BUNDLED SOLAR POWER PROJECT BY MAHINDRA SUSTEN PRIVATE LIMITED

By KBS Certification Services Pvt. Ltd.

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Summary:

KBS Certification Services Pvt. Ltd. has been contracted by, "EKI Energy Services Limited." to undertake 4th verification and certification for the greenhouse gas (GHG) emission reductions reported from 'Bundled Solar Power Project by Mahindra Susten Private Limited' for the monitoring period 01-April-2021 to 23-September-2021 (Inclusive of both days), under the crediting period 29-June-2016 to 28-June-2026, in the initial monitoring report version 01 dated 20-October-2021, with regard to the relevant requirements of VCS Standard, Version 4.1.

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 is promoted by Mahindra Susten Private Limited and Divine Solren Private Limited who also are the project proponents in the project activity.

The bundled project activity is a greenfield project and involves installation of photovoltaic solar power plants and feed the generated electricity to national electricity grid of India. The project therefore displaces an equivalent amount of electricity which would have otherwise been generated by fossil fuel dominant electricity grid. In the Pre- project scenario the entire electricity, delivered to the grid by the project activity, would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources.

All solar plants in the project have been operational since commissioning. Start date of the project activity is 29-June-2016, on this day, 30 MW solar PV project activity by Cleansolar Renewable Energy Private Limited (CREPL) was commissioned as per the commissioning certificates/09/, VCS PD version 2 dated 22-June-2018 /03/ and Joint Validation and Verification Report version 02 dated 28-June-2018/03/.

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

The crediting period for VCS began on 29-June-2016 and will end on 28-June-2026. This is the 4th monitoring under the first crediting period and covers the activity from 01-April-2021 to 23-September-2021 (inclusive of both dates). During this period, the project activity has supplied 196,116.80 MWh of electricity, contributing to the GHG reductions of 189,309 tCO_2e. An undertaking from the project participant confirms that project will not claim any other scheme benefits for the concerned monitoring period.

A risk based approach has been followed to perform the verification of the project activity. In the course of verification, 00 Corrective Action Requests (CARs) and 03 Clarification Requests (CLs) have been raised. All the CARs and CLs have been closed out successfully. No FAR has been raised during this verification or the previous verification.

It is our responsibility to express an independent GHG verification opinion on the calculation of GHG emission reductions from the project for the period 01-April-2021 to 23-September-2021 (Inclusive of both days) based on the reported emission reductions in the final monitoring report version 05 dated 23-February-2022 for the same period.

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

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

- The project fulfils criteria of VCS Standard Version 4.1.
- The project is in line with all relevant VCS requirements as per VCS Programme guide version 4.0 /05/
- Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board and VCS Association;
- All information and references relevant to the project activity resulting in emission reductions;

The monitoring is transparent, adequate and in line with applied baseline and monitoring methodology of ACM0002: Grid-connected electricity generation from renewable sources –-- Version 18.1 /10/.

Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 189,309 tCO_2e (round down value) emission reductions during the monitoring period 01-April-2021 to 23-September-2021 (Inclusive of both days), under the crediting period 29-June-2016 to 28-June-2026.

Contents

1 INTRODUCTION

1.1 Objective

KBS Certification Services Pvt. Ltd. has been contracted by, "EKI ENERGY SERVICES LIMITED." to undertake verification and certification for the greenhouse gas (GHG) emission reductions reported from 'Bundled Solar Power Project by Mahindra Susten Private Limited', in the initial monitoring report version 01 dated 20-October-2021/1.1/, with regard to the relevant requirements of VCS Standard Version 4.1. Current monitoring period is from 01-April-2021 to 23-September-2021 (Inclusive of both days), under the crediting period 29-June-2016 to 28-June-2026. The VCS projects must undergo an independent third-party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs).

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

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

1.2 Scope and Criteria

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

The project is assessed against the requirements of VCS standard version 4.1 and related rules and guidance /5//7/. KBS has, based on the recommendations in the latest version of Verified Carbon standard, employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

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

- Ensure that the project activity has been implemented and operated as per the registered VCS PD and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place as per the documents provided by the client and during remote audit;

- Ensure that the monitoring report and other supporting documents provided are complete.
- Ensure that the practiced monitoring system and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved CDM methodology /10/.
- Evaluate the data recorded and stored are as per the monitoring methodology.

1.3 Level of Assurance

☑Reasonable level of assurance

The verification is based on the VCS PD, MR, proof of title, proof of right, additional documents related to baseline and monitoring methodology, the subsequent background investigation, monitoring plan, follow-up interviews and supporting documents made available to the verification team by project proponent. The information in these documents is reviewed against the requirements of VCS Standard Version 4.1. KBS has focused on the identification of significant risks for project implementation and the generation of Emission Reductions.

