



VERIFICATION REPORT FOR “GRID CONNECTED SOLAR ENERGY PROJECT”



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

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Summary:

LGAI Technological Center, S.A. (hereafter referred to as Applus+ Certification) has been contracted by CLP India Private Limited to conduct the verification of the project - “Grid Connected Solar Energy Project”, VCS ID 1890 regarding the relevant requirements of VCS programme guidelines and standard (VCS standard version 4.5, & VCS program guide version 4.4). Relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting has been applied for verification.

The monitoring period covers under this verification are from 21/09/2022 to 31/08/2023 (both days included).

The verification includes confirming the implementation of the monitoring plan of the registered VCS PD and MR (VCS ID 1890) and the application of the monitoring methodology as per ACM0002 version 19: “Grid-connected electricity generation from renewable sources”.

The project activity involves electricity generation by the solar power supplying the generated electricity to state DISCOM i.e Integrated Indian Grid. The project being a renewable energy generation activity, leads to reduction in fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and plays beneficial role in the mitigation of climate change.

A risk-based approach has been followed to perform this verification. During verification, 02 Corrective Action request (CARs), 00 Forward Action request (FARs), and 01 Clarification request (CLs) were raised and successfully closed.

The review of the project design documentation, monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, interviews and stakeholders have provided Applus+ Certification with sufficient evidence to validate the fulfillment of the stated criteria.

Applus+ Certification confirms that the project is implemented in accordance with the registered VCS PD&MR. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the project's GHG emissions, and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the emission reductions from the project activity "Grid Connected Solar Energy Project" in India during the period 21/09/2022 to 31/08/2023 (including both days) amount to 301,399 tons of CO₂e.

CONTENTS

1	INTRODUCTION	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Level of Assurance.....	5
1.4	Summary Description of the Project	6
2	Verification Process	7
2.1	Method and Criteria.....	7
2.2	Document Review	8
2.3	Interviews	8
2.4	Site Visits	8
2.5	Resolution of Findings	12
2.6	Eligibility for Validation Activities	13
3	Validation Findings	13
3.1	Participation under Other GHG Programs	13
3.2	Methodology Deviations.....	13
3.3	Project Description Deviations.....	13
3.4	Grouped Project	14
4	Verification Findings	14
4.1	Project Implementation Status	14
4.2	Safeguards	18
4.3	AFOLU-Specific Safeguards	19
4.4	Accuracy of GHG Emission Reduction and Removal Calculations	19
4.5	Quality of Evidence to Determine GHG Emission Reductions and Removals	20
4.6	Non-Permanence Risk Analysis.....	32
5	Verification Opinion.....	32
	APPENDIX 1: DOCUMENT REFERENCES	34
	APPENDIX 2: ABBREVIATIONS	36
	APPENDIX 3: FINDINGS OVERVIEW	37
	APPENDIX 4: COMPETENCY STATEMENTS.....	39

1 INTRODUCTION

1.1 Objective

LGAI Technological Center, S.A. (Applus+ Certification) has been contracted by CLP India Private Limited, to undertake the verification of the renewable energy project titled “Grid Connected Solar Energy Project” (VCS ID-1890). The verifiers have reviewed the GHG data collected to date for the monitoring period from 21/09/2022 to 31/08/2023 (both days included) covered in this verification. The objective of this verification is a thorough and independent assessment of registered project activities against the applicable VCS requirement by the VVB. The verification process shall determine whether the proposed project activity complies with the requirements of latest VCS guidelines, applicability conditions of the selected methodology, relevant host country regulations and guidance issued by the VCS Board.

1.2 Scope and Criteria

The scope of verification is to assess the claims and assumptions made in the VCS monitoring report (MR) against the VCS criteria, including but not limited to, VCS standard, applied methodology and other relevant rules and requirements established for VCS project activities.

The Verification is not meant to provide any consulting towards the project participants. However, stated requests for clarification and/or corrective actions request may have provided inputs for improvement of the project design.

1.3 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements. Reasonable assurance is a high level of assurance regarding material misstatements, but not an absolute one.

