.87 %

Benchmark (Equity IRR): 15.50 %

Sensitivity Analysis	Equity IRR			
Variation %	-10%	Normal	10%	Breaching Value
PLF	3.90%	6.87%	9.88%	26.74%
O&M	7.69%	6.87%	5.99%	-68.47%
Project Cost	9.13%	6.87%	4.89%	-17.13%
Tariff Rate	7.35%	6.87%	14.09%	26.74%

The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals. The deviations only correct the typo errors, and do not relate to any other part of the methodology. The Deviation doesn't alter the additionality, project design, monitoring approach, and emission reduction calculations. The nature of deviation is permanent.

Deviation-12:

Below SPV's geodetic coordinates are corrected for better identification of site. The previously mentioned coordinates have slight typo errors. With this deviation, there has been no change in the design and specification of the SPVs. The new and old geodetic coordinates owners are tabulated below.

Name of the SPVs	Old geodetic coordinates		New geodetic coordinates	
	Latitude	Longitude	Latitude	Longitude
Sunworld Solar Power Pvt Ltd	18.57 N	78.86 E	18.82203 N	79.10108 E

ACME Babadham Solar Power Private Limited	15.9 N	76.9 E	15.98979 N	76.93002 E
ReNew Neemuch Solar Power Pvt Ltd	18.9 N	78.60 E	18.79589 N	78.63609 E
ReNew Narwana Solar Power Pvt Ltd (Lingampet)	18.86 N	78.18 E	18.27893 N	78.10435 E

The deviations only correct the typo errors and do not relate to any other part of the methodology. The Deviation doesn't alter the project design, monitoring approach, and emission reduction calculations. The nature of deviation is permanent.

- Deviations 8, Deviations 9, Deviations 10, Deviations 11 and Deviations 12 have been approved in the previous verification (Monitoring period: 25-September-2021 to 25-April-2022 (Inclusive of both days)).

Deviation in the current monitoring period 26-April-2022 to 31-January-2023:

Deviation-13:

The commissioning date of ACME Solar Power Technology Private Limited, Athena Karnal Solar Power Private Limited and ACME Koppal Solar Energy Private Limited are revised and correct date are tabulated below.

SPV's Name	Capacity	Commissioning date	Commercial operation / plant synchronization date
ACME Solar Power Technology Private Limited	50 MW	05-February-2018	07-February-2018
Athena Karnal Solar Power Private Limited	50 MW	15-June-2018	21-June-2018
ACME Koppal Solar Energy Private Limited	40 MW	16-March-2018	15-April-2018

Assessment team noted that there are two different dates were mentioned on the commissioning certificates of these 3 plants. One date which is commissioning/installation of the SPV however, on this date only project plant was ready fully but not synchronized with grid. Thus, the state utility has synchronized the plant with grid later date and project plant started delivering electricity to the grid. Thus, as per the state utility practice, commercial operation date is also starting date of JMR. Thus, first JMR was issued from the date of commercial operation start date and thus there is no overestimation of ERs for the period between physical commissioning to grid synchronization. Further, commissioned plant can only delivery energy to grid only after synchronization with the grid by state utility. Thus, chances of the overestimation of ERs are ruled out.

Further, assessment team checked the commissioning certificates issued by state utility/SECI which mentions both commissioning & grid synchronization dates and also first JMR issued and confirmed that JMR starts with only commercial operation date.

PP has now revised deviation 13 for both commissioning dates and commercial operation/grid synchronization dates for ACME Solar Power Technology Private Limited, Athena Karnal Solar

Power Private Limited & ACME Koppal Solar Energy Private Limited and found correct. The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals and the deviations relate only to the criteria and procedures for monitoring or measurement, and do not relate to any other part of the methodology. Deviation does not alter additionality, calculation of emission reduction and the project design. The nature of this deviation is permanent.

Assessment team checked the Commissioning Certificates of the ACME Solar Power Technology Private Limited, Athena Karnal Solar Power Private Limited and ACME Koppal Solar Energy Private Limited, where Commissioning Certificates of the above mentioned SPVs are found in line with the Commissioning dates mentioned in the section 3.1 of the MR. are correct. VVB has verified that the proposed change doesn't alter the project design, monitoring approach, additionality and emission reduction calculations. The nature of deviation is permanent.

Deviation-14:

Below SPV's geodetic coordinates are corrected for better identification of site. The previously mentioned coordinates have slight typo errors. With this deviation, there has been no change in the design and specification of the SPVs. The new and old geodetic coordinates owners are tabulated below.

Activity Instances	Name of the SPVs	Old geodetic coordinates		New geodetic coordinates	
		Latitude	Longitude	Latitude	Longitude
01	Sunworld Solar Power Pvt Ltd	18.82203 N	79.10108 E	18.82203 N	79.10108 E
	ReNew Ranga Reddy Solar Power Pvt Ltd	18.30 N	78.88 E	18.304502 N	78.88827 E
	ReNew Medak Solar Energy Pvt Ltd	18.14 N	78.29 E	18.147288 N	78.291108 E
	ReNew Nizamabad Solar Energy Pvt Ltd	19.13 N	78.24 E	19.13129 N	78.251088 E
	ACME PV Powertech Private Limited (Sadashivpet)	17.58 N	77.89 E	17.7015718 N	77.8131532 E
	ACME Solar Power Technology Private Limited	16.80 N	78.89 E	17.721751 N	78.975642 E
	Athena Bhiwadi Solar Power Pvt Ltd	14.11 N	78.45 E	14.086597 N	78.461025 E
	Athena Hisar Solar Power Private Limited	14.11 N	78.78 E	14.104121 N	78.465313 E
	Athena Karnal Solar Power Private Limited	14.02 N	78.44 E	14.1207402 N	78.4525128 E
	ACME Kaithal Solar Power Private Limited	17.73 N	77.21 E	17.732182 N	77.217419 E
	ACME Babadham Solar Power Private Limited	15.98979 N	76.93002 E	15.98979 N	76.93002 E
	ACME Koppal Solar Energy Private Limited	17.21 N	76.77 E	17.212184 N	76.777021 E

	ACME Vijayapura Solar Energy Pvt Ltd	17.91 N	77.37 E	17.918732 N	77.372409 E
	ACME Rewa Solar Energy Pvt Ltd	27.46 N	71.99 E	27.477468 N	71.990588 E
	Ayana Chittorgarh Solar Energy Pvt. Ltd	27.35 N	72.14 E	27.350000 N	72.140000 E
02	ReNew Karimnagar Solar Power Pvt Ltd	18.52 N	79.55 E	18.521019 N	79.554364 E
03	ReNew Purvanchal Solar Power Pvt Ltd	18.69 N	79.62 E	18.689688 N	79.632532 E
04	ReNew Rewanchal Solar Power Pvt Ltd	17.80 N	79.15 E	17.800414 N	79.153588 E
05	ReNew Neemuch Solar Power Pvt Ltd	18.79589 N	78.63609 E	18.79589 N	78.63609 E
06	ReNew Fazilka Power Pvt Ltd (Nandipet)	18.86 N	78.18 E	18.859975 N	78.18131 E
07	ReNew Narwana Solar Power Pvt Ltd (Lingampet)	18.27893 N	78.10435 E	18.27893 N	78.10435 E
08	ReNew Warangal Solar Power Pvt Ltd	18.57 N	78.86 E	18.575534 N	78.860413 E
09	Devishi Renewable Energy Pvt Ltd	29.04 N	79.22 E	29.0497399 N	79.222841 E
10	Devishi Solar Power Pvt Ltd	29.06 N	79.19 E	29.0497399 N	79.222841 E
11	Sunworld Energy Pvt Ltd	29.20 N	79.08 E	29.208627 N	79.086677 E
12	Acme Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)	16.69 N	78.42 E	16.966462 N	77.651767 E
13	Acme Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)	17.43 N	79.28 E	17.434986 N	79.284074 E
14	ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)	16.71 N	78.47 E	18.796471 N	78.634222 E
15	ACME Mahbubnagar Solar Energy Pvt Ltd-3 (PADMAJIWADI)	18.40 N	78.21 E	18.4138412 N	78.2151276 E
16	ACME Mahbubnagar Solar Energy Pvt Ltd-1 (MANTHANI)	18.69 N	79.63 E	18.688100 N	79.629544 E

The deviations only correct the typo errors and do not relate to any other part of the methodology. The Deviation doesn't alter the project design, monitoring approach, and emission reduction calculations. The nature of deviation is permanent.

Assessment team checked all the new updated geo-coordinates of the SPVs (KML file) and found that SPVs are showing the exact location of the project site.VVB has verified that the proposed change doesn't alter the project design, monitoring approach, additionality and emission reduction calculations. The nature of deviation is permanent.

Deviation-15:

Following Deviation 7 approval during the fourth verification (Monitoring period 25-April-2021 to 24-September-2021 (Inclusive of both days)),

Assessment team confirmed during the remote audit (interview) from PP that The ACME Rewari Solar Power Pvt Ltd. (50 MW) and ACME Kurukshetra Solar Energy Pvt Ltd. (50 MW) are excluded from the grouped project activity since 01-July-2020. The project's capacity, initially documented as 1207.05 MW, is revised to 1107.50 MW. Moreover, the estimated annual emission reduction values have been adjusted from 2,078,589 tCO_{2e} to 1,920,889 tCO_{2e}, reflecting a conservative approach. Thus, it is acceptable to the VVB team.

The deviation does not relate to any other part of the methodology and fundamental aspects remain unchanged, including the design, monitoring approach, additionality, and emission reduction calculations. The nature of deviation is permanent.

VVB has verified that the proposed change doesn't alter the project design, monitoring approach, additionality and emission reduction calculations. The nature of deviation is permanent.