The items covered in the verification are described below:

- Criteria of VCS Version 4.1 (VCS Program guide Version 4.0 & VCS Standard Version 4.1)
- Criteria of CDM approved methodology, ACM0002- Version 18.1
- VCS Monitoring Report
- Monitoring Plan
- Background investigation and follow up interviews
- Stakeholder feedback
- Registered VCS PD and Joint Validation & Verification Report
- Project's compliance with other relevant rules, including the project country (India) legislation and assurance to stakeholders of the quality

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

- Compliance with relevant law and regulations
- Stakeholder comments (If any)
- Proof of title
- Single line diagram and site location map
- Technical specifications of equipments, meters etc.
- Power Purchase Agreement

- Commissioning Certificate
- Remote audit (22-November-2021) for verification
- Invoices
- Export/Import data records
- Calibration Certificates

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

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

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

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

- is materially correct and is a fair representation of the actual project details, and
- is prepared in accordance with VCS requirements /4/ /5/ and the applied CDM methodology/10/ for information pertaining to GHG qualification, monitoring and reporting.

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

1.4 Summary Description of the Project

The project activity involves the installation of a bundled Solar PV project. The total installed capacity of the bundled solar PV project is 205 MW at different states (Telangana, Gujarat, and Rajasthan) of India through SPVs. The details of the SPVs and commissioning dates for the project are as follows:

Name of SPVs	AC Capacity (MW)	COD	State
Cleansolar 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

Earlier, 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[1] (refer section 3.3 of this report) by the owner (CLP India Private Limited[2]) of two of the SPVs. The Project activity is a new facility (Greenfield) and the electricity generated by the project is being exported to the Indian electricity grid. The project therefore displaces an equivalent amount of electricity which would have otherwise been generated by fossil fuel dominant electricity grid. In the Pre-project scenario the entire electricity, delivered to the grid by the project activity, would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources.

During the current monitoring period, all the sites are operational, and the project activity has supplied 196,116.80 MWh of electricity, and thus contributing to 189,309 tCO_2e GHG reductions.

During the remote audit inspection/11/, locations (as mentioned in section 1.7 of MR) and all the technical aspects of the project activity (equipments, type, date of calibration etc.) mentioned in the VCS PD /3/ have been verified. The same was also crosschecked during the desk review of supporting documents like technical specifications/06/, single line diagram/17/, PPA/8/ and commissioning certificates/9/.

Project entity information as verified is presented below:

Item	Data
Project Entities	Mahindra Susten Private Limited and Divine Solren Private Limited (Project Proponent)
	EKI Energy Services Limited (Project consultant)

[1] VCS declaration dated 05-December-2021

[2] As per the "Noting of change in status of Company pursuant to acquisition by CLP India Private Limited" document, the ownership of Clean Solar Renewable Energy Private Limited and Divine Solren Private Limited has been transferred to CLP India Private Limited based on the Share Purchase Agreement dated 21-February-2020.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification process was carried out in line with the requirements of VCS Version 4.1/04/. In addition, the verification team followed the guidelines of the CDM Validation and Verification Standard. Standard auditing techniques and KBS's CDM Procedures were also applied during the verification. A risk-based approach was followed to carry out verification and assess all the factors and concerns that relate to the issuance of emission reductions from a project activity.

They include:

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

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

Duration of Verification:

Remote audit	22-November-2021 (Justification section 2.4 below)
Draft Verification Report	28-December-2021
Final Verification Report	31-December-2021

2.2 Document Review

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

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

The list of documents reviewed is included in 'Appendix I'.

2.3 Interviews

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

2.4 Site Inspections

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for Verra guidance on site visits, notification of Covid-19 Travel Guidance for Projects https://verra.org/covid-19-travel-guidance/ and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit. Further Email from VERRA dated 24-March-2020 from "Andrew Beauchamp" has been referred as per which "*The VCS Program does not explicitly mandate site visits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.0). Therefore, where a VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for an exemption or pre-approval from Verra is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, please ensure that the applicable section of the validation/verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit*".

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

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

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

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

Date:	22-November-2021 through Zoho meeting application	
Key points discussed:	**Name of person,**	**Designation, Organization**

	interviewed	
VCS requirements, Operational data, Monitoring equipment, Calibration, Data collection, storage, Archiving QA/QC procedures Training of monitoring personnel Calculation of ERs Grievance procedure O &M procedures	Prakash Sahu	Manager, Enking International
	Sandeep Saha	Manager- Climate Change department, CLP Wind Farms (India) Private Limited
	Sandeep Sharma	Assistant Manager, Mahindra Susten Private Limited
	Amit Debariya	Solar Asset manager- CLP Wind Farms (India) Private Limited
	Gaurav Joshi	Site In-charge, Mahindra Susten Private Limited
	Sai Bhargav	Site In-charge, Astra Solren Private Limited
	Raj Singh Baghela	Site In-charge, Astra Solren Private Limited

2.5 Resolution of Findings

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

Corrective action request (CAR):

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

Clarification request (CL):

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

FAR (Forward Action Request):

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

CARs and CLs are to be resolved or closed out if the PP modifies the project description, rectifies the MR or provides adequate additional explanations or evidence that satisfies the

concerns. If this is not completed, the project activity cannot be recommended for issuance under VCS registry.

