BUNDLED SOLAR POWER PROJECT BY MAHINDRA SUSTEN PRIVATE LIMITED

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Summary:

Verification purpose: Mahindra Susten Private Limited has commissioned the LGAI Technological Center, S.A. (Applus+ Certification) to carry out the 5th verification of the project "Bundled Solar Power Project by Mahindra Susten Private Limited" (VCS ID 1767) for the monitoring period 24-September-2021 to 23-April-2022 (Inclusive of both days). The 'Bundled Solar Power Project by Mahindra Susten Private Limited' has total installed capacity of 205 MW (AC) located in different states (Telangana, Gujarat and Rajasthan) of India through SPVs. The project activity has been commissioned on dated 29-June-2016 and continuous operational since commissioning. The bundled project activity is a greenfield project and involves installation of photovoltaic solar power plants and generate electricity. The generated electricity by the project activity is supplied to Indian grid. Thus, the project has contributed to reduction of GHG emissions by displacing fossil fuel dominated grid-based electricity with renewable energy – Solar energy based renewable electricity.

Start date of the project activity is 29-June-2016. This is the day which the first phase of project activity was commissioned and started emission reductions. An undertaking /16/ has been submitted by PP for double counting confirming that no GHG reduction will be claimed in any other GHG mechanism for current monitoring period. Project activity undergoes continued operation and no major breakdown had taken place during current monitoring period.

The current monitoring period covered the period from 24-September-2021 to 23-April-2022 (inclusive both days), under the crediting period of 29-June-2016 to 28-June-2026. During the current

verification period, the project activity has supplied 223,762.78 MWh of electricity, and thus contributing to the GHG reductions 215,993 tCO_2e.

A risk-based approach has been followed to perform this verification activity. In the course of verification, 06 Corrective Action requests (CAR), 01 Clarification Requests (CLs) and 00 Forward action requests (FARs) were raised and successfully closed. 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 VVB with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred to as Applus+ Certification) has been appointed by 'Mahindra Susten Private Limited' to perform the verification of the "Bundled Solar Power Project by Mahindra Susten Private Limited" under VCS standard 4.3 and project guide version 4.2. The objective of this verification activity is to have an independent third party for the assessment of the project design, monitoring report and Verification report and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular; the project's baseline, monitoring plan is assessed against the applied methodologies "ACM0002- Consolidated baseline methodology for grid-connected electricity generation from renewable resources (version 18.1). The project's 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 program guide 4.2 and VCS standard, version 4.3

- *CDM Validation and Verification Standard for project activities, version 03.0/9/*
- *CDM Project Standard for project activities, version 03.0/9/*
- *VCS standard version 4.3/8/*
- *VCS program guide version 4.2/8/*

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 carbon units (VCUs).

The scope of the verification is the independent and objective review of the monitoring report (MR). The MR is reviewed against the relevant criteria (see above) and decisions by the CDM Executive Board and VCS executive board, including the approved baseline and monitoring methodology. The verification was based on the guidance given in the CDM Validation and Verification Standard for the project activities, version 03.0, review against registered joint VCS PD & MR/7/ and Final Validation report, CDM Project Standard for project activities, version 03.0 and VCS program guide, version 4.2 and standard version 4.3.The VVB 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 VCUs. 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 remote audit or document verifications. The entire documents checked/plant verification conducted to arrive at positive verification conclusions.

CONTENTS

1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (Hereinafter referred as Applus+ Certification) has been appointed by Mahindra Susten Private Limited to perform the verification of the project entitled "Bundled Solar Power Project by Mahindra Susten Private Limited" under VCS standard version 4.3 and program guide version 4.2. The objective of this verification activity is to have an independent third party for the assessment of the project design, monitoring report and final verification report and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular; the project's baseline and monitoring plan is assessed against applied methodologies –

- ACM0002 (version 18.1) "Consolidated methodology for grid-connected electricity generation from renewable sources"/10/
- The project's 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 program guide, version 4.2 and standard version 4.3.
- CDM Validation and Verification Standard for project activities, version 03.0/9/
- CDM Project Standard for project activities, version 03.0/9/

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 estimated verified carbon units (VCUs).

1.2 Scope and Criteria

The scope is defined as an independent and objective review of the Monitoring report (MR) for the period from 24-September-2021 to 23-April-2022 (inclusive both days) prepared as per the registered VCS JOINT PD & MR /7/ and registered approved methodologies ACM0002 (version 18.1)/10/. 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 4.3/8/ and VCS Program guide version 4.2, including the approved baseline and monitoring methodologies applied. The verification was based on the requirements in the CDM validation and verification standard for project activities, Version 03.0/9/, CDM Project Standard for project activities, version 03.0 /9/and VCS program guide, version 4.2/8/ and standard version 4.3/8/.

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. There are no material errors, overestimation of ER, omission or misstatement. The verification team has reviewed all the documents like commissioning certificate, Energy generation records, fuel records etc.

1.3 Level of Assurance

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. The entire documents checked/ remote audit verification conducted to arrive at positive verification conclusions.

1.4 Summary Description of the Project

The total installed capacity of the bundled solar PV project 205 MW at different states (Telangana, Gujarat, and Rajasthan) of India through SPVs. The installation of a bundled Solar PV project in the state of Telangana, Gujarat, and Rajasthan. The project is promoted by Mahindra Susten Private Limited and Divine Solren Private Limited. The project activity was commissioned on dated 29-June-2016.

Below is the detail of all SPVs along with commissioning date of project activity.

Name of SPVs	AC Capacity (MW)	COD	State
Clean solar Renewable Energy Private Limited	30	29-June-2016	Telangana
Divine Solren Private Limited	50	22-July-2017	Telangana
Astra Solren Private Limited	40	31-March-2017	Gujarat
	25	02-June-2017	Gujarat
Mahindra Susten Private Limited	60	31-March-2017	Rajasthan

Initially, Mahindra Susten Private Limited was the sole owner of the bundled project activity, however, Divine Solren Private Limited has also been appointed as a PP (refer section 3.3 of this report).

The previous monitoring period covered the period from 01-April-2021 to 23-September-2021 (First and last date included) and contributed 189,309 tCO_2e GHG reductions. During the Current Monitoring Period from 24-September-2021 to 23-April-2022(First and last date included) the

project activity has supplied 223,762.78 MWh of electricity, and thus contributing to the GHG reductions of 215,993 tCO_2e.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification Process: The project assessment is based on the Clean Development Mechanism Validation and Verification Standard for project activities, version 03.0 and VCS standard version 4.3 and VS program guide, version 4.2 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:

- A desk review of the monitoring Report against the registered Joint VCS PD & MR;
- Follow-up interviews with project participant;
- 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. LGAI Technological Center, S.A. (Applus+ Certification) has developed a specific checklist customized for the project. The checklist demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from verifying the identified criteria.

Appointment of the assessment team

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

The composition of audit team shall be approved by the LGAI Technological Center S.A. (Applus+ Certification) ensuring that the required skills are covered by the team.

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

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

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

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Jitendra Mohan Singh	LA/TE	YES	YES	NA	YES
Mr. Srikanth Meesa	TR	YES	YES	NA	YES

The complete list of CVs is included as Appendix 3 of this report.