3.4 Grouped Project

This is a grouped project. However, there is no addition of any new project instance during this verification inline with the VCS Standard Version 4.5.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

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

The project activity is a 1,107.50 MW solar power project. grouped project having 16 project activity instances with 15 small scale project activity and 01 large scale project activity. implemented by ACME Cleantech Solution Private Limited, in Telangana, Andhra Pradesh, Karnataka, Rajasthan and Uttarakhand state in India.

The Details of project location:

Activity Instances	Village	District	State	Name of the SPVs	Latitude	Longitude
01	Jagathiyal	Karimnagar	Telangana	Sunworld Solar Power Pvt Ltd	18.82203 N	79.10108 E

	Siricilla	Karimnagar	Telangana	ReNew Ranga Reddy Solar Power Pvt Ltd	18.30450 N	78.88827 E
	Annathsagar,	Medak	Telangana	ReNew Medak Solar Energy Pvt Ltd	18.14728 N	78.29110 E
	Beeravelly	Adilabad	Telangana	ReNew Nizamabad Solar Energy Pvt Ltd	19.13129 N	78.251088 E
	AnanthaSagar	Medak	Telangana	ACME PV Powertech Private Limited (Sadashivpet)	17.701571 N	77.813153 E
	Bhongir	Nalgonda	Telangana	ACME Solar Power Technology Private Limited	17.721751 N	78.975642 E
	Bhiwadi	Kadapa	Andhra Pradesh	Athena Bhiwadi Solar Power Pvt Ltd	14.086597 N	78.461025 E
	Hisar	Kadapa	Andhra Pradesh	Athena Hisar Solar Power Private Limited	14.104121 N	78.465313 E
	Karnal	Kadapa	Andhra Pradesh	Athena Karnal Solar Power Private Limited	14.120740 N	78.452512 E
	Chitaguppa	Kaithal	Karnataka	ACME Kaithal Solar Power Private Limited	17.732182 N	77.217419 E
	Amaravati	Raichur	Karnataka	ACME Babadham Solar Power Private Limited	15.98979 N	76.93002 E
	Bidi	Belagavi	Karnataka	ACME Koppal Solar Energy Private Limited	17.212184 N	76.777021 E
	Malchapur	Bidar	Karnataka	ACME Vijayapura Solar Energy Pvt Ltd	17.918732 N	77.372409 E
	Bhadla	Jodhpur	Rajasthan	ACME Rewa Solar Energy Pvt Ltd	27.477468 N	71.990588 E
	Bap, Bhadla	Jodhpur	Rajasthan	Ayana Chittorgarh Solar Energy Pvt. Ltd	27.350000 N	72.140000 E
02	Kalvasrirampur	Karimnagar	Telangana	ReNew Karimnagar Solar Power Pvt Ltd	18.521019 N	79.554364 E
03	Manthini	Karimnagar	Telangana	ReNew Purvanchal Solar Power Pvt Ltd	18.689688 N	79.632532 E
04	Jangaon	Karimnagar	Telangana	ReNew Rewanchal Solar Power Pvt Ltd	17.800414 N	79.153588 E
05	Gudhur	Karimnagar	Telangana	ReNew Neemuch Solar Power Pvt Ltd	18.79589 N	78.63609 E
06	Nandipet	Karimnagar	Telangana	ReNew Fazilka Power Pvt Ltd (Nandipet)	18.859975 N	78.18131 E
07	Lingampet Bayampally	Nizamabad	Telangana	ReNew Narwana Solar Power Pvt Ltd (Lingampet)	18.27893 N	78.10435 E
08	Mallaram	Karimnagar	Telangana	ReNew Warangal Solar Power Pvt Ltd	18.575534 N	78.860413 E
09	Kailashpuri, Gadarpur	Udham Singh Nagar	Uttarakhand	Devishi Renewable Energy Pvt Ltd	29.0497399 N	79.222841 E
10	Kailashpuri, Gadarpur	Udham Singh Nagar	Uttarakhand	Devishi Solar Power Pvt Ltd	29.0497399 N	79.222841 E

11	Ratanpura	Udham Singh Nagar	Uttarakhand	Sunworld Energy Pvt Ltd	29.208627 N	79.086677 E
12	Kalwakurthy	Mehboobnagar	Telangana	Acme Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)	16.966462 N	77.651767 E
13	Mothkur	Yadadri	Telangana	Acme Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)	17.434986 N	79.284074 E
14	Kalwakurthy	Mehboobnagar	Telangana	ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)	18.796471 N	78.634222 E
15	Kalwakurthy	Mehboobnagar	Telangana	ACME Mahbubnagar Solar Energy Pvt Ltd-3 (PADMAJIWADI)	18.413841 N	78.215127 E
16	Nagaram	Peddapally	Telangana	ACME Mahbubnagar Solar Energy Pvt Ltd-1 (MANTHANI)	18.688100 N	79.629544 E

Verification team confirmed during desk review from the Google Earth and Google Map that the location of the project activity including the coordinates. Now the geodetic coordinates show the exact location of the project activity. There is deviation in the geodetic coordinates of the project coordinates from the registered PD and previous verification report. VVB has verified that the proposed change doesn't alter the project design, monitoring approach, additionality and emission reduction calculations. The nature of deviation is permanent.

Assessment team checked the commissioning certificates^{1/} of each instance and confirmed that the dates of Commission for each Solar plants are correct. Assessment team also confirm during remote audit with the PPs representatives that there is no change in project design and the project is implemented as per the description provided in the VCS PD except one deviation request by PP during current monitoring period related to reconfigurations of the equipment's under monitoring plan of the grouped project activity. The project boundary includes the electricity generation equipment at the project site, substation and the regional grid (now Indian grid).

Activity Instance	SPV Name	State	Capacity (MW)	Date of Commissioning
1	Sunworld Solar Power Pvt Ltd	Telangana	30	15-November-2017
	ReNew Ranga Reddy Solar Power Pvt Ltd		30	02-June-2017
	ReNew Medak Solar Energy Pvt Ltd		45	14-July-2017
	ReNew Nizamabad Solar Energy Pvt Ltd		50	11-September-2017
	ACME PV Powertech Private Limited (Sadashivpet)		50	07-July-2017

Activity Instance	SPV Name	State	Capacity (MW)	Date of Commissioning
	ACME Solar Power Technology Private Limited		50	Commissioning date: 05-February-2018 Commercial Operation Start date: 07-February-2018
	Athena Bhiwadi Solar Power Pvt Ltd	Andhra Pradesh	50	05-July-2018
	Athena Hisar Solar Power Private Limited		50	21-June-2018
	Athena Karnal Solar Power Private Limited		50	Commissioning date: 15-June-2018 Commercial Operation Start date: 20-June-2018
	ACME Kaithal Solar Power Private Limited	Karnataka	40	24-January-2018
	ACME Babadham Solar Power Private Limited		40	22-January-2018
	ACME Koppal Solar Energy Private Limited		40	Commissioning date: 16-March-2018 Commercial Operation Date: 15-April-2018
	ACME Vijayapura Solar Energy Pvt Ltd		40	23-January-2018
	ACME Rewa Solar Energy Pvt Ltd	Rajasthan	100	24-September-2018
	Ayana Chittorgarh Solar Energy Pvt. Ltd	Rajasthan	250	26-October-2019
2	ReNew Karimnagar Solar Power Pvt Ltd	Telangana	15	02-March-2017
3	ReNew Purvanchal Solar Power Pvt Ltd		15	23-February-2017
4	ReNew Rewanchal Solar Power Pvt Ltd		15	24-March-2017
5	ReNew Neemuch Solar Power Pvt Ltd		15	25-March-2017
6	ReNew Fazilka Power Pvt Ltd (Nandipet)		15	13-March-2017
7	ReNew Narwana Solar Power Pvt Ltd (Lingampet)		15	24-February-2017
8	ReNew Warangal Solar Power Pvt Ltd		15	03-March-2017
9	Devishi Renewable Energy Pvt Ltd	Uttarakhand	12.5	19-February-2017

Activity Instance	SPV Name	State	Capacity (MW)	Date of Commissioning
10	Devishi Solar Power Pvt Ltd		12.5	19-February-2017
11	Sunworld Energy Pvt Ltd		12.5	10-February-2017
12	ACME Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)	Telangana	10	26-September-2017
13	ACME Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)		10	17-Septemeber-2017
14	ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)		10	11-September-2017
15	ACME Mahbubnagar Solar Energy Pvt Ltd-3 (PADMAJIWADI)		10	09-September-2017
16	ACME Mahbubnagar Solar Energy Pvt Ltd-1 (MANTHANI)		10	12-September-2017
Total				1,107.5

Technical Specifications of the 16 project activity instances

Assessment team also checked the technical details of the Solar plants installed onsite from documents submitted by PP and previous verification reports. The same is cross checked from the photographs of the number plates, module capacity/^{01/} etc. submitted by PP & also cross checked from the technical details from Manufacturer.

The assessment team interviewed remotely with the plant site personals in order to verify the status of the project implementation of the monitoring plan. It has also been verified as per the guidelines in ACM0002: Grid-connected electricity generation from renewable sources, Version 19.0 and AMS I.D. Grid connected renewable electricity generation, Version 18. that the calculations for the GHG emission reductions are done in accordance with the aforesaid methodology. Technical specifications of the Solar PV Modules are described in the Appendix 06.