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

00 CARs and 03 CLs were found during verification and closed satisfactorily. The list of CARs/CLs raised and the response provided, the means of verification, reasons for their closure and references to correction in the MR are provided in appendix II of this report. The revised MR/1.2/ with changes incorporated as per the issues raised were rechecked with the documentary evidences and found to be inline.

2.5.1 Forward Action Requests

Verification report/3/ of the previous monitoring period was checked, and it was confirmed that no FAR was raised previously. This is 4th verification and One FAR has been raised under this verification. Refer to Appendix II for further details.

2.6 Eligibility for Validation Activities

KBS conducted verification activity for 4th monitoring period which is the most recent monitoring period from 24-December-2019 to 31-March-2021. Current monitoring period is from 01-April-2021 to 23-September-2021. Total monitoring period is less than 6 consecutive years. Hence, as per paragraph 4.1.20 (2) of VCS standad 4.1, KBS is authorized to conduct verification for current monitoring period. KBS has a valid UNFCCC accreditation in the Sectoral scope from UNFCCC.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project activity is registered under the VCS only (VCS Project ID 1767)[3] and is neither de-registered nor seeking registration under any other emissions trading program or any other mechanism that includes GHG allowance trading. PP also confirms that net GHG emission reductions or removals generated during this monitoring period shall not be used for compliance under any such programs or mechanisms. This was confirmed through a declaration /16/ submitted by the PP and hence accepted by the assessment team.

3.2 Methodology Deviations

There is no methodology deviations are applied during the monitoring period.

3.3 Project Description Deviations

PP had requested for following deviations during the earlier monitoring period which were approved during 3rd periodic verification and an additional deviation i.e. deviation 5 is requested in current monitoring period which is permanent in nature.

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 PD, 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.

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

Deviation 4: Change in billing meter details

In the registered VCS PD/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 PD/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 6390.6/31*29=5,978.30 MWh and import is 54.6/31*29=51.08 MWh. 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.

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. An assessment of deviation impact on the following was checked;

The applicability of methodology:

The proposed deviation is for apportioning of energy generated for calculation of emission reductions. It is verified and confirmed that it does not affect applicability of methodology as there has been no change in the applied technology or capacity of the bundled project.

Additionality

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 appropriateness of the baseline scenario

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

3.4 Grouped Project

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

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity is in operation stage as evidenced by the remote inspection /11/ of the site. All the physical components and project boundary are in conformity with the description in registered VCS PD /3/. The project locations and project equipment capacities have been confirmed during the remote inspection, also through the technical specifications /6/ and found in-compliance with the registered VCS PD /3/.

The project capacities, date of commissioning and locations are provided in below 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"
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"

Start date of the project activity is 29-June-2016. This is commissioning date for 'Cleansolar Renewable Energy Private Limited' Solar PV power plant. Verification team has checked the commissioning certificate/9/ and confirms that the commissioning date is correct.

The technical details of the project are mentioned 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

Based on the remote inspection and the reviewed project documentation like the technical specification, photographs of meters, solar PV plants /6/, single line diagram/17/, power purchase agreement and O&M Contract /8/, commissioning certificates /9/, calibration certificates of energy meters/13/ and invoices/14/ etc. the verification team confirms that the project was implemented and operated as described in the registered VCS PD /3/. Further, the verification team confirms that-

- There is no material discrepancy between project implementation and the project description in the registered VCS PD except project deviations mentioned above in section 3.3 which are verified and confirmed.
- The monitoring plan is completely implemented and is suitable with actual monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters)
- The project activity is availing GHG emission reductions for only one program and there will not be any double accounting for the same.
- There is no methodology deviation applied to this project.

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

Ownership and other programs:

PP has declared/16/ that the project is registered in VCS, and will avail GHG emissions reductions for only one program and there will not be any double accounting for the same; thus emission reductions generated by project will be solely claimed by PP and PP has the right of use, which is acceptable. Net GHG emission reductions or removals generated by this project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions as the host country i.e. India is not a participant in any emission trading programs or nor does it have any binding limits.

Sustainable Development Contributions:

As confirmed during the remote audit, the project displaces electricity produced in fossil fuel based power plants, by using clean renewable source to generate electricity and thereby contributes to sustainable development through reduction in greenhouse gas (GHG) emissions. It has also been confirmed that the project implementation has led in significant environmental and socio-economic benefits (as stated in section 1.11 of the submitted MR) and contributes to the social, economic, technological and environmental well-being. The project supplies clean, affordable and renewable energy (196,116.80 MWh net electricity under the monitoring period) without reliance on fossil fuels for generation of electricity to meet the growing demands in the region. Also, the project implementation is providing employment to the locals with a decent and secure work environment by reducing emissions otherwise generated by the operation of fossil fuel based power plants and would lead to promotion of solar PV based power generation and to encourage other entrepreneurs to participate in similar projects as well.