Document review

The Monitoring Report (version 01)/5/ submitted by the PP was reviewed against the approved methodology, registered VCD Joint PD & MR /7/, 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 was conducted by LGAI Technological Center S.A. (Applus+ Certification) who performed interviews, telephone conferences with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report 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)/5/ on dated 22-August-2022 submitted by the project participant 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 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 final 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 project owners, the positive verification opinion and relevant documents are submitted to the VCS secretariat through the VCS web-platform.

2.2 Document Review

The documents listed in Appendix 1 of this report have been used to review , corss check and compare data provided by project participants.

2.3 Interviews

The key personnel interviewed are summarised in the table below:

Sr. No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Jain	Mr. Ajai	Site In-charge, Mahindra Susten Private Limited	07-July-2022 (Via zoho meeting)	Project Implementation, JMR & invoicing procedure, calibration, grievance mechanism	Jitendra Mohan Singh
2.	Khan	Mr. Suhail	Site In-charge, Mahindra Susten Private Limited			
3.	Ramnath	Khedkar	Site In-charge Astra Solren Private Limited			
4.	-	Mr. Ninesh	Carbon Assets Manager, Mahindra Susten Private Limited			
5.	-	Mr. Navneet	Site In charge Cleansolar Renewable Energy Private Limited			
6.	-	Mr. Naveen	Site Incharge Divine Solren Private Limited			

7.	Bhiyani	Mr. Sushil	Local stakeholders (Rajasthan)		Local Area Development and issue	
8.	Ladva	Mr Ninesh	Local stakeholders (Gujarat)			
9.	-Sahu	Mr. Prakash Kumar	Consultant EKI Energy Services Ltd		Monitoring Report, Emission Reductions calculation	
10.	Pandey	Ms. Bhavini	Consultant EKI Energy Services Ltd		Monitoring Report, Emission Reductions calculation	

2.4 Site Inspections

The verification team has not performed the onsite visit for the verification of this project activity. The exemption for conducting an onsite visit for this project activity is allowed by VERRA, as the VCS has not a specific requirement to preform the site visits, however, an adequate level of assurance has been achieved during the verification processes.

Moreover, a remote audit was conducted for the project activity on 07-July-2022. Remote audit was conducted due to ongoing COVID-19 pandemic situation in the entire country of India. Considering the prevalent conditions of COVID-19 pandemic, VVB decided to skip the onsite visit to avoid any potential health risks. Moreover, The VCS Program does not explicitly mandate remote audits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (as per Section 4.1.2 of the VCS Standard, version 4.3.

The VVB has taken alternative measures for ensuring a reasonable level of assurance while conducting the Verification process, using standard auditing techniques and advanced communication solutions in order to be able to interview the relevant stakeholders and to cross-check the relevant documentation, implementation of the project activity and its design, monitoring performance, equipment in the project activity, etc. (all the evidences and processes of cross-check are detailed within this Verification Report). The interviewed personnel and the scope and mean of interview are listed in above Section 2.3 of this Verification Report.

Technical details & metering/monitoring arrangement verified through onsite photographs, name plates and calibration certificates shared by PP. All the documents were cross checked to ensure conservative estimation of emission reduction.

During the remote audit, the PP representatives were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of 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/, Power Purchase Agreement (PPA)/13/, Certificate for share of electricity issued by respective state utility (JMR)/3/, invoice/4/, calibration certificates/17/, etc. were also verified.

During the remote audit, the PP representatives/ O & M personal 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 JMR issued by state electricity board/3/ & monthly Invoices/4/ for the complete monitoring period, O&M agreement /15/on-site Photographs /14/, meter specifications, key technical specifications of the major equipment like panel etc. provided to assessment team were verified through video conference call using ICT tool (Zoho meeting) to establish the current status and the implementation of the Project Activity

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 which need to be clarified for LGAI Technological Center S.A. (Applus+ Certification)'s positive conclusion on the project design and Monitoring report. The Corrective Action Requests and Clarification Requests raised by LGAI Technological Center S.A. (Applus+ Certification) were resolved during communications between the Client and LGAI Technological Center S.A. (Applus+ Certification) to guarantee the transparency of the validation process, the concerns raised and responses given are summarized below in the Appendix 2.

The final MR Version 04/5/ dated 22-August-2022 submitted by project participant 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 VCS objectives. The VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Project design document and Monitoring report	00	00	00
Description of project activity	01	02	00
Application of selected baseline and monitoring methodology and selected standardized baseline			
- Applicability of methodology and standardized baseline	00	00	00
- Deviation from methodology	00	00	00
- Clarification on applicability of methodology, tool and/or standardized baseline	00	00	00

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Project boundary	00	00	00
Establishment and description of baseline scenario	00	00	00
Demonstration of additionality	00	00	00
Emission reductions	00	02	00
Calibration details	00	01	00
Monitoring plan	00	00	00
No Net harm assessment	00	00	00
Local stakeholder consultation	00	00	00
Others (please specify)- - Regarding double counting Declaration - ER Sheet - Supporting documents	00	01	00
Total	**01**	**06**	**00**

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

2.5.1 Forward Action Requests

This is 5th verification of project activity. One FAR was raised during previous verification and no FAR has been raised during this verification process (refer Appendix 2).

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 been registered under the VCS only (Project ID 1767[1]) with crediting period from 29-June-2016 to 28-June-2026.

As per the MR and undertaking provided, PP would not consider the credit from any other mechanism for the current monitoring period. The undertaking/16/ is provided to confirm that there is no any double accounting for current monitoring period. Further, assessment team confirms that the project activity is not participating in any other form of environmental credits.

[1] https://registry.verra.org/app/projectDetail/VCS/1767

Also, the project activity is not registered for REC benefits. The same was verified by checking the REC website[2].

3.2 Methodology Deviations

The project activity has applied correct methodology which are as per the registered joint VCS Joint PD & MR. Verification team confirmed that there is no request for methodology deviation applied neither during this monitoring period nor during previous monitoring periods.

3.3 Project Description Deviations

This is 5th verification period of the Project activity and PP has not sought any project description deviation during current monitoring period. However, PP has sought following project desciption deviaitons duing the previous veifications .

Deviation 1: Addition of Divine Solren Private Limited as a Project Participant

Initially, Mahindra Susten Private Limited was the only Project Participant. However, Divine Solren Private Limited has also been added as a project participant. The VCS-Accession-Representation form in this regard has been submitted to VERRA. Further, a declaration dated 28-June-2021 was provided to confirm that the project ownership and right of use as per the VCS compliance rest with Mahindra Susten Private Limited and Divine Solren Private Limited.

Deviation 2: Changes in geographical co-ordinates for Cleansolar Renewable Energy Private Limited, Divine Solren Private Limited and Mahindra Susten Private Limited project sites.

During earlier verification, geographical co-ordinate were verified using google earth software and it was observed that the same mentioned for Cleansolar Renewable Energy Private Limited and Divine Solren Private Limited are slightly incorrect as project locations were not accurately represented by the registered co-ordinates. Further, PP also revised geo coordinates of Mahindra Susten Private Limited project site along with the earlier two sites.