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

Assessment team confirms following during the verification remote audit:

1. Start date of the project activity is 10-February-2017 as mentioned in the registered VCS PD/4/.
2. Below is the issuance of project history, VVB team found history of the below audit trail is correct:

S. no	Monitoring period	Audit Type
1	10-February-2017 to 28-February-2018 (both days inclusive)	Joint Validation and 1 st Verification
2	01-March-2018 to 31-January-2020 (Inclusive of both days)	2 nd Verification
3	01-February-2020 to 24-April-2021 (Inclusive of both days)	3 rd Verification
4	25-April-2021 to 24-September-2021(Inclusive of both days)	4 th Verification
5	25-September-2021 to 25-April-2022 to (Inclusive of both days)	5 th Verification
6	26-April-2022 to 31-January-2023 (Inclusive of both days)	6 th Verification (Ongoing)

3. An undertaking letter dated 13-september-2023 has been submitted by PP for no double counting with any other GHG program. PP also has given a written declaration that project has not claimed and will not claim from other form of GHG credit. Assessment team also checked that the projects are not registered under the REC mechanism of India and the same can be cross-checked at <https://www.recregistryindia.nic.in/>. Also, VVB confirms that project activity is not included in ET program and not used for compliance with an emission trading program or to meet binding limits on GHG emissions. PP has given a written declaration that the credit claimed under VCS only for the current monitoring period will not be claimed under any other GHG mechanism nor rejected.
4. Assessment team confirms that this is the 6th monitoring under VCS and covers the activity from 26-April-2022 to 31-January-2023 (inclusive of both dates). The project activity adopts renewable crediting period of 10 years period and can be renewed for maximum 2 times. 10-February-2017 is the start date and 09-February-2027 will be end date of the first crediting period^{6/}.

The GHG credits from 26-April-2022 to 31-January-2023 will be claimed under VCS only. At any point of time during the crediting period, the project proponent will abide by the “No Double Counting”^{12/}.

5. Assessment team checked and found that the Project proponent of the project activity mentioned in Section 1.3 of monitoring report is correct^{6/}:
6. Assessment team also checked the details of other entity mentioned in Section 1.3 of monitoring report and found correct^{6/}.
7. The quantified emission reduction calculation for the monitoring period is correct and conservative. Assessment team also compared overall achieved VCUs with the estimated VCUs and found that the actual VCUs is 1,638,125 tCO₂e by whole grouped project, which is 10.77% higher than the estimated emission reductions 14,78,821 tCO₂e (19,20,889 tCO₂e/365 days x 281 days) during this monitoring period.
8. Project activity claimed credit under VCS only for the current monitoring period and during previous validation and verification and credit will not be claimed under any other form of environmental credit and other GHG mechanism nor rejected.

CL 01, CL 02, CAR 01 and CAR 02 were raised during the verification process and closed successfully.

SUSTAINABLE DEVELOPMENT:

The project's operations yield positive outcomes for the local environment and employment in the neighbouring area. By harnessing clean electricity through Solar PV technology, the project actively reduces the reliance on fossil fuels, directly aligning with SDG 7. This shift towards cleaner energy sources not only contributes to sustainable energy goals but also translates into emission reductions that support the objectives of SDG 13.

PP has provided the Training related to soft and technical skills during the current monitoring period contributed in SDG 4 as below:

Activity Instance	SPVs Name	No. of trainings
1	Sunworld Solar Power Pvt Ltd	41
	ReNew Ranga Reddy Solar Power Pvt Ltd	5
	ReNew Medak Solar Energy Pvt Ltd	53
	ReNew Nizamabad Solar Energy Pvt Ltd	11
	ACME PV Powertech Private Limited (Sadashivpet)	7
	ACME Solar Power Technology Private Limited	8
	Athena Bhiwadi Solar Power Pvt Ltd	59
	Athena Hisar Solar Power Private Limited	
	Athena Karnal Solar Power Private Limited	
	ACME Kaithal Solar Power Private Limited	24
	ACME Babadham Solar Power Private Limited	18
	ACME Koppal Solar Energy Private Limited	14
	ACME Vijayapura Solar Energy Pvt Ltd	28
	ACME Rewa solar energy private limited	19
	Ayana Chittorgarh Solar Energy Pvt. Ltd	24
2	ReNew Karimnagar Solar Power Pvt Ltd	4
3	ReNew Purvanchal Solar Power Pvt Ltd	14
4	ReNew Rewanchal Solar Power Pvt Ltd	4
5	ReNew Neemuch Solar Power Pvt Ltd	5
6	ReNew Fazilka Power Pvt Ltd (Nandipet)	4
7	ReNew Narwana Solar Power Pvt Ltd (Lingampet)	4
8	ReNew Warangal Solar Power Pvt Ltd	5
9	Devishi Renewable Energy Pvt Ltd	19
10	Devishi Solar Power Pvt Ltd	21
11	Sunworld Energy Pvt Ltd	13
12	ACME Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)	35
13	ACME Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)	55
14	ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)	12
15	ACME Mahbubnagar Solar Energy Pvt Ltd-3 (PADMAJIWADI)	4
16	ACME Mahbubnagar Solar Energy Pvt Ltd-1 (MANTHANI)	7
Total		517

VVB team has assessed the training documents and found mentioned training has been conducted during the current monitoring period. Sustainable development contribution provided in Table 1 of the Final MR of the current monitoring period.

Further, in line with para 3.17.1, VCS project standard Version 4.5 “The project proponent must demonstrate that a project contributes to at least three SDGs by the end of the first monitoring period, and in each subsequent monitoring period.” Thus, PP has provided project’s contribution towards SDGs 7.2, 4.4 and 13.0 in table 1 of Final monitoring period version 04 of the current monitoring period. Verification team verified the same with the Training details^{14/} and Training attendance sheet^{14/} submitted by PP along with the monitoring report and found both inline.

VVB team verified details provided in table 1 of Final monitoring period version 04 of the current monitoring period. Thus, acceptable to VVB team.

4.2 Safeguards

4.2.1 No Net Harm

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

The project activity promotes environmental and socio-economic well-being as it results in zero GHG emissions due to installation and operation of clean, renewable energy technology for electricity generation. The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013⁸. This report clearly mentioned that solar/Solar power project activity operations do not result in direct air pollution, noise pollution. Moreover, also as per the Central Pollution Control Board of India notification⁹ solar/solar project falls under White Category and are practically non-polluting.

⁸ <https://smartnet.niua.org/sites/default/files/resources/report-on-developmental-impacts-of-RE.pdf>

⁹ <https://cpcb.nic.in/openpdffile.php?id=TGF0ZXN0RmlsZS9MYXRlc3RfMTE4X0ZpbmFsX0RpcmVjdGlvb250MucGRm>

4.2.2 Local Stakeholder Consultation

Local stakeholder consultation has been conducted at the time of project registration. For ongoing stakeholder's communication, PP have maintained grievance register/^{15/} at the site office. All the stakeholders are happy with the implementation and operation of the project activity and no negative comments envisaged for the project activity. Complaint/suggestion/feedback register is maintained at site as a part of ongoing communication with stakeholders in line with clause 3.19.5 of VCS Standard, ver. 4.5 and appropriate actions taken time to time by PP.

Assessment team checked the grievance register/^{15/} provided by PP and found that local stakeholders can anytime lodge their grievances if any in the register over the operational life time of the project. During current monitoring period few grievances was received mentioned in section 2.2 of monitoring report and same has been resolved same has been verified by VVB team. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate. Assessment team during the remote observed that, Grievance register is maintained at project location. Thus, no discrepancies were observed in this section. CAR 02 was raised during the verification process and closed successfully. please refer Appendix 02.

4.3 AFOLU-Specific Safeguards

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

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the VCS PD. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the VCS PD.
Findings	CL 03 was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CL.
Conclusion	Baseline Emissions: The baseline Emissions for a given year is calculated by multiplying the energy baseline with the grid emission factor. The grid in this case is 'Indian Grid' Formula Used: - $BE_y = EG_{PJ, y} \times EF_{grid, CM, y}$ Where, BE_y = Baseline Emissions in year y, tCO₂e $EG_{PJ, y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh) $EF_{grid, CM, y}$ = Combined margin CO₂ emission factor for grid connected power

	generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO₂e/MWh) Ex-ante parameters: EF_{grid,CM,y} : Combined margin emission factor for National Grid (Indian grid) in year y for the implemented grouped project activity. where Combined margin emission factor is 0.9475 tCO₂/MWh for Indian grid fixed for entire crediting period. Verification team found same was used in the ER calculations. Ex ante value of emission factor is taken from CEA database, Version 13, June 2018¹⁰ used to use Tool to calculate the emission factor for an electricity system (version 07.0). Verification team checked the EF value and found in consistent with registered PD^{1/}. Values are as follows: EF_{grid,OM,y} = 0.9726 tCO₂/MWh EF_{grid,BM,y} = 0.8723 tCO₂/MWh EF_{grid,CM,y} = 0.9475 tCO₂/MWh Ex-post parameter: EG_{facility,y} = Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid in year y = 1,728,924.68 MWh The verification team has checked the entire monthly JMR reports/^{11/} for net electricity generated & supplied to the grid and crosschecked same with the JMR/^{11/} raised State Utilities towards PP for the monitoring period. All values are found correct in ER sheet/^{7/}. All the parameters are monitored and recorded as per the monitoring plan in the MR/^{6/}. However, PPs have apportioned the values for the first and last month of the monitoring period where dates are not matching with JMR cycle. Apportioning found appropriate and conservative. The calculations/measurement of net electricity supplied to grid is under purview of state electricity board and the PP/Project activity Instance owner has no role on it. PP/Project activity Instance owner gets value of net electricity supplied to grid and hence this parameter is mentioned as a part of monitoring plan. Leakage: As per approved PD, para 43 of the small-scale methodology AMS.I. D (version 18.0) and para 57 of the large-scale methodology ACM0002 (Version 19.0), Leakage emissions are not considered The net electricity supplied the grid by the project activity during the monitoring period is 1,728,924.68 MWh. The generation values have been cross checked with JMR and were found to be consistent. All the energy meters of accuracy class 0.2s are under the
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¹⁰ https://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver13.pdf

	purview of the state electricity boards. The details of electricity meters are provided in Appendix 5 of this report. All relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement/determination method, the correctness of the values applied for ER calculation^{7/}, the accuracy, and applied QA/QC measures. Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors. BE_y (baseline emissions), tCO₂e BE_y = 1,728,924.68 MWh x 0.9475 tCO₂/MWh = 1,638,125 tCO₂e (round down values) As per applied methodology ACM0002, Version 19.0, the VCS PD, project emission is considered zero as the project activity involved Solar power generation^{4/}. PE_y = As per– AMS.I. D (version 18.0), ACM0002 (Version 19.0), all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected. As the project activity involved solar power project emissions (PE_y) are taken as zero. Leakage: AMS.I. D (version 18.0), ACM0002 (Version 19.0), Leakage emissions are not considered for the project activity^{18/}. Hence, ER_y = BE_y – PE_y – LE_y = 1,638,125 – 0- 0 = 1,638,125 tCO₂e (round down values) Verification team confirms that the monitoring has been carried out in accordance with the monitoring plan contained in the registered VCS PD^{4/}. Assessment team confirmed that the GHG emission reductions and removals have been quantified correctly in line with the registered VCS PD^{4/}.
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4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	The verification team checked the Calibration details of the monitoring meters with the calibration certificates.
Findings	No CAR was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	The verification team checked the break down log for the monitoring period ^{13/} . During the remote interview, the feeder wise location of the solar plants is confirmed.