Management and operational system:

Verification team was able to verify that authorities and responsibilities /15/ for monitoring and reporting of all data related to the emission reductions were clearly defined for the monitoring period from 01-April-2021 to 23-September-2021 (Inclusive of both days).

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

The monitoring plan described in the section 4.3 of the MR/1.2/ is confirmed to be correct. All the parameters of the monitoring plan are monitored using appropriate metering system.

The verification team has interviewed the plant personnel /11/ who are involved in the monitoring of the parameters that are used to determine the emission reductions of the VCS project. It is confirmed based on the interviews /11/ that the plant team is competent enough to monitor the parameters as described in the monitoring plan.

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

Implementation status of the monitoring plan:

Verification team confirms through remote inspection /11/ and from the document review like PPAs/8/, Commissioning certificates/9/, calibration certificates/13/, Invoices/14/ that, the

actual monitoring system complies with the monitoring plan mentioned in the registered VCS PD /3/ and there is no deviation in monitoring plan, procedures, and the equipments.

During the verification, all relevant monitoring parameters of the registered monitoring plan have been verified with regard to the appropriateness of the verification method; the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures. All monitoring parameters have been measured / determined without material misstatements and are in line with all applicable standards and relevant requirements. It is confirmed that the monitoring mechanism is effective and reliable.

Therefore, from the document review and remote inspection, it is confirmed that all the parameters were monitored in accordance with the registered monitoring plan during the monitoring period. Following are the details of monitoring in accordance with the monitoring plan of the registered VCS PD /3/:

Data - Parameter	$EG_{PJ,y}$
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid in year y in MWh.
Source of data	Verification team confirms that the data has been measured directly from energy meters and recorded on Joint Meter Reading (JMR) reports /12/ which contains export, import values. The value was crosschecked with the invoices raised by PP to the respective state utilities for the complete monitoring period.
Description of measurement methods and procedures to be applied	During the remote inspection and through document review, it has been confirmed that the difference of final value of export and import is used for monthly values of net electricity supplied to the grid by the project activity and same value will be considered for ER calculations. It was confirmed that, monthly meter readings are taken from the main and check meters installed at the substation and certified by the representatives of SEB Officials and the representatives of the project proponent.
Frequency of monitoring-recording	Continuous monitoring and at least monthly recording as verified by the verification team through remote assessment.
Value monitored	196,116.80 MWh
Monitoring equipment	During the remote inspection and through document review, it has been confirmed that the data has been monitored continuously by electronic tri-vector meters with accuracy class 0.2s (for both – main and check). These meters measure both, export and import of electricity at the State Electricity Board (SEB) substation. The meters are monitored on continuous basis and

	cumulative readings are taken on an agreed date once in a month through Joint Meter Reading procedure. Based on Monthly Joint meter readings (JMR) /12/, net electricity exported by the project activity to the grid is reported. The verification team has verified all the JMRs/12/ for this monitoring period and confirms that the same values are applied in the ER calculation sheet /2.2/. In line with deviation requested under section 2.3.2 of monitoring report, PP has used unitary method i. e. Daywise apportioning method for calcualtion of net electricity generation for all the sites. The metering arrangement, accuracy class of meters, calibration frequency is under control of state electricity board (once in five years as per CEA notification[4]) and PP does not have any control on it. During remote inspection and through document review, it was confirmed that energy meters are calibrated periodically by the SEB at all project sites. The energy meters are with accuracy class of 0.2s and in satisfactory working condition as checked from the calibration certficates. Calibration details of the meters for all project sites are provided in Annexure IV. The meters are in compliance with the host country calibration regulations and is confirmed that they have valid calibrations during the entire monitoring period.
QA-QC procedures to be applied	The generation values have been cross-checked with the invoices/14/ and were found to be consistent. It was confirmed through remote inspection that calibration at required intervals is followed and faulty meters are replaced immediately.
Purpose of the data	Calculation of baseline emissions
Calculation method	It was confirmed that, the value of net electricity generation supplied to the grid is directly sources from Joint Meter Reading (JMR) reports which contains the export and import readings. These are recorded through dedicated SEB energy meter installed at the substation.
Comments	As confirmed during the remote inspection, the electricity generation is measured at sub-station end as net electricity supplied to the grid, available through Joint Meter Reading (JMR) reports and can be cross-checked through invoices raised to respective state utilities.

[4] https://cea.nic.in/old/reports/regulation/CEA_metering_regulation_amendment_2019.pdf

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

Opinion:

The verification team confirms that

- The project activity has been implemented and operated as per the registered VCS PD /3/, however on comparison of achieved emission reductions (189,309 tCO_2e) with the estimated emission reductions (158,814 tCO_2e) for the monitoring period, a 19.20% increase was observed. This increase in emission reductions was attributed to the higher generation. The current monitoring period is of 6 months of windy season and hence it would not be conclusive to conclude anything with respect to generation data and its effect on additionality. Hence, A FAR is raised for the monitoring and checking additionality based on annual PLF observed for the period of 01-April-2021 to 31-March-2022 which will be covered once subsequent verification is concluded.
- Further, it was confirmed that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place, as per the documents provided by the PP and remote audit /11/;
- The monitoring complies with the requirement of the applied methodology /10/;
- The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included above under each parameter and confirms to the requirement of the PD /3/;
- The values included in the monitoring report /1.2/ and corresponding emission reduction sheets /2.2/ are verified and included under each monitoring parameter.