Deviation 3: Changes in commissioning date of Solar PV plant

In the registered VCS JOINT PD & MR, commissioning date for 25 MW Astra Solren Private Limited project located in Gujarat state, was mentioned as 23-May-2017. However, during earlier verification, based on document review, commissioning date of the project was observed as 02-June-2017. Hence, the commissioning date had been revised.

Deviation 4: Change in billing meter details

[2] https://www.recregistryindia.nic.in/

In the registered VCS Joint PD & MR/3/, meter details for 25 MW project of Astra Solren Private Limited were mentioned under meter details for 40 MW project of Astra Solren Private Limited in Annexure 2. PP has updated these details.

PP had requested above deviations during the earlier monitoring period which were approved during the 3rd periodic verification.

Deviation 5: Addition of apportioning method (unitary method) for electricity generation

This bundled project activity is located in three different states. Each state has different billing cycle which causes a mismatch in emission reduction calculation which is based on electricity generation. PP had not mentioned any specific apportioning approach in the registered VCS Joint PD & MR /3/ which can take care of the same.

Hence, PP has proposed a day wise apportioning method (unitary method) to be used for export and import values for electricity generation and example of which is presented below;

Example: For Divine Solren Private Limited, in September, 2021, the total electricity export and import are 6390.6 MWh and 54.6 MWh respectively for the billing period from 26-August-2021 to 26-September-2021. PP has decided to apply unitary method i.e. dividing electricity values by the number of days in the month and then multiplying with number of days covered in the monitoring period.

Thus, the value derived for export is 6,390.6/31*29=5,978.30 MWh and import is 54.6/31*29=51.07 MWh[3]. It was verified that the outcomes of the unitary method are lower than the month values with appropriate ratio of the days covered in the monitoring period and thus conservative.

Deviation 5 which is permanent in nature approved in previous verification period .

All the deviations as observed above, are properly described and justified by the PP in the final monitoring report version 05 dated 23-February-2022 (during previous verification.

The proposed deviation does not impact the capacity or technology. It is verified and confirmed that it does not affect additionality of the Project. The deviation does not impact the project baseline. It is verified and confirmed that, it does not affect appropriateness of the baseline scenario.

[3] DSPL billing cycle is from 26th of proceeding month to 26th of next month and the values of September is taken to show as an example for which the billing cycle was 26 -August- 2021 to 26- September- 2021 but previous monitoring period ended in 23-September-2021. Thus, subtracting 26- August-2021 from 26-September 2021 the value comes to 31 days that's why it has been divided to the total of export and import and when 23 September 2021 is subtracted from 26 August 2021 the value is 29. So it has been multiplied in the total export and import for the apportioning to match the monitoring date.

3.4 Grouped Project

The project does not involve any addition of new project activity and thus the project do not fall under grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During the remote audit, it was concluded that the project has been implemented as per registered VCS Joint PD & MR/7/. The same has been verified from the commissioning certificate/1/ and other statutory clearances submitted. During the current monitoring period it was observed that no unforeseen situation evolved which can impact the operation of the project activity. Scheduled maintenance was carried out as per the instruction of the manufacturer and the same is acceptable to the assessment team.

There was no major breakdown reported during the monitoring period as verified from the Plant Log sheets/18/ submitted by PP. Only Schedule maintenance was carried out as per instruction of manufacture and the same.

Project location is confirmed by the assessment team through interview with PP during remote audit and assessment of monitoring report. Assessment team also checked the technical details of the project site containing latitude and longitude of the project site and confirmed that the details as mentioned in the registered VCS Joint PD & MR/7/ are correct.

The solar power plant locations[4] and commissioning dates are provided in following table.

Name of SPVs	Capacity (MW)		Date of Commissioning	State	Geographical co-ordinates
	AC	DC			
Cleansolar Renewable Energy Private Limited	30	36.6	29-June-2016	Gingurthi, village, tandur Mandal, Vikarabad district, Telangana	17° 21' 55.4" 77° 31' 45.9"

[4] https://www.google.com/maps/d/viewer?mid=1FS1BQdF7zVmUqxTYV1NnvtzwODy9DtM0&ll=22.733740151096505%2C74.74424859999999&z=6

Divine Solren Private Limited	50	59.8	22-July-2017	Mallapur & Mujgi village, Nirmal & Dilwarpur Mandal, Telangana	19° 02' 39.6" 78° 17' 16.1"
Astra Solren Private Limited	40	52	31-March-2017	Charanka village, Santalpur Tehsil, Patan district, Gujarat	23° 54' 00.0" 71° 12' 00.0"
	25	32.49	02-June-2017		
Mahindra Susten Private Limited	60	78.01	31-March-2017	Goyalri & Gajner village, Kolayat Tehsil, Bikaner district, Rajasthan	27° 53' 48.6" 72° 56' 48.3"

The start date of the project is 29-June-2016. This is the date on which 'Clean solar Renewable Energy Private Limited' Solar PV power plant was commissioned and project started emission reduction which is in line with VCS Standard version 4.3. Assessment team checked the Commissioning certificates/1/and confirmed that the dates of Commissioning of all solar plant are correct.

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period except to the changes in contact details of PPs. The technical details were checked by the verification team with technical specification of/11/ and found consistent. The specification of solar power plant as below:

30 MW Plant by, Cleansolar Renewable Energy Private Limited

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Multi-crystalline and Thin Film
2	Make of modules installed	Trina Solar and Solar Frontier
3	Model of the modules installed	Trina Solar TSM-310PC14; Solar Frontier SF170-S
4	Make & Model of Invertor	SMA - Sunny Central 2200
5	Number of Inverters	14
6	Make & Number of Transformers	Power transformer-1, make-CGL; Inverter duty transformers-14, make-Danish

50 MW plant by Divine Solren Private Limited

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Multi-crystalline
2	Make of modules installed	Hanwha Solar
3	Model of the modules installed	Hanwa Solar HSL 72 P6-PC-1-315/320
4	Make & Model of Invertor	SMA - Sunny Central 1000CP-XT
5	Number of Inverters	46

6	Make & Number of Transformers	Power transformer-2, make-CGL ; Inverter duty transformers-12, make-Danish

40 MW plant by Astra Solren Private Limited

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Multi-crystalline and Thin Film
2	Make of modules installed	Canadian Solar and First Solar
3	Model of the modules installed	Canadian Solar 320 P Mix, First Solar FS 4117A-3
4	Make & Model of Invertor	SMA - Sunny Central 1000CP-XT, GE Power – LV5 1000kW
5	Number of Inverters	40
6	Make & Number of Transformers	Power transformer-2, make-CGL ; Inverter duty transformers-11, make-Danish

25 MW plant by Astra Solren Private Limited

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Multi-crystalline
2	Make of modules installed	Hanwha Solar
3	Model of the modules installed	Hanwa Solar HSL 72 P6-PC-1-320
4	Make & Model of Invertor	SMA - Sunny Central 1000CP-XT
5	Number of Inverters	25
6	Make & Number of Transformers	Power transformer-1, make-CGL ; Inverter duty transformers-7, make-Danish

60 MW plant by Mahindra Susten Private Limited

Sl. No.	Technical details of the equipment	Description
1	Technology Used	Multi-crystalline and Thin Film
2	Make of modules installed	Canadian Solar and First Solar
3	Model of the modules installed	Canadian Solar 320 P Mix, First Solar FS 4117A-3
4	Make & Model of Invertor	SMA - Sunny Central 1000CP-XT, GE Power – LV5 1000kW
5	Number of Inverters	60
6	Make & Number of Transformers	Power transformer- 1, make-Bharat Bijlee ; Inverter duty transformers-18, make-Danish

The assessment team confirmed through interview with O & M personnel during remote audit that there are no changes into the project design during this monitoring period. It was found that the monitoring plan was implemented as per the requirement of the VCS Joint PD & MR /7/ & approved monitoring Plan and applied methodologies. The organisational role and responsibility as mentioned in the registered VCS Joint PD & MR /7/ is followed onsite. The calibration of energy

meter is carried out as per the accepted deviation in calibration frequency during the monitoring period from 29-June-2026 to 28-June-2026. There is no delay in calibration of meters observed.