	The metering arrangement is bi-directional energy meters (Main and Check) of accuracy class 0.2s at the State Electricity Board (SEBI) sub-station. These electricity meters are being used by state electricity board for Share certificate statements. This meter also measures electricity exported/supplied by the plant to pooling substation and further to substation. This meter also measures electricity imported by the plant from the grid. These electricity meters are being used by state electricity board for monthly generation reports^{/11/}. The details like make, Serial number, Calibration dates etc.^{/5/}. are provided in appendix 05 of this report. Calibration of all the meters is done by state electricity board officials as per the industry standards. Verification team confirms that all the energy meters (main and check meter) installed at the substation are of accuracy class of 0.2s and are calibrated as per the calibration frequency mentioned in monitoring plan in VCS PD i.e. The calibration frequency of meters is once in 5 years^{/5/}. No delayed calibrations were observed in the project activity for this monitoring period. All the meters are of same accuracy class i.e., 0.2s as per the requirement of the registered PD. Interview during remote audit with O&M personnel also confirms the same. The calculation of net electricity supplied to grid is under purview of state electricity board and PP does not have control on it. Calibration details of the monitoring meters checked with calibration certificates submitted by PP and found that calibration frequency of 5 years is complied^{/5/}. Thus, no delayed calibration is observed and thus the same is found appropriate. The break down log is checked & details of same was provided in the monitoring report. and there is no major breakdown during the monitoring period. No unforced error observed. No sampling procedure applied for monitoring of the data parameter and entire documents were checked by the assessment team to arrive at positive verification conclusions. The monitoring plan is followed at the project site. The monitoring meters were calibrated in line with the registered monitoring plan and there was no delay in calibration observed. Thus, assessment team concluded that the evidences are sufficient in quantity, and appropriate for the quality, to determine the GHG reductions and removals. The quantified emission reduction calculation for the monitoring period is correct and conservative. Assessment team also compared actual VCU (1,638,125 tCO₂e) with the estimated VCU (14,78,821 tCO₂e) and found that the actual VCU is 10.77% higher than the estimated emission reduction which is due to variations in solar flow pattern, grid availability and other parameters which are not in the control of PP.
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4.6 Non-Permanence Risk Analysis

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

5 VERIFICATION OPINION

Applus+ Certification has been engaged^{/02/} by ACME Cleantech Solution Private Limited to perform the 6th verification of the “BUNDLED SOLAR PHOTOVOLTAIC PROJECT BY ACME”.

The project participants are responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project’s monitoring plan in the registered VCS PD^{/4/} and the applied methodology ACM0002 of Version 19.0 and AMS I.D version 18.0.

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Further, the verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for document verifications. The entire documents checked/Power plant verification conducted to arrive at positive verification conclusions. The verification team can confirm that:

- the project is operated as planned and described in the project document. However, deviation has been observed mention in section 3.3 of this report;
- the monitoring plan is as per the applied methodology;
- the monitoring process in Monitoring Report is as per the registered PD^{/4/};
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.
- A Reasonable Level of assurance was achieved as planned, during verification process.

Verification period: 26-April-2022 to 31-January-2023 (inclusive of both days).

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)

(01-May-2022 to 31-December-2022)	14,46,005	0	0	14,46,005
(01-January-2023 to 31-January-2023)	1,92,120	0	0	1,92,120
Total	1,638,125	0	0	1,638,125

The actual emission reductions achieved is 1,638,125 tCO₂ which is 10.77% higher than estimated i.e., 14,78,821. The higher emission reduction achieved is justified due to higher generation in the current monitoring period.

Year	<i>Ex-ante emissions reductions /removals</i>	<i>Achieved emissions reductions /removals</i>	<i>Percent difference</i>	<i>Justification for the difference</i>
(26-April-2022 to 31-January-2023)	14,78,821	1,638,125	10.77%	The higher emission reduction achieved is justified due to higher generation in the current monitoring period. The generation of electricity depends upon many other climatic conditions, which are not within the control of the project participant.

APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

No.	Author	Title	References to the document	Provider
1.	Respective State Utility	Commissioning certificates of the all-solar plant installed in different States of India issued by the Southern Power Distribution Company of Telangana Limited.	-	PP
2.	Applus	Contract of the project participant with the DOE. Ref. No. A+SH_SYST_TQC_VCS_VER_11823	20-April-2023	PP
3.	Manufacturer(s)	The operational lifetime of the project activity from the manufacturer (Technical specifications)	Manufacturer technical specifications	PP
4.	VERRA	Registered PD version 02 https://registry.terra.org/app/projectDetail/VCS/1753	29-January-2019	PP
5.	Respective state authority	Calibration Certificates of energy meters issued by the Ganga calibration Services Private Limited	-	PP
6.	NA	MR version 01 MR version 02 MR version 03 MR version 04	23-May-2023 21-September-2023 25-January-2024 25-November-2024	PP
7.	NA	Emission reduction sheet version 01 Emission reduction sheet version 02 Emission reduction sheet version 03(Final)	23-May-2023 21-September-2023 25-January-2024	PP
8.	PP	KML file for Geo-coordinates	-	PP
9.	SPVs and state board	Power Purchase Agreements between Northern Power Distribution Company of Telangana Limited and PP	-	PP
10.	NA	Tools/ guidelines used in the project activity - Glossary of CDM terms version 11 - VCS standard Version 4.5 - VCS Program Guide 4.4 - VCS verification report template Version 4.2	UNFCCC CDM/VCS web site	UNFCCC
11.	State Utility for JMR, PP for invoice	Monthly statement- JMR issued by the Northern Power Distribution Company of Telangana Limited & Invoices for the complete monitoring period	-	PP
12.	PP	Declaration regarding no participation in other GHG program for the concerned monitoring period.	22-August-2022	PP
13.	PP	Single line diagram	-	PP

No.	Author	Title	References to the document	Provider
14.	PP	Employment Training and attendance records for plant persons	-	PP
15.	PP	Grievance Register maintained at site	-	PP
16.	UNFCCC	CDM validation and verification standard for project activities, Version 03.0	-	UNFCCC
17.	Applus	Previous Verification Report (5 th verification report)	01-December-2022	PP
18.	UNFCCC	ACM0002 of Version 19.0 and AMS I.D version 18.0	-	UNFCCC

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

CL ID	01	Section no.	4.1	Date: 01-August-2023
Description of CAR				
1. PP is requested to submit copies of technical training records of the personnels involved in O&M. 2. PP is requested to submit Breakdown details/log of the project activity for the monitoring period. 3. PP is requested to submit the following documents to the VVB team: I. Commissioning certificates II. Technical specifications of all solar PV Modules. III. PPA IV. Calibration certificates of the current monitoring period				
Project participant response				Date: 21-September-2023
1. Copies of technical training records are now being submitted to Verification team. 2. During Current monitoring, there was No Major Breakdown happen. Therefore, Breakdown details are not provided. And Also, Generation during current monitoring is 2.23% higher than the estimated emission reduction. 3. Following documents to the VVB team are now being submitted. I. Commissioning certificates II. Technical specifications of all solar PV Modules. III. PPA IV. Calibration certificates of the current monitoring period				
Documentation provided by project participant				
1. Commissioning certificates 2. Technical specifications of all solar PV Modules. 3. PPA 4. Calibration certificates of the current monitoring period 5. Training Records 6. Daily Generation Record				
DOE assessment				Date: 05-october-2023
1. VVB team observe that PP has submitted technical training record for all the project activities. Which is found appropriate and relevant to the project activity. Hence, accepted and comment#01 is closed. 2. PP shall provide self-declaration for no major breakdown happen at the project site. Hence, comment#02 is open. 3. VVB team observe that PP has submitted following documents; • Commissioning certificates • PPA • Calibration certificates of the current monitoring period • Self-attested technical specification for all the project activity dated 10-october-2022				
Project participant response				Date: 25-January-2024
Undertaking letter is now being submitted to verification team for no major breakdown happen at the project site.				
Documentation provided by project participant				
Undertaking letter for No major breakdown				
DOE assessment				Date: 31-January- 2024
1. PP has submitted the Undertaking letter which states that there is no major breakdown was there during the applied monitoring period. This undertaking was found to be self-explanatory for the validation of the clear ER generation from the project.				
CL01 have been resolved and closed.				