4.2 Safeguards

4.2.1 No Net Harm

The project activity is solar PV project plant and does not involve any negative impact. Verification team confirms it based on its local and sectoral expertise.

4.2.2 Local Stakeholder Consultation

The local stakeholder consultation meeting for the project activity was conducted at Project location sites as below:

1. For 30 MW solar project at Telangana by Cleansolar Renewable Energy Private Limited
   Date of invitation: 08-July-2015
   Date of meeting: 16-July-2015
   Location of meeting: Project site, Telangana

2. For 50 MW solar project at Telangana by Divine Solren Private Limited
   Date of invitation: 09-July-2015
   Date of meeting: 17-July-2015

Location of meeting: Project site, Telangana

3. For 65 MW solar project at Gujarat by Astra Solren Private Limited
   Date of invitation: 05-November-2016
   Date of meeting: 12-November-2016
   Location of meeting: Project site, Telangana

4. For 60 MW solar project at Rajasthan by Mahindra Susten Private Limited
   Date of invitation: 04-October-2016
   Date of meeting: 11-October-2016
   Location of meeting: Project site, Telangana

The stakeholder consultation process was validated during the registration of project activity in VCS. VCS Joint Validation & Verification report /3/ was verified to confirm the same. Also, PP has placed grievance/feedback register at the project site to get feedback on the project from stakeholders. Verification team has checked the copy of on-site grievance registers submitted by the PP for all four locations and confirms that the grievances that have been registered till date are of minor nature related to the maintenance requirements of the site and have been resolved successfully within a short period of time. No comments or negative feedback of local stakeholders has been received till date.

4.3 AFOLU-Specific Safeguards

This is not an AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The verification team has reviewed the emission reduction (ER) spread sheet /2.2/ and checked all the formulae and verified them to be correct and in line with the monitoring plan of the registered VCS PD and the applied monitoring methodology /10/.

All the monitored parameters are described above in section 4.1. All the ex-ante parameters which are used in the calculation of emission reduction are presented in section 4.1 of the MR /1.2/ transparently. It is confirmed that all the ex-ante parameters have been correctly used in the emission reduction calculation.

Baseline emissions:

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

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

Where:

BE_y = Baseline emissions in year y (tCO_2/yr)

$EG_{PJ,y}$ = Net Electricity exported to grid (MWh)

$EF_{grid,CM,y}$ = Baseline Emission Factor (Combined margin CO_2 emission factor for grid)

The baseline emission factor in year y (tCO_2/MWh), is fixed ex-ante for the duration of the crediting period and is 0.9653 tCO_{2e}/MWh.

Therefore,

$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$
$BE_y = 196,116.80 \times 0.9653$
$BE_y = 189,309\ tCO_2e$ (round down value)

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

Project Emissions:

As per the applied methodology /10/, the PE_y in case of a solar PV project is considered zero. Hence, $PE_y = 0$ is acceptable to the verification team.

Leakage:

As per the applied methodology /10/ and as defined in the registered VCS PD /03/, no leakage is considered in the project activity and the same is followed in this monitoring period also. Thus, it is in compliance with the VCS PD/3/.

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

Parameter	Description	Source/Justification
$EF_{grid,OM,y}$ tCO_2/MWh	Operating Margin CO_2 emission factor in year y	Calculated as per ACM0002/10/ with 3 years vintages (2013-14, 2014-15 & 2015-16) data obtained from "CO_2 Baseline Database for Indian Power Sector" version 12.0 published by 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 0.9843 is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD/3/.
$EF_{grid,BM,y}$ tCO_2/MWh	Build Margin CO_2 emission factor in year y	Calculated as per ACM0002/10/ with latest date available for the most recent year i. e. 2015-16) data obtained from "CO_2 Baseline Database for Indian Power

		Sector" version 12.0 published by 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 is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD/3/.
$EF_{grid,CM,y}$ tCO_2/MWh	Combined Margin CO_2 emission factor in year y	Combined margin emission factor has been calculated by the Central Electricity Authority in accordance with CDM methodology: ACM0002/10/ and tool to calculate the emission factor for an electricity system. The value 0.9653 is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD/3/.

On comparison of achieved emission reductions (189,309 tCO_2e) with the estimated emission reductions (158,814 tCO_2e) for the monitoring period, a 19.20% increase was observed. This increase in emission reductions was attributed to the higher generation.