The Project participant contribution from the project activity towards sustainable development in accordance to host country: The same has been described in Section 1.11 of MR.

The project activity fulfilled the contribution of sustainable development to the host country by implementing environmentally friendly technology and creating employment opportunities to the local community. Same is confirmed during remote audit. PP has demonstrated SDG contributions in the section 1.11 of the MR and submitted training records/12/for same. However, according to the Appendix 2- the document history mentioned in the VCS Standard Version 4.3 (latest version), Project Proponent is required to demonstrate contributions to a minimum of three SDGs, effective immediately for all projects registered on or after 20-January-2023. Projects registered before 20 January 2023 shall demonstrate contributions to at least three SDGs by 20 January 2025[5]. Since this project is registered before 20-January-2023, SDG reporting is not required for the project activity.

VCUs generated from this verification will not be used for other trading program to avoid any kind of double counting. The same is confirmed by the PP during the verification remote audit. Assessment team also conducted independent review regarding the same and found that the statement of the PP is accurate and project is not involved in any other kind of GHG trading for the present verifications/monitoring period. The web sites https://registry.verra.org/app/projectDetail/VCS/1767 were checked to confirm the same:

Assessment team hereby also confirms from the declaration made by PP that the projects are not registered under the any other scheme, Other environmental or GHG credits (i.e., GS4GG, GCC etc.) & REC mechanism of India and the same is cross-checked at https://recregistryindia.nic.in. Moreover, as per state tariff policy the project is not eligible to receive REC benefits as it is selling power to State electricity grid.

The assessment team observed that the project is in line with the registered and applied methodologies and thus no clarification/deviation is sought.

Assessment team confirms following during the verification remote audit:

1. Start date of the project is 29-June-2016
2. An undertaking letter/16/ has been submitted by PP for no double counting with any other GHG program. PP also has given a written declaration that project will not claim other form of GHG credit for the concerned monitoring period.
3. Assessment team confirms that this verification under VCS covers the activity from 24-September-2021 to 23-April-2022 (inclusive of both dates). VCS crediting period is of 10

[5] https://verra.org/wp-content/uploads/2022/01/VCS-Summary-of-Effective-Dates-2022-01.pdf

years (fixed) with 29-June-2016 as the start date and crediting period end date as 28-June-2026.

4. GHG credits from 24-September-2021 to 23-April-2022 will be claimed under VCS only. At any point of time during the crediting period, the project proponent will abide by the "Double Counting".
5. Assessment team checked and found that the Project proponent of the project activity is as below for the current monitoring period:

Organization name	*Mahindra Susten Private Limited*
Contact person	*Mr. Pradeep Gupta*
Title	*CEO*
Address	*6th Floor AFL House, Lok Bharati Complex, Marol Maroshi Road, Mumbai, Maharashtra- 400059*
Telephone	*+91-9589899649*
Email	*mehta.saurabh2@mahindra.com*

Organization name	*Divine Solren Private Limited*
Contact person	*Mr. Sandip Saha*
Title	*Deputy Manager, Carbon & Sustainability*
Address	*7th Floor, FULCRUM, Sahar Road, Andheri (East), Mumbai – 400099 India*
Telephone	*+91- 9833775833*
Email	*sandip.saha@clpindia.in*

6. The details of Other entity involves in the project activity is given below: -

Organization name	*EKI Energy Services Limited*

Contact person	*Bhavini Pandey*
Title	*Project Manager*
Address	*Office No 201, Plot No 48, Scheme 78, Vijay Nagar Part- II, Indore 452010, India*
Telephone	*+91-9028885805*
Email	*registry@enkingint.org*

6. The estimated emission reduction achieved from the project activity for the current monitoring period is 191,299 tCO_2e (329,360 tCO_2e/365 days x 212 days), whereas actual emission reductions achieved are 215,993 tCO_2e, which is 12.91% higher than estimated emission reductions. As actual VCUs are higher than estimated value for the current MP which is due to increase in percentage of plant load factor, however, there is no effect on additionality(Refer Section 5 of this report)

   Finding: CL 01, CAR 01 & CAR 02 were raised and successfully closed. Please refer Appendix 2 for more information.

4.2 Safeguards

4.2.1 No Net Harm

No potential environment or socio-economic matter was found during the discussion with PP during remote audit. The project is renewable energy project and thus no negative impact observed onsite as confirmed by PP during remote audit.

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 2013 clearly mentioned that Solar-based power project activity operations do not result in direct air pollution, noise pollution.

However, assessment team still conducted the No net harm assessment for some of the parameters and the result is described below:

Sr. No.	Indicator	Assessment team opinion
1	Air quality	The project generates clean energy which replaces the fossil fuel intensive electricity generation.

Sr. No.	Indicator	Assessment team opinion
		Also report on "Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects" prepared by MNRE dated September 2013 clearly mentioned that Solar plant operations do not result in direct air pollution. Therefore, it is validated that mitigation measures were robustly implemented on ground for air quality issues project will have a positive impact on air quality.
2	Soil condition	There are negligible impacts envisaged during operation of the project activity being Solar power-based power project. For mitigating the impacts during construction, various mitigation measures were taken which is validated from the plant records of PP and the interview with local villagers. It was also confirmed that, the vegetation planted at project site helps to reduce soil erosion. The same is confirmed during the discussion with stakeholders during remote audit. Therefore, it can be concluded that the project has no effect on soil conditions during its operation because it has no waste coming out.
3	Biodiversity	During the verification remote audit, it was observed that the condition of ground vegetation is good and no rare species is found in the around area. The project site is not on the migration route of migratory bird nor is the project affecting aquatic life. With the implementation of Project, the green cover has increased at the Project site; the biodiversity in the vicinity will be improved with the vegetation improvement.
4	Employment Generation	The project activity employed local population as skilled workers as well as security guards. The personnel employed by the project activity are also provided trainings and exposed to various awareness programs therefore a positive indicator has been accepted.
5	Livelihood of the poor	The project is associated with infrastructure development like roads in the nearby areas and promoting economic activities like grants to local school and communities' temples etc. Also, project employed local villagers as guards for the security of power project.