CL ID	02	Section no.	4.1	Date: 01-August-2023
Description of CAR				
1. PP is requested to provide evidences for the contribution of SDGs for current monitoring period & over project lifetime. 2. Calibration details in the Appendix 1 and 3 of the MR versions 01 dated 23-May-2023 are twice mentioned. Clarify it.				
Project participant response				Date: 21-September-2023
1. JMR and Invoices for SDG 7 and SDG 13 and Training Records and for SDG 8 as evidence for Contribution of SDGs for current monitoring period are now being provided and SDG Details of previous verification are being mentioned in section 1.11. 2. Typo error regarding Calibration details is being corrected, now details are mentioned in only Appendix 1.				
Documentation provided by project participant				
1. Revised Monitoring Report 2. Revised Emission Reduction sheet				
DOE assessment				Date: 05-october-2023
1. PP has claimed SDG 4, Target 4.4: " By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.". PP to clarify, how the project activity complies with the mentioned target. Hence, comment#01 is open. 2. PP has submitted revised monitoring report. VVB team observe that in the same calibration details has been mentioned under appendix 1. However, some inconsistencies are observed in calibration date and same has been commented in revised monitoring report. Hence, comment#02 is open.				
Project participant response				Date: 25-January-2024
1. Regarding the SDG 4, Target 4.4, definition for computer-related activities among youth and adults, PP like to clarify that the project activity aligns with this target. Specifically, a total of 517 training sessions have been provided during the current verification process. These training sessions encompass a mix of on-site activities and computer-related tasks. I would like to inform you that the training records are currently being submitted to the verification team for their review. 2. Typo error regarding calibration date and now error are being corrected as per the submitted calibration report.				
Documentation provided by project participant				
Revised Monitoring report				
DOE assessment				Date: 31-January- 2024
1. PP as per the revised MR, has mentioned the training details of all 517traings have been provided under Appendix 2 which contains the name of all 16 SPVs name which conducted all 517 trainings for the applied monitoring period. 2. All typo errors and inconsistencies have been resolved.				
CL02 have been resolved and closed.				

CL ID	03	Section no.	4.4	Date: 01-August-2023
Description of CAR				
1. PP shall submit JMRs and invoices for the complete monitoring period of the project activity, to verify the energy generation and ERs. 2. In the section 4.2 of the submitted MR version 01, 'Source of data' section of the 'data ana parameters monitored' is not described as per the guidelines of the VCS Monitoring report template version 4.2. Corrective actions sought. 3. In the ER Sheet, Project activity basic details like project title is missing in the Tab 'Final VER Calc'. Corrective actions sought.				
Project participant response				Date: 21-September-2023
1. JMRs and invoices for the complete monitoring period of the project activity are now being provided to Verification Team. 2. 'Source of data' section of the 'data ana parameters monitored' is now described as per Registered PD and guidelines of the VCS Monitoring report template version 4.2, in the section 4.2 of the submitted MR version 02. 3. All Required details are now being mentioned in revised Emission Reduction sheet.				
Documentation provided by project participant				
1. JMRs and Invoices 2. Revised Monitoring Report 3. Revised Emission R Sheet				
DOE assessment				Date: 05-october-2023

1. VVB team observe that PP has submitted JMR's and invoices for entire crediting period. Which is found appropriate and relevant to the project activity. Hence, accepted and Comment#03 is closed.
2. VVB team observe that PP has submitted revised monitoring report and in the same under section 4.2 source of data has been described as per the guidelines of the VCS Monitoring report template version 4.2. Hence, comment#02 is closed.
3. VVB team observe that PP has submitted revised ER sheet and in the same Project activity basic details like project title, version & date has been mentioned. However, some inconsistencies (like generation value and date) have been observed in ER sheet. Hence, comment#03 is open.
Project participant response
Date: 25-January-2024
The generation values have been checked, and necessary corrections have been implemented. As a result, the ER sheet now accurately reflects the corrected generation values, ensuring consistency between the ER sheet and the Monitoring report.
Documentation provided by project participant
Revised ER sheet Revised Monitoring Report
DOE assessment
Date: 31-January-2024
3. Revised MR and ER sheet has all the information as correct and consistent between all the documents.
CLO3 have been resolved and closed.

CAR ID	01	Section no.	4.1	Date: 01-August-2023
Description of CAR				
1. Some sections of the Title page of the MR version 01 dated 23-May-2023 are not inline with guidelines of the VCS Monitoring report template version 4.2. Corrective action sought.				
2. As per the guidelines of the VCS Monitoring report template version 4.2, Verification period of the current monitoring report is found missing in the Table which is in the section 1.1 of the MR.				
3. Some geodetic co-ordinates of project activity are not showing the exact location of the project activity. PP requested to revise the coordinates and indicate the project boundaries if it is applicable. Kindly submit the KML file of project coordinates separately.				
4. PP requested to update the tool number of the following tools 'Tool for the demonstration and assessment of additionality', 'Tool to calculate the emission factor for an electricity system' and 'Tool to calculate the emission factor for an electricity system' in section 1.9 of the MR. Corrective action sought.				
Project participant response				Date: 21-September-2023
1. Section of title page of the monitoring report are corrected, now it is in-line with guidelines of the VCS Monitoring report template version 4.2.				
2. As per the guidelines of the VCS Monitoring report template version 4.2, Verification period of the current monitoring report is now being mentioned the Table which is in the section 1.1 of the MR.				
3. Some geodetic coordinates of the project activity are not precisely pinpoint its location, the project activity itself is readily identifiable using the submitted geo-coordinates. Furthermore, PP is submitting the KML file containing the project coordinates.				
4. Tool number are now being updated of following tools 'Tool for the demonstration and assessment of additionality', 'Tool to calculate the emission factor for an electricity system' and 'Tool to calculate the emission factor for an electricity system'.				
Documentation provided by project participant				
1. Revised Monitoring Report.				
2. KML File				
DOE assessment				Date: 05-october-2023
1. VVB team observe that PP has submitted revised monitoring report and in the same cover page of the monitoring report has been updated as per VCS Monitoring report template version 4.2. Hence, comment#01 is closed.				
2. VVB team observe that PP has submitted revised monitoring report and in the same Verification period of the current monitoring report has been provided in the Table under the section 1.1 of the MR. Hence, comment#02 is closed.				
3. PP has submitted revised monitoring report. VVB team observe that geo-coordinates have been updated. However, some geodetic coordinates of the project activity are not precisely pinpoint its location. Further, PP have submitted KML file containing the project coordinates to verify the same. Which is found relevant and appropriate to the project activity. Hence, comment#03 is closed.				
4. VVB team observe that PP has submitted revised monitoring report and in the same section 1.8 has been updated. Tool no, title and version has been mentioned, which is found appropriate. Hence, accepted and comment#03 is closed.				
CAR01 have been resolved and closed.				

CAR ID	02	Section no.	4.2.2	Date: 01-August-2023
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Description of CAR	
1. PP is requested to submitted supporting documents of ongoing communication with local stakeholders as per requirement of Para 3.17.18 and 3.17.19 of the VCS standard V.4.4 2. Summary of the grievances received during this monitoring period found missing in the monitoring report version 01. Also submit the copy of the grievance register. Corrective action sought. 3. As per the guidelines of the VCS Monitoring report template version 4.2, 'dates of announcements or meetings, periods during which input was sought'. Kindly mention the above details as per the template guidelines in the section 2.2 of the submitted MR version 01 dated 23-May-2023.	
Project participant response	Date: 21-September-2023
1. Grievance Register is now being provided to the verification team as the evidence of ongoing communication with local stakeholders. 2. No any grievances received during the current monitoring period, and same is mentioned in the revised Monitoring report. 3. The dates of announcements or meetings, Invitation date, meeting dates and other important dates are now being mentioned in revised Monitoring report.	
Documentation provided by project participant	
1. Grievance Register 2. Revised Monitoring Report	
DOE assessment	Date: 05-october-2023
1. VVB team observe that PP has submitted Grievance Register as the evidence of ongoing communication with local stakeholders. Which is found relevant and appropriate to the project activity. Hence, accepted and comment#01 is closed. 2. PP has submitted Grievance Register as the evidence. VVB observe that in the same some grievances have been reported. However, as revised monitoring report No any grievances received during the current monitoring period. Hence, comment#02 is open. 3. PP has submitted revised monitoring report. VVB team observe that in the same dates of meetings, Invitation date has been mentioned which is found appropriate to the project activity. Hence, accepted and comment#03 is closed.	
Project participant response	Date: 25-January-2024
Grievances received during the current monitoring period are now being incorporated in revised Monitoring report and being submitted to verification team.	
Documentation provided by project participant	
Revised Monitoring Report	
DOE assessment	Date: 31-January-2024
2. PP has corrected the inconsistency, as per section 2.2 of the MR, there is a mention of all reported grievances during the current monitoring period.	
CAR02 have been resolved and closed.	

CAR ID	03	Section no.	3.1	Date: 01-August-2023
Description of CAR				
PP is requested to submit the double counting declaration that the project activity is not participating in any other GHG programs.				
Project participant response				Date: 21-September-2023
The double counting declaration letter are now being submitted to verification team.				
Documentation provided by project participant				
Declaration for double counting				
DOE assessment				Date: 31-September-2023
VVB observe that PP has submitted declaration for no double counting dated 13-september-2023. Which is found appropriate and relevant to the project activity. Hence, accepted and CAR#03 is closed.				
CAR03 have been resolved and closed.				

CAR ID	04	Section no.	4.1	Date: 01-August-2023
Description of CAR				
1. PP is requested to revise the language of the Monitoring report as the project activity is already commissioned. 2. All the Line diagram provided are correct. However, PP is requested to maintain consistency in line diagram formats in the 'personal training' section of the 4.3 of the MR version 01 dated 23-May-2023. 3. During assessment editorial mistakes are observed, PP is requested to update font and format throughout the MR as per the guidelines of the VCS Monitoring report template version 4.2.				