The increase in PLF which has resulted in higher generation does have an impact on the additionality of the project activity. However, the current monitoring period is only for 6 months of windy season and hence, DOE is of opinion that impact of PLF on the additionality will not provide a complete analysis. Hence, A FAR is raised for the monitoring and checking additionality based on annual PLF observed for the period of 01-April-2021 to 31-March-2022 which will be part of subsequent verification (i. e. 24-September-2021 to 31-March-2022) along with the current monitoring period (01-April-2021 to 23-September-2021).

Furthermore, the electricity generation from the start date of crediting period till end of the monitoring period and its impact on additionality has also been assessed and found that, the actual electricity generation variation is still below than the variation required to breach the benchmark. Thus, VT confirms that the variation till end of current monitoring period (i.e. 29/06/2016 to 23/09/2021) is instantaneous and even if consistently expected throughout the lifetime of project activity i.e. 25 years which was considered for IRR calculation then also the IRR value will be below the selected benchmark. Please refer appendix VI for detailed assessment.

According, to the applied methodology /10/, the conservativeness of the achieved emission reduction was checked and the detailed emission reduction calculation has been transparently provided in the ER sheet /2.2/. All the formulae and the calculation procedure were checked by the verification team. In the opinion of verification team, the assumptions, emission factors and default values that were applied in the calculations have been justified. Also, the verification team confirms that there were no manual transposition errors between the data sets in the ER Sheet/2.2/ during the current monitoring period. It is confirmed that the data has been measured directly from meters and it was cross checked from the joint meter readings/12/ and the invoices/14/ raised to state electricity utilities and was able to verify the same.

Finding: FAR 01 is raised. Refer to appendix 2 for further details.

Opinion: The verification team confirms;

- The monitoring plan has been implemented as per the registered VCS PD /3/;
- The monitoring complies with the requirement of the applied methodology/10/;
- The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included above under each parameter and confirms to the requirement of the PD /03/;
- The values included in the monitoring report /1.2/ and corresponding emission reduction sheet /2.2/ are verified and included under each monitoring parameter, wherever appropriate.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

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

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan /3/. No significant lack of evidence and missing data were detected during remote audit discussion and video inspection /11/. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures. The monitoring parameters have been measured / determined without material mis-statements and is in line with all applicable standards and relevant requirements. The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included in section 4.1 under each parameter and confirms to the requirement of the registered VCS PD /03/. The export and import data is measured by the electricity meters, recorded continuously and the invoices are generated monthly /14/. The data is then reported annually through VCS Monitoring Report as verified by the verification team through remote assessment.

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

4.6 Non-Permanence Risk Analysis

Not applicable to the project activity.

5 VERIFICATION CONCLUSION

KBS Certification Services Pvt. Ltd. has been commissioned by 'EKI ENERGY SERVICES LIMITED.' to perform verification of its registered VCS project 'BUNDLED SOLAR POWER PROJECT BY MAHINDRA SUSTEN PRIVATE LIMITED', for the monitoring period 01-April-2021 to

23-September-2021 (Inclusive of both days), under the crediting period 29-June-2016 to 28-June-2026, with regard to the relevant requirements of VCS Standard Version 4.1.

The management of the 'EKI ENERGY SERVICES LIMITED.' is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project final Monitoring Report Version 05 and dated 23-February-2022. The calculation and determination of GHG emission reductions from the project is the responsibility of the management of the 'EKI ENERGY SERVICES LIMITED.'. The development and maintenance of records and reporting procedures are in accordance with the Monitoring Report Version 05 dated 23-February-2022.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 01-April-2021 to 23-September-2021 (Inclusive of both days) based on the reported emission reductions in the final Monitoring Report Version 05 dated 23-February-2022 for the same period.

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

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

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

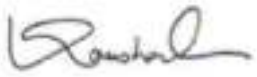
Verification period: From 01-April-2021 to 23-September-2021 (Inclusive of both days)

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)
01-April-2021 to 23-September-2021	189,309	0	0	189,309
Total	**189,309**	**0**	**0**	**189,309**

Location: Faridabad

Date: 25-February-2022



Authorized Signatory: Kaushal Goyal

Designation: Managing Director

KBS Certification Services Pvt. Ltd.