4.2.2 Local Stakeholder Consultation

Project participant has kept a grievance register at project site & sought comments/grievances/suggestions from local stakeholders including local community, government agencies and NGOs which is accessible to stakeholders to provide their feedback on the project as a part of ongoing communication with stakeholders in line with requirement of clause 3.16.17 of VCS Standard, ver. 4.3. However, no comments/grievances/suggestions have been received from the aforementioned stakeholders during the current monitoring period. Project participant has also submitted the copy of register/19/ and the same has been checked by the verification team and confirms that during the current monitoring period, no any grievances received. Verification team confirmed the same during the remote audit and document review.

4.3 AFOLU-Specific Safeguards

This section is not applicable.

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 MR. 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 Joint PD & MR PD/7/.
Findings	CAR 04 and CAR 05 were raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	As per the registered PD and applied methodology, Formula used to calculate achieved emission reduction is as follow; $ER_y = BEy – PEy - LEy$ *Baseline emission: The baseline Emissions for a given year is calculated by multiplying the energy baseline (EB) with the grid emission factor of the grid.* *Formula Used: -* $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ Where: BE_y = Baseline emissions in year y (tCO_2) $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr) **Ex-ante fixed parameters:** The baseline emission factors are sourced from the registered VCS Joint PD & MR/7/. Combined margin CO_2 emission factor ($EF_{grid,CM,y}$) is 0.9653

	tCO_2/MWh. The calculation approach was in line with the registered VCS Joint PD & MR/7/. Values of ex-ante parameters are as follows: **$EF_{grid,OM,y}$** = Calculated as per "Tool to calculate the emission factor for an electricity system, version 5" as 3-year generation weighted average using data for the years 2013-14, 2014-15 & 2015-16. The data are obtained from "CO_2 Baseline Database for Indian Power Sector" version 12.0, published by the Central Electricity Authority, Ministry of Power, Government of India. The value 0.9843 is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS Joint PD & MR/7/. **$EF_{grid,BM,y}$** = The Build Margin emission factor is sourced from Central Electricity Authority: CO_2 Emission Database CEA CO_2 Baseline database Version 12.0, with latest date available for the most recent year i.e. 2015-16 published by the Central Electricity Authority, Ministry of Power, Government of India. which is based on " Tool to calculate emission factor for an electricity system, version 05.0" The value 0.9083 tCO_2/MWh is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS Joint PD & MR. The combined margin emissions factor is calculated as follows: **$EF_{grid,CM,y}$**= $EF_{grid,OM,y}$* W_{OM} + $EF_{grid,BM,y}$* W_{BM} Where: $EF_{grid,BM,y}$= Build margin CO_2 emission factor in year y (tCO_2/MWh) $EF_{grid,OM,y}$= Operating margin CO_2 emission factor in year y (tCO_2/MWh) W_{OM} = Weighting of operating margin emissions factor (0.75) W_{BM}= Weighting of build margin emissions factor (0.25) After calculation, the Combined Emission factor is obtained as 0.9653 tCO_{2e}/MWh is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD & MR . **Monitored Parameters:** As per registered VCS Joint PD & MR/7/, the following monitoring parameter is monitored **$EG_{PJ,y}$** = Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid in year y in MWh. (This value will be the sum of the net electricity generated from all 4 sites) Quantity of net electricity generation supplied to grid is calculated as difference of final measured value of export and import at substation. The export and import value are measured by Tri-vector Main and Check Meter (bi-directional) of accuracy class 0.2s installed at substation of respective project sites. Monthly meter readings are taken from the meter located at substation and certified by the representatives of state utility and the representatives of the project proponent. The JMR generated monthly basis

	as per Joint Metering by Official of State Utility and PP representatives. Based on JMRs, PP raise invoice. In Monthly Joint meter readings (JMR) /3/, It was found that starting date and end date of monitoring period is not matching with the JMRs. Hence, PP has apportioned energy generation value for the starting and ending month in accordance with the deviation sought during previous verification. The verification team has checked all the monthly JMRs/3/ and confirms that the same value has been used for calculation of emission reductions/6/. The net electricity supplied to grid has been cross-checked with the invoices/4/ and found consistent. The calculation of baseline emissions is as below, $BEy = EG_{PJ,y} \times EF_{grid,CM,y}$ Where $EG_{PJ,y}$=223,762.78 MWh $EF_{grid,CM,y=}$ 0.9653 tCO_2 /MWh BE_y= 223,762.78 MWh x 0.9653 tCO_2 /MWh BE_y= 215,993 tCO_2e (round down) **Project Emissions** As per applied methodology (version 18.1)/10/ and registered VCS Joint PD & MR/7/, the PE_y in case of Solar PV project is considered zero, this PE_y=0, acceptable to VVB. **Leakage**: As per applied methodology, version 18.1)/10/ and registered VCS Joint OD & MR/7/, no leakage is considered in the project activity and the same is followed in this monitoring period. **Emission Reductions**: The emission reductions (ER_y) by the Project activity during a given year y is the difference between baseline emissions (BE_y), project activity emissions (PEy) and leakage (considered zero), as follows $ER_y = BE_y - PE_y - LE_y$ Where, BE_y= Baseline emission PE_y= Emissions from the project activity LEy= Leakage Thus, ER_y = 215,993 tCO_2 – 0 = 215,993 tCO_2e Verification team confirms that the monitoring has been carried out in accordance with the monitoring plan contained in the registered VCS joint PD & MR/7/. Verification team confirmed that the GHG emission reductions and removals have been quantified correctly in line with the Applied Methodology (version 18.1)/10/ and registered VCS Joint PD & MR/7/.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	The verification team checked the shutdown/break down log for the monitoring period. During the verification of remote audit, the energy meters are also checked. The Calibration details of the monitoring meters are also checked with calibration certificates.
Findings	CAR 06 was raised and successfully closed. Please refer Appendix 2 for more information.
Conclusion	Assessment team has checked calibration certificates and found that meters are calibrated as per required calibration frequency in registered Joint PD & MR /7/ and calibration is valid for current monitoring period. The details of meters including date of calibrations and validity of calibration has been provided in in Appendix 6 of this report. Meters are calibrated as per the standard procedures and documents for the same are maintained throughout. . The responsibilities and authorities of project management, data handling and recording, measurement methods and QA/QC procedure have been systematically established and formalized and the same was verified during the remote audit. Further, verification team confirmed through interview of PP representative that main meter and check were not found any defective during the current monitoring period and joint meter reading is being taken at substation meter which is being used for preparation of energy breakup by the project activity, thus acceptable to VVB. Verification team confirms through review of calibration certificate that main meters and check meters are of accuracy class of 0.2s, All the meters are calibrated as per calibration frequency mentioned in registered VCS Joint PD & MR i.e., once in five years. The calibration of the energy meters was carried out by third party agency accredited by NABL (National Accreditation Board for Laboratory, Govt of India) to carry out the testing of the meters which is as per the national regulation and thus traceability of the Calibration is also confirmed by the Verification team. The shutdown or break down reports/18/ are checked and found that the plant undergone scheduled maintenance and break down. Assessment team checked the routine maintenance log book and confirmed that it does not have any impact on project design and monitoring procedures. No unforced error observed.

	Assessment team confirmed that data/ information used for determining GHG reductions and removals were sufficient in quantity and of appropriate quality. Calibration certificates of meters/ QA/QC procedure checked and found to be appropriate.