Project participant response		Date: 21-September-2023
1. The Language of the Monitoring report is now being revised. 2. The consistency in Single line diagram formats is being followed throughout monitoring report. 3. Editorial mistakes are now being corrected, also the font size and format throughout the MR are being followed as per the guidelines of the VCS Monitoring report template version 4.2.		
Documentation provided by project participant		
1. Revised Monitoring Report		
DOE assessment		Date: 05-october-2023
1. VVB team observe that PP has submitted revised monitoring report and in the same language has been revised as the project activity is already commissioned. Hence, comment#01 is closed. 2. VVB team observe that PP has submitted revised monitoring report and in the same under section 4.3 Single line diagram formats made consistent. Hence, comment#02 is closed. 4. VVB team observe that PP has submitted revised monitoring report and in the same font size and format has been made consistent throughout the MR as per the guidelines of the VCS Monitoring report template version 4.2. Hence, comment#03 is closed.		
CAR04 have been resolved and closed.		

APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Lead Auditor/Technical Expert	OR	Takarkhede	Dr. Atul	TQC-Outsourced entity	Yes	No	Yes	Yes
2.	Auditor	OR	Shrivastava	Ishan	TQC-Outsourced entity	Yes	No	Yes	Yes
3	Observer	OR	Joshi	Trapti	TQC-Outsourced entity	No	No	No	No

Technical reviewer and approver of the verification and certification report

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

Short CVs of the Team:

Dr. Atul Takarkhede is Ph.D. (Environmental Sciences) from Institute of Science, RTM Nagpur University, Nagpur, and he has already published different technical papers related to environmental sciences. He counts with more than 11 years of experience in field of Environmental Auditing, consulting and accreditation. He is an expert in ISO 9001-14001, CO2/GHG Reporting, Carbon Foot Print, Energy, Water and Waste Management reporting for organizations' environmental performance. His professional portfolio is mainly related with carrying out EIA, conducting QA/QC of EIA Reports; conducting environmental/water audits; NABET requirements appliance, functional area expert in Water Pollution & Solid & Hazardous Waste management among others. Furthermore, he counts with solid experience on CDM-VCS-GS

consultancy and auditing. Currently he is associated with True Quality Certifications Private Limited and empanelled with Applus+ Certification to carry out GHG audits in the aforementioned schemes. Dr. Atul Takarkhede is based in Nagpur, India. Dr. Atul Takarkhede participated as part of the Audit Team as the Lead Auditor and Technical Expert for the assessment.

Mr. Ishan Shrivastava, has done bachelor of engineering in Mechanical Engineering from Rajiv Gandhi Proudyogiki Vishwavidyalaya, India. He has a year of working experience in India's one of the Maharatna Company i.e. GAIL (India) Limited in the area of Natural Gas, Energy & Environment. Currently, He is working in True Quality Certifications Pvt. Ltd. (An outsource entity for LGAI Technological Center, S.A. (Spain) "Applus+ Certification") since 2019 and has been involved as Auditor (Validator/Verifier) for Validation and Verifications of Project Activities (Renewable and nonrenewable projects) under CDM/VCS/GS4GG/GCC programs. Mr. Ishan Shrivastava is based in Indore, India. Mr. Ishan Shrivastava may participate as part of the Audit Team as Auditor for the assessment

Ms. Trapti Joshi has done Masters in Environmental Engineering from National Institute of Technology, Kurukshetra, Harayana, and Bachelor of Engineering in Civil Engineering from SGSITS, Indore, India. She has done Masters' research focused on Life Cycle Assessment of solid waste management : A case study of Indore City She has worked as Trainee with GHG Auditing team at VKU Certification for three months (Nov 2022 to Jan. 2023). Currently, She is working in True Quality Certifications Pvt. Ltd. (An outsource entity for LGAI Technological Center, S.A. (Spain) "Applus+ Certification") since March 2023 and has been involved in supporting Audit teams for Verifications of Project Activities (Renewable and non - Renewable projects) under CDM/VCS/GS4GG programs.

Mr. Simon Shen (Master's Degree in Thermal Energy Engineering, Bachelor's Degree in Environmental Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and review with Applus+, apart from the years of experience working as GHG Auditor and ISO 9001/14001 in TUV SUD for 3.5 years before he joined Applus+. Mr. Simon Shen has extensive experience also as former Applus+ Shanghai CDM Technical Manager. Mr. Simon Shen is based in Shanghai, China. Mr. Simon Shen may participate in the project's technical review team.

APPENDIX 4: ABBREVIATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CMS	Central Monitoring system
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
JMR	Joint Meter Reading Report
PP	Project Participant
VVB	Validation Verification Body
VCS	Verified Carbon Standards
VCU	Verified Carbon Unit(s)

APPENDIX 5: CALIBRATION DETAILS

Although, 5 years calibration frequency has been taken as mentioned in the Power Purchase Agreement and as per the registered PD, the validity of the calibration as mentioned in the calibration certificates are mentioned below. The error won't be applied as the meters are calibrated well before the end date of previous calibration as per the registered PD which is 5 years. Further there is no delay observed in Calibration of the energy meters. Thus, acceptable to assessment team.

Since metering arrangement, monitoring practice, accuracy class, calibration interval is under control of state electricity board, the PP do not have any control on monitoring practice and calibration of meters. The meter serial number and their calibration dates project activity instances are as below.

Project Instance Number	Name of the SPVs	Capacity (MW)	Main Meter Details	Check Meter Details	Calibration Date	Due date
1	Sunworld Solar Power Pvt Ltd	30	SL. No. APZ00191 Make: Secure Accuracy class: 0.2s	SL. No. APZ00192 Make: Secure Accuracy class: 0.2s	17-December-2019	16-December-2024
	ReNew Ranga Reddy Solar Power Pvt Ltd	30	SL. No. APZ00197 Make: Secure Accuracy class: 0.2s	SL. No. APZ00198 Make: Secure Accuracy class: 0.2s	29-November-2019	28-November-2024
	ReNew Medak Solar Energy Pvt Ltd	45	SL. No. APZ00188 Make: Secure Accuracy class: 0.2s	SL. No. APZ00189 Make: Secure Accuracy class: 0.2s	29-October-2020	28-October-2025
	ReNew Nizamabad Solar Energy Pvt Ltd	50	SL. No. APZ00194 Make: Secure Accuracy class: 0.2s	SL. No. APZ00195 Make: Secure Accuracy class: 0.2s	21-March-2020	20-March-2025
	ACME PV Powertech Private Limited (Sadashivpet)	50	SL. No. APZ00201 Make: Secure Accuracy class: 0.2s	SL. No. APZ00202 Make: Secure Accuracy class: 0.2s	19-September-2020	18-September-2025
	ACME Solar Power Technology Private Limited	50	SL. No. APZ00185 Make: Secure Accuracy class: 0.2s	SL. No. APZ00186 Make: Secure Accuracy class: 0.2s	09-November-2020	08-November-2025

Project Instance Number	Name of the SPVs	Capacity (MW)	Main Meter Details	Check Meter Details	Calibration Date	Due date
	Athena Bhiwadi Solar Power Pvt Ltd	50	SL. No.:AT-0501-A Make: Larsen & Toubro Limited Accuracy Class: 0.2s	SL. No.: AT-0502-A Make: Larsen & Toubro Limited Accuracy Class: 0.2s	10-September-2018	09-September-2023
	Athena Hisar Solar Power Private Limited	50	SL. No. AT-0496-A Make: Larsen & Toubro Limited Accuracy Class: 0.2s	SL. No. AT-0495-A Make: Larsen & Toubro Limited Accuracy Class: 0.2s	11-September-2018	10-September-2023
	Athena Karnal Solar Power Private Limited	50	SL. No. AT-0507-A Make: Larsen & Toubro Limited Accuracy Class: 0.2s	SL. No: AT-0508-A Make: Larsen & Toubro Limited Accuracy Class: 0.2s	11-September-2018	10-September-2023
	ACME Kaithal Solar Power Private Limited	40	SL. No. 17054932 Accuracy class: 0.2s	SL. No. 17054938 Accuracy class: 0.2s	03-March-2018	02-March-2023
	ACME Babadham Solar Power Private Limited	40	SL. No. 16113468 Accuracy class: 0.2s	SL. No. 17069195 Accuracy class: 0.2s	18-August-2020	17-August-2025
	ACME Koppal Solar Energy Private Limited	40	SL. No. 17115504 Accuracy class: 0.2s	SL. No. 17069212 Accuracy class: 0.2s	20-July-2020	19-July-2025
	ACME Vijayapura Solar Energy Pvt Ltd	40	SL. No. 17054962 Accuracy class: 0.2s	SL. No. 17054957 Accuracy class: 0.2s	09-June-2020	08-June-2025
	ACME Rewa Solar Energy Pvt Ltd	100	SL. No. 18053541 Make: L&T Accuracy Class: 0.2s	SL. No. 18053542 Make: L&T Accuracy Class: 0.2s	16-September-2020	15-September-2025
	Ayana Chittorgarh Solar Energy Pvt. Ltd	250	SL. No. 18053539 Make: L&T Accuracy Class: 0.2s	SL. No. 18053540 Make: L&T Accuracy Class: 0.2s	26-September-2021	25-September-2026
2	ReNew Karimnagar Solar Power Pvt Ltd	15	SL. No. APZ00131 Make: Secure Apex 150 Accuracy class: 0.2s	SL. No. APZ00132 Make: Secure Apex 150 Accuracy class: 0.2s	09-January-2021	08-January-2026
3	ReNew Purvanchal Solar Power Pvt Ltd	15	SL. No. APZ00102 Make: Secure Accuracy class: 0.2s	SL. No. APZ00103 Make: Secure Accuracy class: 0.2s	16-November-2019	15-November-2024