APPENDIX I: REFERENCES

/1/	/1.1/ Monitoring Report, Version 01, dated 20-October-2021 (Initial Version) /1.2/ Monitoring Report, Version 05 dated 23-February-2022 (Final Version)
/2/	/2.1/ Emission Reduction calculation sheet, Version 01 dated 20-October-2021 (corresponding to initial Version of VCS MR) /2.2/ Emissions Reduction calculation Sheet, (corresponding to final Version of VCS MR)
/3/	Registered VCS-PD (Joint Project Description and Monitoring Report) version 02 dated 22-June-2018 Joint Validation & Verification Report version 02 dated 28-June-2018
/4/	VCS Standard Version 4.1
/5/	VCS Programme guide Version 4.0
/6/	Technical specifications/photographs of Solar PV plant, electricity meters etc.
/7/	VCS Validation Verification manual version 3.2
/8/	Power purchase agreement for the Solar PV plants Operation and maintenance contracts
/9/	Commissioning Certificates of all project sites
/10/	ACM0002: Grid-connected electricity generation from renewable sources --- Version 18.1 https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG
/11/	Remote auditing (22-November-2021) for verification of measuring and monitoring procedure, • Video recordings • Interviews and data/log review
/12/	Joint Meter Readings for the entire monitoring period 01-April-2021 to 23-September-2021
/13/	Calibration Certificates for main meters and check meters
/14/	Invoices raised during the monitoring period 01-April-2021 to 23-September-2021
/15/	Organization structure/chart
/16/	VCS declaration (dated 05-December-2021) by Mahindra Susten Private Limited and Divine Solren Private Limited for avoidance of double counting
/17/	Single line diagram and meter locations / Layout

APPENDIX II: FINDINGS

Summary of findings	CAR	CL	FAR
	00	03	01

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

~~FAR ID~~		~~Section no.~~		~~Date:~~
~~Description of FAR~~				
~~Project participant response~~				~~Date:~~ DD/MM/YYYY
~~Documentation provided by project participant~~				
~~VVB assessment~~				~~Date:~~ DD/MM/YYYY

Table 2. CL from this verification

Date	Type & Number	Raised by	Reference
01/12/2021	CL 01	Verification team	
Non conformities raised			
1. Monitoring period mentioned in section 1.1 is inconsistent with the table on the 1st page of MR. 2. Under parameter – EGPJ,y , it is mentioned that 'The calibration details are being mentioned in **Error! Reference source not found.**'. However, the appendix 2 is missing in the MR. Please clarify.			
Project Participant's response		Date: 14/12/2021	
1. Monitoring period has been revised in the section 1.1. 2. Appendix headings have been revised, also there were no breakdown during the current monitoring period.			
Documentation Provided as Evidence by Project Participant			

MR V2	
Information Verified by Team Leader	**Date of review:** 15/12/2021
1. Monitoring period mentioned in section 1.1 is now made consistent with the table on the 1st page of MR which is checked and confirmed. Hence this part of CL is closed. 2. PP has revised description under parameter – $EG_{PJ,y}$ to provide correct Appendix number i.e. Appendix 1 which is checked and confirmed. During remote audit, it was confirmed by site representative that no major break downs were observed during current monitoring period hence absence of Appendix 2 is accepted. Hence this part of CL is closed.	

Date	**Type & Number**	**Raised by**	**Reference**
01/12/2021	CL 02	Verification team	ER sheet
Non conformities raised			
The supporting documents for the electricity generation values for the 1st and the last month of monitoring i.e. April, 2021 and September, 2021 respectively is missing.			
Project Participant's response	**Date:** 14/12/2021		
Supporting documents regarding generations are being revised.			
Documentation Provided as Evidence by Project Participant			
JMR and Invoices			
Information Verified by Team Leader	**Date of review:** 15/12/2021		
PP has submitted supporting documents for the electricity generation values for the 1st and the last month of monitoring i.e. April, 2021 and September, 2021 respectively. The submitted documents i. e. JMR and Invoices were cross checked against the values mentioned in the ER sheet and the values were found consistent. **Thus, this CL is closed.**			

Date	**Type & Number**	**Raised by**	**Reference**
15/12/2021	CL 03	Verification team	Project Deviation
Non conformities raised			
PP has added a Project Description Deviation in current MR (version 2.0). This deviation is with respect to apportioning approach and it mentions that '*…..therefore with this deviation, unitary method for apportioning export and import values is being used…..*'. However, details about this proposed method is not mentioned in the revised MR, Kindly clarify. Also, PP shall demonstrate with example under deviation in the MR how the chosen method is the most conservative method of calculation.			

Project Participant's response	Date: 15/12/2021
Proposed change mentioned with sample calculation is being mentioned over the revised MR.	
Documentation Provided as Evidence by Project Participant	
MR V3	
Information Verified by Team Leader	**Date of review:**
PP has revised mentioned propose deviation to include an example. The example, its calculation and conservativeness of chosen way of calculation is checked and accepted to the verification team. **CL is closed.**	

Table 3. CAR from this verification

No CAR raised during current verification.