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	
1.	*Not applicable*	Not applicable	Not applicable	Not applicable

5 VERIFICATION CONCLUSION

Applus+ Certification has been engaged by Mahindra Susten Private Limited to perform verification of the "Bundled Solar Power Project by Mahindra Susten Private Limited".

The management of 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 VCS Joint PD & MR+ and the Applied methodology (version 18.1)/10/.

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 and VCS Standard version 4.3. 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. The verification can confirm that:

- the project is operated as planned and described in the project document;
- the monitoring plan is as per the applied methodology;
- the monitoring process in Monitoring Report is as per the
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan
- 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 during the verification.
- No limitation observed for the present verification

- Project complies with the verification criteria for projects and their GHG emission reductions or removals set out in VCS program guideline version 4.2 and VCS Standard version 4.3.
- Project has been implemented in accordance with the project description and subsequently validated deviations

Verification period: From 24-September-2021 to 23-April-2022 (first and last date included).

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

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
24-September-2021 to 23- April -2022	215,993	0	0	215,993
Total	**215,993**	**0**	**0**	**215,993**

The estimated emission reduction achieved from the project activity for the current monitoring period is 191,299 tCO_2e (329,360 tCO_2e/365 days x 212 days), whereas actual emission reductions achieved are 215,993 tCO_2e, which is 12.91% higher than estimated emission reductions. As actual VCUs are higher than estimated value. VVB has checked the impact of increased VCUs on additionality. As per below table Value of achieved emission reduction higher than estimated during the current monitoring period have no impact on the additionality of the project activity, this is due to increase in percentage of plant load factor (PLF), where the percentage increase in plant load is below the additionality breaching value.

Project Investor	Observed PLF	PLF at the time of Validation	PLF Variations	Additionality Breaching Values [6]	Additionality breached due to increased PLF
Cleansolar Renewable Energy Private Limited (CREPL)	20.28%	19%	6.72%	12.16%	No
Divine Solren Private Limited (DSPL)	21.19%	19%	11.52%	17.39%	No
Astra Solren Private Limited (ASPL)	23.66%	19%	24.53%	38.23%	No
Mahindra Susten Private Limited (MSPL)	19.87%	19%	4.58%	35.12%	No

[6] The additionality Breaching values has been sourced directly from the registered VCS Joint PD and & MR.

APPENDIX I: DOCUMENTS REVIEWED DURING VERIFICATION

No.	Author	Title	References to the document	Provider

1.	NA	Commissioning Certificates of	Commissioning Certificates of all issued by SEB	Project participant
2.	Applus	Contract of the project participant with the DOE A+SH_SYST_TQC_VCS_VER_15222	Dated: 03-June-2022	Project participant
3.	State Utility	Joint Metering Reports for complete monitoring period	JMR records	Project participant
4.	PP	Invoices for complete monitoring period	24-September-2021 to 23-April-2022	Project participant
5.	NA	Monitoring Report, (Initial Version) Monitoring Report Monitoring Report (Post TR)	Version 01, dated 20-May-2022 Version 03 dated 03-August-2022 Version o4, dated 22-August-2022	Project participant
6.	NA	Emission Reduction sheet (Initial) Emission Reduction sheet (Final)	Version 01, dated 20-May-2022 Version 03 dated 03-August -2022	Project participant
7.	NA	VCS Joint PD & MR Previous Verification report (MP: 01-April-2021 to 23-September-2021	Version 02 dated22-June-2018 Version 03.0, dated25-February-2022	VERRA
8.	VERRA	VCS Standard VCS Programme guide	Version 4.3 Version 4.2	VERRA
9.	UNFCCC	CDM validation and verification standard for project activities, Version 03.0 CDM Project Standard for project activities, version 03.0	UNFCCC CDM web site	UNFCCC
10.	UNFCCC	ACM0002: Grid-connected electricity generation from renewable sources	Version 18.1	UNFCCC
11.	NA	Technical specifications of technology used.	-	Project participant
12.	PP	Training records for all sites of project activity.	-	Project participant
13.	NA	Power purchase agreement for the Sites of project activity.	-	Project participant
14.	NA	Remote auditing for verification of measuring and monitoring procedure, • Video recordings & snapshots of the project site/equipment's	07-July-2022	Project participant

		• Interviews and data/log review		
15.	NA	Operation and Maintenance agreement	-	Project participant
16.	NA	Declaration of No Double Counting	14-July-2022	Project participant
17.	SEB	Calibration Certificates	Calibration Certificates of all Meters	
18.	PP	Plant log sheet	24-September-2021 to 23-April-2022	Project participant
19.	PP	Grievance register	24-September-2021 to 23-April-2022	Project participant

APPENDIX II: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION

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

FAR ID	01	Section no.	4.4	Date: 14-July-2022
Description of FAR				
During current monitoring period, observed PLF has resulted in higher generation which does not have an impact on the additionality of the project activity. However, the current monitoring period is only for 6 months and hence, DOE is of opinion that impact of PLF on the additionality will not provide a complete analysis. During next verification, verifying DOE is requested to check for annual PLF for the period of 01-April-2021 to 31-March-2022 (inclusive of current monitoring period) and its impact on the additionality of the project activity.				
Project participant response				**Date:18-July-2022**
PLF assessment for the period 01-April-2021 to 31-March-2022 (inclusive of current monitoring period) has been done and it is observed that the increased generation does not breach the additionality threshold values. The same has been addressed in MR and calculated in ER. Additionality breaching values has been taken from approved joint PD MR V02 Appendix1 sensitivity analysis table of each SPV as calculated. .				
Documentation provided by project participant				
MR, ER ,JMR and Invoices for complete monitoring period.				
DOE assessment				**Date: 30-July-2022**

PP has carried out the analysis of annual PLF for the period of 01-April-2021 to 31-March-2022 and same has been reproduces below:-

Project Investor	Capacity (MW)	Observed Annual PLF	PLF at the time of Validation	PLF Variations	Additionality Breaching Values
Clean solar Renewable Energy Private Limited (CREPL)	30	18.98%	19%	-0.17%	12.16%
Divine Solren Private Limited (DSPL)	50	20.61%	19%	8.4% %	17.39%
Astra Solren Private Limited (ASPL)	40	23.0%	19%	21.06%%	38.23%
Mahindra Susten Private Limited (MSPL)	25				
Mahindra Susten Private Limited (MSPL)	60	22.86%%	19%	20.30%%	35.12%

VVB has checked the additionality breaching values mentioned in Appendix 1 Sensitivity of registered Joint PD & MR and found that increase in observed PLF/generation does not breach the additionality threshold values.. . In conclusion assessment team found that as per above table the increase in percentage of PLF is below the sensitivity breaching values. Thus, there is no impact on the additionality of the project activity, due to increase in plant load factor (PLF). Thus, acceptable to VVB. FAR is closed.