Project Instance Number	Name of the SPVs	Capacity (MW)	Main Meter Details	Check Meter Details	Calibration Date	Due date
4	ReNew Rewanchal Solar Power Pvt Ltd	15	SL. No. APZ00106 Make: Secure Accuracy class: 0.2s	SL. No. APZ00107 Make: Secure Accuracy class: 0.2s	05-January-2021	04-January-2026
5	ReNew Neemuch Solar Power Pvt Ltd	15	SL. No. APZ00111 Make: Secure Accuracy class: 0.2s	SL. No. APZ00112 Make: Secure Accuracy class: 0.2s	18-July-2019	17-July-2024
6	ReNew Fazilka Power Pvt Ltd (Nandipet)	15	SL. No. APZ00116 Make: Secure Accuracy class: 0.2s	SL. No. APZ00117 Make: Secure Accuracy class: 0.2s	21-June-2019	22-June-2024
7	ReNew Narwana Solar Power Pvt Ltd (Lingampet)	15	SL. No. APZ00126 Make: Secure Accuracy class: 0.2s	SL. No. APZ00127 Make: Secure Accuracy class: 0.2s	23-July-2020	22-July-2025
8	ReNew Warangal Solar Power Pvt Ltd	15	SL. No. APZ00121 Make: Secure Accuracy class: 0.2s	SL. No. APZ00122 Make: Secure Accuracy class: 0.2s	13-December-2019	12-December-2024
9	Devishi Renewable Energy Pvt Ltd	13	SL. No. UKD02401 Make: Secure Accuracy class: 0.2s	SL. No. UKD02402 Make: Secure Accuracy class: 0.2s	01-November-2019	31-October-2024
10	Devishi Solar Power Pvt Ltd	13	SL. No. UKD02400 Make: Secure Accuracy class: 0.2s	SL. No. UKD02399 Make: Secure Accuracy class: 0.2s	01-November-2019	31-October-2024
11	Sunworld Energy Pvt Ltd	13	SL. No. UKD02416 Make: Secure Accuracy class: 0.2s	SL. No. UKD02417 Make: Secure Accuracy class: 0.2s	10-September-2021	09-September-2026
12	ACME Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)	10	SL. No. APZ00321 Make: Secure Accuracy class: 0.2s	SL. No. APZ00322 Make: Secure Accuracy class: 0.2s	29-May-2019	28-May-2024
13	ACME Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)	10	SL. No. APZ00316 Make: Secure Accuracy class: 0.2s	SL. No. APZ00317 Make: Secure Accuracy class: 0.2s	24-August-2020	25-August-2025
14	ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)	10	SL. No. APZ00301 Make: Secure Accuracy class: 0.2s	SL. No. APZ00302 Make: Secure Accuracy class: 0.2s	16-March-2020	15-March-2025

Project Instance Number	Name of the SPVs	Capacity (MW)	Main Meter Details	Check Meter Details	Calibration Date	Due date
15	ACME Mahbubnagar Solar Energy Pvt Ltd-3 (PADMAJIWADI)	10	SL. No. APZ00312 Make: Secure Accuracy class: 0.2s	SL. No. APZ00313 Make: Secure Accuracy class: 0.2s	27-July-2020	26-July-2025
16	ACME Mahbubnagar Solar Energy Pvt Ltd-1 (MANTHANI)	10	SL. No. APZ00306 Make: Secure Accuracy class: 0.2s	SL. No. APZ00307 Make: Secure Accuracy class: 0.2s	16-November-2019	15-November-2024

APPENDIX 6: TECHNICAL SPECIFICATIONS OF THE PROJECT ACTIVITY INSTANCES

Technical Specifications of the 16 project activity instances:

SPV NAME		Sunworld Energy Pvt Ltd, Bazpur
Site		Bazpur-2
Module	Make	BYD
	specification of module	260, 265 Watts
	Total No of Module	58872
Inverter	Make	TBEA
	AC power	1000 KW
	Total Number of Inverter	12
Transformer	Make	Electrotherm India Pvt Ltd
	Transformer KVA	4.5 Mva (1), 4 MVA (2)
	Total Numb PT	3
SPV NAME		ACME Yamunanagar Solar Power Pvt Ltd-1 (KOSGI)
Site		Kosgi
Module	Make	Trina
	specification of module	320, 325, 330 Watts
	Total No of Module	41860
Inverter	Make	Tbea
	AC power	1250 KW
	Total Number of Inverter	8
Transformer	Make	Aum Transformer
	Transformer KVA	-

	Total Numb PT	2
SPV NAME		ACME Yamunanagar Solar Power Pvt Ltd-2 (MOTHKUR)
Site		Mothkur
Module	Make	ZN shine, TALESUN
	specification of module	315, 320 325 Watts
	Total No of Module	42120
Inverter	Make	Tbea
	AC power	1250 KW
	Total Number of Inverter	8
Transformer	Make	Pete Hammond
	Transformer KVA	
	Total Numb PT	2
SPV NAME		ACME Vijaypura Solar Power Pvt. Ltd.
Site		Halburga
Module	Make	Trina ,Zn Shine, Risen
	specification of module	315, 320, 325, 330 Watts
	Total No of Module	167620
Inverter	Make	Tbea
	AC power	1250 KWkw
	Total Number of Inverter	32
Transformer	Make	Prime Meiden
	Transformer KVA	1X32/40MVA
	Total Numb PT	1
SPV NAME		ACME Solar Power Technology Private Ltd, Bhongir
Site		Bohngir
Module	Make	YINGLI, GCL

	specification of module	265, 270, 260
	Total No of Module	245160
Inverter	Make	Sungrow
	AC power	2500 KW
	Total Number of Inverter	20
Transformer	Make	Voltamp
	Transformer KVA	-
	Total Numb PT	2
SPV NAME		ACME Mahbubnagar Solar Energy Pvt Ltd-3
Site		Padmajiwadi
Module	Make	Jollywwod, Trina solar
	specification of module	370, 325, 320, 330 Watts
	Total No of Module	39500
Inverter	Make	Tbea
	AC power	1250 KW
	Total Number of Inverter	8
Transformer	Make	Aum Transformer
	Transformer KVA	-
	Total Numb PT	2
SPV NAME		ACME Mahbubnagar Solar Energy Pvt Ltd-2 (GODHUR)
Site		Godhur-2
Module	Make	BYD
	specification of module	265, 260 Watts
	Total No of Module	52368
Inverter	Make	Tbea
	AC power	1250 KW
	Total Number of Inverter	8

Transformer	Make	Pete Hammond
	Transformer KVA	-
	Total Numb PT	2
SPV NAME		ACME Rewa Solar Energy Pvt Ltd
Site		Bhadla-L2
Module	Make	ZnShine, GCL
	specification of module	315, 320, 325,330 Watts
	Total No of Module	464760
Inverter	Make	Tbea
	AC power	3750 KW/5000KW
	Total Number of Inverter	26
Transformer	Make	Silchar, Toshiba,Reychen Rpg
	Transformer KVA	
	Total Numb PT	14
SPV NAME		ACME Kaithal Solar Power Pvt. Ltd.
Site		Chittuguppa
Module	Make	Trina, Znshine, Yingli
	specification of module	320, 325 Watts
	Total No of Module	168440
Inverter	Make	Tbea
	AC power	1250 KW KW
	Total Number of Inverter	32
Transformer	Make	Prime Meiden
	Transformer KVA	32/40 MVA
	Total Numb PT	1
SPV NAME		Devishi Renewable Energy Pvt Ltd, Gadarpur

Site		Gadarpur-1
Module	Make	BYD
	specification of module	255, 260, 275 Watts
	Total No of Module	62304
Inverter	Make	Tbea
	AC power	1000 KW
	Total Number of Inverter	12
Transformer	Make	Electrotherm India Pvt Ltd
	Transformer KVA	4.5 Mva (1), 4 MVA (2)
	Total Numb PT	3
SPV NAME		ACME PV Powertech Private Limited
Site		Sadashivpet
Module	Make	RISEN, GCL, BYD
	specification of module	270, 265, 260, 275 Watts
	Total No of Module	242616
Inverter	Make	Sungrow
	AC power	2520 KW
	Total Number of Inverter	20
Transformer	Make	Transformer & Rectifiers
	Transformer KVA	-
	Total Numb PT	2
SPV NAME		ACME Mahbubnagar Solar Energy Pvt Ltd-1 (MANTHANI)
Site		Manthani
Module	Make	BYD
	specification of module	260, 265 Watts
	Total No of Module	51864
Inverter	Make	Tbea

	AC power	1250 KW
	Total Number of Inverter	8
Transformer	Make	Aum Transformer
	Transformer KVA	-
	Total Numb PT	2
SPV NAME		Ayana Chittorgarh Solar Energy Pvt. Ltd
Site		Bhadla-L3
Module	Make	ZNSHINE, GCL & ECONESS
	specification of module	315, 320, 325,330 Watts
	Total No of Module	462210
Inverter	Make	Tbea
	AC power	3750 KW/5000KW
	Total Number of Inverter	26
Transformer	Make	Silchar, Toshiba
	Transformer KVA	
	Total Numb PT	14
SPV NAME		ACME Babadham Solar Power Pvt. Ltd.
Site		Byagwat
Module	Make	Trina,Znshine, Yingli,Talesun
	specification of module	315, 320, 325 Watts
	Total No of Module	168240
Inverter	Make	TBEA
	AC power	1250 KW KW
	Total Number of Inverter	32
Transformer	Make	Prime Meiden
	Transformer KVA	40MVA
	Total Numb PT	1