Table 4.FAR from this verification

Date	Type & Number	Raised by	Reference
15-December-2021	FAR	Verification team	NA
Non conformities raised			
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 's response		**Date:**	
Documentation Provided as Evidence by Project Participant			
Information Verified by Team Leader		**Date of review:**	

APPENDIX III: COMPETENCE OF TEAM MEMBERS

Personnel Name:		**Deepak Pundlik**	
Qualified to work as:			
Team Leader	☐	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope		**Technical Area**	
Energy industries (renewable/non-renewable sources)		TA 1.2: Energy generation from renewable energy sources	
Approved by (Manager C & T)		Shikha Sharma	
Approval date:		07-July-2021	

Personnel Name:		**Tushar Chaudhari**	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope		**Technical Area**	
Energy Industries (renewable/non-renewable sources)		TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar	
Energy industries (renewable/non-renewable sources)		TA 1.2: Energy generation from renewable energy sources	
Energy demand		TA 3.1. Energy Demand	
Waste Handling and Disposal		TA 13.1 Waste Handling and Disposal	

Approved by	Manager Competency & Training
Approval date:	02-September-2020

Personnel Name:		**Anjana Sharma**	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	**Technical Area**		
SS: 01: Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
	TA 1.2: Energy generation from renewable energy sources		
SS 3: Energy demand	TA 3.1. Energy Demand		
SS 5: Chemical industry	TA 5.1 Chemical industry		
SS 12: Solvents use	TA 12.1 Chemical industry		
SS 13: Waste handling and disposal	TA 13.1 Waste Handling and Disposal		
	TA 13.2 Manure		
Approved by (Manager C & T)	Shikha Sharma		
Approval date:	05-August-2021		

APPENDIX IV: CALIBRATION DETAILS

The energy meters details for the project activity is as below.

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

Meter Details	Main Meter	Check Meter	Standby Meter
Meter Serial No	APX00619	APX00620	APX00622
Meter Make	SECURE	SECURE	SECURE
Accuracy Class	0.2 s	0.2 s	0.2 s
Date of Calibration	23-February-2019	23-February-2019	23-February-2019
Due date of Calibration	22-February-2024	22-February-2024	22-February-2024

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

Meter Details	Main Meter	Check Meter	Standby Meter
Meter Serial No	APZ00292	APZ00293	APZ00294
Meter Make	SECURE	SECURE	SECURE
Accuracy Class	0.2 s	0.2 s	0.2 s
Date of Calibration	04-September-2019	04-September-2019	04-September-2019
Due date of Calibration	03-September-2024	03-September-2024	03-September-2024

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

Meter Details	Main Meter	Check Meter
Meter Serial No	GJ 3832 A	GJ 3833 A
Meter Make	SECURE	SECURE
Accuracy Class	0.2 s	0.2 s
Date of Calibration	24-March-2017	24-March-2017
Due date of Calibration	23-March-2022	23-March-2022

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

Meter Details	Main Meter	Check meter
Meter Serial No	GJ 3830 A	GJ 3831 A
Meter Make	SECURE	SECURE
Accuracy Class	0.2 s	0.2 s
Date of Calibration	24-March-2017	25-March-2017
Due date of Calibration	23-March-2022	24-March-2022

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

Meter Details	Main Meter	Check Meter
Meter Serial No	15624818	15624819
Meter Make	L & T	L & T
Accuracy Class	0.2 s	0.2 s
Date of Calibration	28-September-2019	
Due date of Calibration	27-September-2024	

APPENDIX V: ABBREVIATION

General	
AC	Alternative Current
ACM	Approved Consolidated Methodology
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
DC	Direct Current
EB	Executive Board
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse Gases
IPCC	Intergovernmental Panel for Climate Change
ISO	International Organization for Standardization
JMR	Joint Meter Readings
MR	Monitoring Report
MW	Mega Watt
MWh	MegaWatt hour
NCV	Net Calorific Value
O&M	Operation & Maintenance
OM	Operating Margin
PD	Project Description
PP	Project proponent
PPA	Power Purchase Agreement
PV	Photovoltaic

QA/QC	Quality Assurance/Quality Control
SPV	Special Purpose Vehicle
tCO2	Tonnes of Carbon Dioxide
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
VCU	Voluntary Carbon Units
VER	Voluntary Emissions Reductions
VVB	Validation/Verification Bodies
Project specific	
ASPL	Astra Solren Private Limited
CREPL	Cleansolar Renewable Energy Private Limited
DSPL	Divine Solren Private Limited
MSPL	Mahindra Susten Private Limited

APPENDIX VI: PLF VARIATION ASSESSMENT

Electricity generation (MWh)													
Monitoring dates/ SPVs	MP 01		MP 02		MP 03		MP 04		PLF Observed from 29/06/2016 to 23/09/2021	PLF in Registered VCS PD	% Change	PLF Breaching Value in Registered PD*	Additionality Breached
	29-06-2016	23-05-2018	24-05-2018	23-12-2019	24-12-2019	31-03-2021	01-04-2021	23-09-2021					
Cleansolar Renewable Energy Private Limited (CREPL)	98290.7		84508.0		69499.1		22947.0		19.98 %	19%	5.18 %	12.16 %	No
Divine Solren Private Limited (DSPL)	79804.9		144799.2		119555.4		42711.4		16.85 %	19%	11.30%	17.39 %	No
Astra Solren Private Limited (ASPL)	144502.3		214260.3		180057.0		62115.4		20.14 %	19%	5.98 %	38.23 %	No
Mahindra Susten Private Limited (MSPL)	157772.6		222976.6		171507.0		68342.97		22.53 %	19%	18.57%	35.12 %	No