Table 2. CL from this verification

CL ID	01	Section no.	4.1	Date: 14-July-2022
Description of CL				
During desk review, Verification team observed that PP has not submitted the Power Purchase agreement and O & M agreement to VVB for verification. PP to clarify.				
Project participant response				**Date: 18-July-2022**
PPA and O&M is being submitted.				
Documentation provided by project participant				
PPA and O&M				
DOE assessment				**Date :30-July-2022**
PP has submitted following document to verification team. • Power purchase agreement signed between PP and respective state DISCOM for all sites of the project activity. • PP has submitted the O & M agreement for all sites. Mahindra sustain Pvt. Ltd. is operator as per agreement signed with divine Solren private limited dated 30-August-2017, Astra Solren private limited dated 25-July-2017 and Clean solar renewable energy private limited (CREPL) dated 19-October-2016 and agreement signed with Mahindra TEQO private limited as operator dated 27-December-2019 for project owner Mahindra susten Pvt. Ltd. CL is closed.				

Table 3. CAR from this verification

CAR ID	01	Section no.	4.1	Date: 14-July-2022
Description of CAR				
During desk review, the following inconsistencies were observed: 1. Title of ministry responsible for regulate SDG's indicators in India is not inline with ministry's official webpage. 2. PP requested to provide plant log book/sheet for current monitoring period. Corrective action sought.				
Project participant response				**Date: 18-July-2022**
1. Ministry name has been corrected in MR. 2. Log book has been provided in the attached link				
Documentation provided by project participant				
Revised MR and Logbooks				
DOE assessment				**Date :30-July-2022**

1. PP has removed the name of ministry under section 1.11 of revised monitoring report responsible for regulate SDG's indicators in India 2. PP has submitted Plant log sheet for current monitoring period to assessment team. No major breakdown has found during current monitoring period. Further.no unforeseen activity observed during the present verification that can alter the applicability or additionality of the applied methodology. Thus, CAR closed.

CAR ID	02	Section no.	4.1	Date: 14-July-2022
Description of CAR				
PP requested to submit declaration letter regarding avoidance of double counting of emission reductions in the other GHG trading programmes and REC mechanism of India.				
Project participant response				**Date:** 18-July-2022
The declaration letter from the PP has been submitted				
Documentation provided by project participant				
Declaration letter				
DOE assessment				**Date:** 30-July-2022
PP has submitted "No Double Counting" undertaking dated 14-July-2022 and confirmed that no double counting of GHG reduction will be claimed for current monitoring period from other GHG trading programme and REC mechanism of India to the DOE. Thus, CAR is closed.				

CAR ID	03	Section no.	4.2	Date: 14-July-2022
Description of CAR				
In Section 2.2, PP has mentioned about process of ongoing mechanism for communication with local stakeholder as per the requirement of Para 3.17.3 and 3.17.4 of the VCS standard V.4.3. However, to verify, PP is requested to provide the supporting for the same.				
Project participant response				**Date: 18-July-2022**
The grievance register places at the site are being submitted.				
Documentation provided by project participant				
Plant grievance register.				
DOE assessment				**Date: 30-July-2022**
PP has submitted the grievance register placed at each site of project activity for ongoing communication with local stakeholder and no major grievances has been made by local stakeholders during current monitoring period. Thus, CAR is closed.				

CAR ID	04	Section no.	4.4	Date: 14-July-2022
Description of CAR				
PP has submitted the emission reduction sheet and all supporting's to verify monitoring parameter for current monitoring period to VVB team. However, during review of ER sheet, verification team observed that emission reduction calculation is not in compliance with the applied methodology. Also, vintage wise baseline emission is not rounded down. Thus, corrective action sought.				
Project participant response				**Date:** 18-July-2022
Calculation is now being aligned with the applied methodology. Vintage wise ER is now being rounded down.				
Documentation provided by project participant				
ER V2				
DOE assessment				**Date:** 30-July-2022

Baseline for all site is not calculated in accordance with the formula in applied methodology. Also, baseline emission should be rounded down. Thus, CAR is open.
Project participant response **Date:** 02-August-2022
The Baseline emission is in accordance with equation 11 of ACM0002 V18.1 and also as per the registered PD section 3.1. For conservativeness, the summation of Baseline emission has been rounded down. Inserting rundown in each month's baseline emission would further lower down the emission reduction calculation. The conservative approach is applied in vintage-wise baseline emission calculation.
Documentation provided by project participant
ER Sheet
DOE assessment **Date:** 08-August -2022
PP has now updated the ER sheet that is now in compliance as per the Applied methodology for the all the sites of project activity and vintage wise round down in baseline emission also provided in emission reduction calculation sheet for conservative approach. Thus, CAR is closed.

CAR ID	05	**Section no.**	4.4	**Date:** 14-July-2022
Description of CAR				
VVB observed that emission reductions are 12.74% higher than the estimated emission reduction during the current monitoring period. PP to further justify the same on impact of additionality				
Project participant response				**Date:** 18-July-2022
The increased value does not breach the benchmark values. The calculation is in the ER sheet and the explanation provide in the MR section 5.4.				
Documentation provided by project participant				
Revised RM and ER				
DOE assessment				**Date:** 30-July-2022

PP has provided below sensitivity analysis table for current monitoring period.

Project Investor	Observed PLF during current monitoring period	PLF at the time of Validation	PLF Variations	Additionality Breaching Values
Cleansolar Renewable Energy Private Limited (CREPL)	20.28%	19%	**6.72%**	12.16%
Divine Solren Private Limited (DSPL)	21.19%	19%	**11.52%**	17.39%
Astra Solren Private Limited (ASPL)	23.65%	19%	**24.45%**	38.23%
Mahindra Susten Private Limited (MSPL)	19.87%	19%	**4.58%**	35.12%

Verification team has checked the additionality and confirms that the increasein percentage of PLF during current monitoring period is below the benchmark and breaching values for the all the sites of project activity. Increase in PLF is due to the higher generation during current monitoring period factor involved in higher generation is climatic conditions, which is not in control of project proponent. Thus, Value of achieved emission reduction higher than estimated during the current monitoring period have no impact on the additionality of the project activity, this is due to increase in plant load factor (PLF), where the percentage increase in plant load is below the additionality breaching value. Thus, accepted to verification team, CAR is closed.

CAR ID	06	**Section no.**	4.5	**Date: 14-July-2022**
Description of CAR				

Details related to Monitoring meters and its calibration dates is provided in Appendix 1 of the monitoring report and calibration certificates to verify same. However, calibration certificates of 40 MW and 25 MW solar project of Astra Solren Private Limited found missing relevant to current monitoring period of project activity. Further, Verification team observed that information of meters provided in monitoring report are not consistent with information provided in monitoring report of previous MP. Corrective action sought.
Project participant response **Date: 18-July-2022**
Calibration certificates of all the SPV are being provided. The MR is being revised with the information.
Documentation provided by project participant
Calibration Certificate and revised MR
DOE assessment **Date: 30-July-2022**
PP has provided the missing supporting of calibration for the associated with 40MW and 25 MW solar project of Astra Solren Private Limited for current monitoring period also updated detail of new meter installed at both sites. However, it was observed that the main meter was replaced in June calibrated on dated 20-June-2022. PP is requested to confirm how this meet the requirement of para 368 of VVS 03.0 CAR open.
Project participant response **Date: 02-August-2022**
A 2019 Calibration certificate is now being provided which covers the whole monitoring period.
Documentation provided by project participant
Calibration Certificate
DOE assessment **Date: 08-August -2022**
PP has submitted copies of calibration certificate associated with 40MW and 25 MW solar project of Astra Solren Private Limited for the year 2019 for current monitoring period. Verification team checked the same found that calibration date is consistent. CAR closed.