SPV NAME		Devishi Solar Power Pvt Ltd
Site		Gadarpur-2
Module	Make	BYD, Goldi
	specification of module	255, 260, 275, 270
	Total No of Module	62136
Inverter	Make	Tbea
	AC power	1000 KW
	Total Number of Inverter	12
Transformer	Make	Electrotherm India Pvt Ltd
	Transformer KVA	4.5 Mva (1), 4 MVA (2)
	Total Numb PT	3
SPV NAME		Devishi Renewable Energy Pvt Ltd, Gadarpur
Site		Gadarpur-1
Module	Make	BYD
	specification of module	255, 260, 275
	Total No of Module	62304
Inverter	Make	Tbea
	AC power	1000 KW
	Total Number of Inverter	12
Transformer	Make	Electrotherm India Pvt Ltd
	Transformer KVA	4.5 Mva (1), 4 MVA (2)
	Total Numb PT	3
SPV NAME		ACME Koppal Solar Energy Pvt. Ltd.
Site		Farhatabad
Module	Make	Seraphim, Yingli, Znshine
	specification of module	320, 325

	Total No of Module	168700
Inverter	Make	Tbea
	AC power	1250 KW kW
	Total Number of Inverter	32
Transformer	Make	Prime Meiden
	Transformer KVA	40 MVA
	Total Numb PT	3

SPV Name	Athena Bhiwadi Solar Power Pvt Ltd
AC Capacity in MW	50
Plan DC Capacity in MWp	72.5
DC Capacity Connected	72.5
Tilt details	3 degree & 24 Degree
PV technology	Polycrystalline
Make	Risen, CECEP, Znshine, trusun
specification of module	315, 320,325,330,335 Watts
Total No of Module	223300
Make	Risen, CECEP, Znshine, trusun
AC power	2.5 MW
Total Number of Inverter	20
Output	2.5 MW
Make	TBEA
Transformer KVA	1.IDTs 10000KVA - 4 Nos , 5000 KVA -2Nos and 2. Auxillary tarfo - 50 KVA - 2Nos
Total Numb PT & Trafo	Power transformer not available
SPV Name	Athena Karnal Solar Power Pvt Ltd
AC Capacity in MW	50

Plan DC Capacity in MWp	73.5
DC Capacity Connected	73.5
Tilt details	3 degree & 24 Degree
PV technology	Poly crystalline
Make	CECEP, Znshine, LIGHTWAY, SERAPHIM
specification of module	315 , 320,325,330,335 Watts
Total No of Module	226440
Make	CECEP, Znshine, LIGHTWAY, SERAPHIM
AC power	2.5 MW
Total Number of Inverter	20
Output	2.5 MW
Make	TBEA
Transformer KVA	1.IDTs 10000KVA - 4 Nos, 5000 KVA -2Nos and 2. Auxillary tarfo - 50 KVA - 2Nos
Total Numb PT & Trafo	Power transformer not available
SPV Name	Athena Hisar Solar Power Pvt Ltd
AC Capacity in MW	50
Plan DC Capacity in MWp	72.5
DC Capacity Connected	72.5
Tilt details	3 degree & 24 Degree
PV technology	Polycrystalline
Make	Risen, Adani CECEP, taleseun
specification of module	315 , 320,325,330,335 Watts
Total No of Module	222180
Make	Risen, Adani CECEP, taleseun
AC power	2.5 MW
Total Number of Inverter	20
Output	2.5 MW

Make	TBEA
Transformer KVA	1.IDTs 10000 KVA - 4 Nos , 5000 KVA -2Nos and 2. Auxillary tarfo - 50 KVA - 2Nos
Total Numb PT & Trafo	Power transformer not available
SPV Name	ReNew Purvanchal Solar
Site	Manthani
AC Capacity	15
Plant DC Capacity (CEIG)	19.72
DC Capacity Connected	19.72
Tilt details	3&25
PV technology	Polycrystalline
Make	Risen
specification of module	255, 260, 265
	13920, 31008, 30600
Total No of Module	75528
Make	TBEA
AC power	1250
Total Number of Inverter	12
Output (V)	400
Make	Kryfs(3),PowerWare(1)
Transformer KVA	5000, 50
Total Numb PT ,IDT, Aux	4
SPV Name	ReNew Narwana Solar Power Pvt Ltd
Site	Lingampet
AC Capacity	15
Plant DC Capacity (CEIG)	
DC Capacity Connected	19.30

Tilt details	3&25
PV technology	Polycrystalline
Make	BYD
specification of module	255, 260
	15720, 58800
Total No of Module	74520
Make	TBEA
AC power	1250
Total Number of Inverter	12
Output (V)	380
Make	KRYFS (1), CENTURY (1), UTTAM(1),Powerware (1)
Transformer KVA	5000, 5000, 5000.50
Total Numb PT ,IDT, Aux	4
SPV Name	Renew karimnagar solar power pvt ltd
Site	KalwaSrirampur
AC Capacity	15
Plant DC Capacity (CEIG)	19.35
DC Capacity Connected	19.35
Tilt details	3& 25
PV technology	Polycrystalline
Make	Risen BYD
specification of module	255, 260, 265, 260
	19248, 21000, 33912
Total No of Module	74160
Make	TBEA
AC power	1250
Total Number of Inverter	12
Output (V)	380

Make	UTTAM (1), CENTURY(2), Powerware (1)
Transformer KVA	5000, 5000, 50
Total Numb PT ,IDT, Aux	4
SPV Name	Renew Fazlika Solar Power Pvt Ltd
Site	Nandipet
AC Capacity	15
Plant DC Capacity (CEIG)	19.41
DC Capacity Connected	19.41
Tilt details	3,15,25
PV technology	Polycrystalline
Make	Risen
specification of module	255, 260, 265
	13464, 57912, 3288
Total No of Module	74832
Make	TBEA
AC power	1250
Total Number of Inverter	12
Output (V)	380
Make	UTTAM (2), KRYFS (1), Powerware(1)
Transformer KVA	5000,5000,50
Total Numb PT ,IDT, Aux	4
SPV Name	ReNew Neemuch Solar Power Pvt Ltd
Site	Godhur
AC Capacity	15
Plant DC Capacity (CEIG)	19.45
DC Capacity Connected	19.45
Tilt details	3&25

PV technology	Polycrystalline
Make	Talesun
specification of module	260, 265
	25896, 48048
Total No of Module	73944
Make	TBEA
AC power	1250
Total Number of Inverter	12
Output (V)	380
Make	Rachyem, KRYFS, PETE, Powerware (1)
Transformer KVA	5000, 5000, 5000, 50
Total Numb PT ,IDT, Aux	4
SPV Name	Sun World Solar Power Private Limited
Site	Jagtial
AC Capacity	30
Plant DC Capacity (CEIG)	39.2
DC Capacity Connected	38.9382
Tilt details	3&25
PV technology	Polycrystalline
Make	Talesun, BYD, Yingli
specification of module	260, 265, 260, 265, 265
	5,94,31,88,625
Total No of Module	148056
Make	TBEA
AC power	1250
Total Number of Inverter	24
Output (V)	380
Make	Voltamp (7), Powerware (2)

Transformer KVA	5000, 50
Total Numb PT ,IDT, Aux	9
SPV Name	ReNew Nizamabad Power Pvt Ltd
Site	Nirmal
AC Capacity	50
Plant DC Capacity (CEIG)	64.627
DC Capacity Connected	64.627
Tilt details	3&25
PV technology	Polycrystalline
Make	Talesun, GCL, BYD
specification of module	260, 265, 265, 270, 255
	24888, 170040, 48504
Total No of Module	243432
Make	Sungrow
AC power	2500
Total Number of Inverter	20
Output (V)	360
Make	AUM (2), PETE (5), VOLTAMP (3), T&R(2) Powerware(2)
Transformer KVA	5000, 5000, 5000, 20000/25000, 50
Total Numb PT ,IDT, Aux	14
SPV Name	ReNew Rewanchal Solar Power Plant
Site	Jangaon
AC Capacity	15
Plant DC Capacity (CEIG)	19.37
DC Capacity Connected	16.72

Tilt details	3 & 25
PV technology	Polycrystalline
Make	BYD Risen
specification of module	260, 265, 260, 265
	31320, 32376
Total No of Module	63696
Make	TBEA
AC power	1250
Total Number of Inverter	12
Output (V)	380
Make	Kryfs(3), PowerWare(1)
Transformer KVA	5000,50
Total Numb PT ,IDT, Aux	4
SPV Name	Renew Warangal Power Private Limited
Site	Mallaram
AC Capacity	15
Plant DC Capacity (CEIG)	19.47
DC Capacity Connected	19.47
Tilt details	3&25
PV technology	Polycrystalline
Make	GCL
specification of module	260, 265, 270
	2184, 46176, 24696
Total No of Module	73056
Make	TBEA Sungrow
AC power	1250*8 2500*2
Total Number of Inverter	10

Output (V)	380
Make	Rachyem (2), AUM (1),Powerware (1)
Transformer KVA	5000, 5000, 50
Total Numb PT ,IDT, Aux	4
SPV Name	ReNew Medak Power Private Limited
Site	Medak
AC Capacity	45
Plant DC Capacity (CEIG)	58.44
DC Capacity Connected	58.45
Tilt details	3&25
PV technology	Polycrystalline
Make	Talesun, GCL, BYD
specification of module	260, 265, 265, 270, 260
	220200
Total No of Module	220200
Make	TBEA
AC power	1250
Total Number of Inverter	36
Output (V)	380
Make	Rachyem(4), KRYFS (2), UTTAM (2), Volt Amp (1) T&R(2), Power Ware(2)
Transformer KVA	5000, 5000, 5000, 5000, 20000/25000, 50
Total Numb PT , IDT, Aux	13
SPV Name	Rangareddy Solar Power Private Ltd
Site	Siricilla
AC Capacity	30

Plant DC Capacity (CEIG)	37.23
DC Capacity Connected	37.22
Tilt details	3&25
PV technology	Polycrystalline
Make	BYD
specification of module	260, 265
	31392, 109704
Total No of Module	141096
Make	TBEA
AC power	1250
Total Number of Inverter	24
Output (V)	380
Make	Rachyem (5), KRYFS (1), Power Ware (2)
Transformer KVA	5000,5000,50
Total Numb PT, IDT, Aux	8