APPENDIX III: 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)	Verificationfindings
1.	Lead Auditor/Technical Expert	OR	Singh	Jitendra Mohan	TQC-Outsourced entity	Yes	No	Yes	Yes

Technical reviewer and approver of the verification and certification report

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

Short CVs of the Team:

1. **Jitendra Mohan Singh**, has done Advanced MSc in Sustainable Energy Systems and Management from International Institute of Management, University of Flensburg, Germany and B.Tech. in Agricultural Engineering from Allahabad University, India. He has more than 22 years of working experience in different organizations like IARI, IIT Delhi, ICAR, IRADe, CAPART, SMEC and Perenia Carbon and M B Power (Madhya Pradesh) Ltd. in the area of Agriculture, Energy & Environment and Climate Change. He also worked on contract basis (adhoc) as a RIT expert in UNFCCC from 2010 to 2013. Currently. he is empanelled with Applus+ Certification since 2020 and has been involved Verifications of Pas/PoAs as Lead Auditor and Technical Expert for Renewable and non-Renewable as well as Energy Demand.

2. **Mr. Srikanth Meesa** is a climate change professional with more than 15 years of experience in the fields of climate change, GHG auditing, carbon footprint assessments, water and energy audits, scope-3 emissions, net zero strategies, sustainability &ESG sectors and water and wastewater treatment sectors. He has completed his masters in Environmental Engineering& Management from

I.I.T Delhi and Bachelors in Civil Engineering from Osmania University. Furthermore, he has extensive experience i.e., more than 14 years on the auditing of CDM, VERRA, GS, JCM projects of various sectoral scopes across the world. He has worked with reputed certification bodies such as TUV NORD, DNVGL, TUV SUD and LR. He also has consulting experience on sustainability reports& road-maps, stakeholder consultation and LCA studies while working at Thinkstep (Now called Sphera). Currently, he is associated with Global Green Solutionz and empanelled with Applus+ Certification to carry out GHG audits in the aforementioned schemes. Mr. Srikanth Meesa is based at Hyderabad, India. Mr. Srikanth Meesa may participate as part of the Audit Team as Technical Reviewer for the assessment.

APPENDIX IV: 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
CO_2	Carbon Dioxide
CO_2e	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
SEB	State electricity board
JMR	Joint Metering Report
PP	Project Participant
SPV	Special Purpose Vehicle
VVB	Validation and Verification body
VCU	Verified Carbon Units
VCS	Verified Carbon Standard

APPENDIX V: DECLARATION OF NO DOUBLE COUNTING

Date: 14/07/2022

Undertaking Letter

This undertaking is in reference to the current monitoring period i.e. 24-September-2021 to 23-April-2022 of VCS Project activity titled ***"Bundled Solar Power Project by Mahindra Susten Private Limited"*** *wherein M/s Mahindra Susten Private Limited and Divine Solren Private Limited hereby declares following:-*

1. Projects is neither rejected nor seeking registration under Other GHG Programs.
2. The project is hosted in India, which is a Non-annex country and there is no compliance with an emission trading program or to meet binding limits on GHG emissions for this project activity.
3. Project ownership and right of use as per the VCS compliance rest with Mahindra Susten Private Limited and Divine Solren Private Limited.
4. Project activity does not result in creation of another form of environmental credit during the period for which VCUs are claimed.
5. The project is neither registered in Indian REC nor claiming any of the environmental credits.

Also it is to be noted that, Mahindra Susten Private Limited and Divine Solren Private Limited would not use net GHG emission reductions by this project for compliance with emission trading program to meet binding limits on GHG emissions.

For, M/s Mahindra Susten Private Limited
With Best Regards

Authorized Signatory

For, M/s Divine Solren Private Limited
With Best Regards

Authorized Signatory

APPENDIX VI: CALIBRATION DETAILS

Calibration and Meter Details of 30 MW solar project by Clean solar Renewable Energy Private Limited

Meter Serial No.	Make of Meter	Accuracy Class	Date of Calibration	Validity of Calibration
APX00619 (Main meter)	SECURE	0.2 s	23-February-2019	22-February-2024
APX00620 (Check meter)	SECURE	0.2 s	23-February-2019	22-February-2024
APX00622 (Stand by meter)	SECURE	0.2 s	23-February-2019	22-February-2024

Calibration and Meter Details of 50 MW solar project by Divine Solren Private Limited

Meter Serial No.	Make of Meter	Accuracy Class	Date of Calibration	Validity of Calibration
APZ00292 (Main meter)	SECURE	0.2 s	04-September-2019	03-September-2024
APZ00293 (Check meter)	SECURE	0.2 s	04-September-2019	03-September-2024
APZ00294 (Stand by meter)	SECURE	0.2 s	04-September-2019	03-September-2024

Calibration and Meter Details of 40 MW solar project by Astra Solren Private Limited

Meter Serial No.	Make of Meter	Accuracy Class	Date of Calibration	Validity of Calibration	Date of Calibration	Validity of Calibration
GJ 3832 A (Main meter)	SECURE	0.2 s	24-March-2017	23-March-2022	19-November-2019	18-November-2024
GJ3833A (Check meter)	SECURE	0.2 s	24-March-2017	23-March-2022	19-November-2019	18-November-2024

Calibration and Meter Details -New Meter of 40 MW solar project by Astra Solren Private Limited below

Meter Details	Main Meter
Meter Serial No	GJ5814A
Meter Make	SECURE
Accuracy Class	0.2 s
Date of Calibration	20-June-2027
Validity of Calibration	19-June-2027

Calibration and Meter Details of 25 MW solar project by Astra Solren Private Limited

Meter Serial No.	Make of Meter	Accuracy Class	Date of Calibration	Validity of Calibration	Date of Calibration	Validity of Calibration
GJ 3832 A (Main meter)	SECURE	0.2 s	24-March-2017	23-March-2022	19-Novem-2019	18-November-2024

GJ 3831 A (Check meter)	SECURE	0.2 s	24-March-2017	23-March-2022	19-November-2019	18-November-2024

Calibration and Meter Details -New Meter of 25 MW solar project by Astra Solren Private Limited

Meter Details	Main Meter
Meter Serial No	GJ5815A
Meter Make	SECURE
Accuracy Class	0.2 s
Date of Calibration	20-June-2022
Validity of Calibration	19-June-2027

Note: - Main Meter has been changed and calibrated by UGVCL on both the sites of 40 MW and 25MW of Astra Solren in June 2022. As meter custody is under the GETCO, PP has no control over it. The check meter is not changed.

Calibration and Meter Details of 60 MW solar project by Mahindra Susten Private Limited

Meter Serial No.	Make of Meter	Accuracy Class	Date of Calibration	Validity of Calibration	Date of Calibration	Validity of Calibration
15624818 (Main meter)	L & T	0.2 s	28-September-2019	27-September-2024	24-December-2021	23-December-2026
15624819 (Check meter)	L & T	0.2 s	28-September-2019	27-September-2024	24-December-2021	23-December-2026