Reasonable assurance includes the understanding that there is a remote likelihood that material misstatements will not be prevented or detected on a timely basis. To achieve reasonable assurance, the auditor needs to obtain sufficient appropriate audit evidence to reduce audit risk to an acceptably low level. This means that there is some uncertainty arising from the use of sampling, since it is possible that a material misstatement will be missed.

The evidence used to achieve a reasonable level of assurance is specified in section 2.3 and 2.4 of this report. Materiality for the project is 5%, however the assessment team has verified 100% data (no sampling plan is applied), hence it is sufficient to meet the materiality requirements of the project.

1.4 Summary Description of the Project

The project activity comprises installation of a grid connected solar photovoltaic based power project with a total capacity of 170 MW_{AC} in the state Telangana and Maharashtra in India.

The sub-project of capacity 100 MW_{AC} located in Telangana is developed by CLP Private Limited, has signed power purchase agreement (PPA) with the Southern Power Distribution Company of Telangana (TSSPDCL), is the Electricity Distribution company owned by the government of Telangana for the five southern districts of Telangana.

The sub-projects located in Maharashtra developed by Gale Solarfarms Private Limited (50 MW_{AC}) and Tornado Solarfarms Private Limited (20 MW_{AC}), has signed power purchase agreement (PPA) with SECI (Solar Energy Corporation of India Limited), is a company of the Ministry of New and Renewable Energy, Government of India, established to facilitate the implementation of the National Solar Mission. It is the only Central Public Sector Undertaking dedicated to the solar energy sector.

CLP India Private Limited is the project proponent and Gale Solar farms Private Limited & Tornado solar farms Private Limited is the other entity involved in the project activity (both are 100% subsidiaries of CLP India Private Limited). The details of investors, installed capacity with location and commissioning status is provided in the below table:

Sr.No	Investor Name	Installed Capacity (MW _{AC})	Location of the project	Commissioning date
1	CLP India Private Limited	100	Mahbubnagar dist. in the state of Telangana, India	07/08/2017
2	Gale Solarfarms Private Limited	50	Dhule district of Maharashtra, India	08/02/2018
3	Tornado Solarfarms Private Limited	20	Dhule district of Maharashtra, India	09/11/2017

Location of the project was verified through GPS Map (<https://www.gps-coordinates.net/>) and found consistent with the data provided in the registered joint VCS PD&MR /01/.

The commissioning date of each phase is verified through the commissioning certificate/12/. The verification team has checked the latest photographs/videos the equipment's installed (solar modules, inverters and transformers, energy meters) installed at site and SCADA monitoring system and found to be in accordance with the registered joint VCS PD&MR. Total emission reductions achieved under this monitoring period 21/09/2022 to 31/08/2023 (including both days) is 301,399 tCO₂e.

Based on the assessment of the documents, interviews (virtual) with PP, the assessment team can confirm that the project activity is fully functional and implemented as described in the registered joint VCS PD&MR.

2 VERIFICATION PROCESS

The registered VCS project is undergoing fifth verification under VCS, the approach adopted to ensure the quality of emission reductions is described in the following sections.

2.1 Method and Criteria

The verification approach consists of two phases.

In the first phase, Applus+ Certification completed a strategic review and risk assessment of the project's activities and processes to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant.
- Protocols used to estimate or measure GHG emissions from these sources.
- Collection and handling of data.
- Controls on the collection and handling of data.
- Means of verifying reported data; and
- Compilation of the verification Report.

At the end of this phase, Applus+ Certification produced a Verification Checklist which, based on the risk assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan. It is to be noted that 100% data is verified during the current verification, hence no sampling plan is applicable.

In the second phase using the Verification checklist, Applus+ Certification verified the implementation of the monitoring plan and the data presented in the VCS MR/04/ for the period in question. This involved interview of project proponent representative's and a desk review of the Monitoring Report. This verification report describes the findings of this assessment.

Verification schedule is described in the below table:

Sr. No	Date	Milestones
1	29/08/2023	Contract signed
2	20/09/2023	Desk review
3	23/09/2023	site visit (remote)
4.	18/12/2023	Draft verification report

2.2 Document Review

The verification is performed primarily as a document review of the registered joint VCS PD&MR/01/, previous MR and Verification report/05/ and associated documents as stated in detail in appendix 1 of this document. The assessment is performed by a verification team using a protocol. The cross checks between information provided in the Monitoring report, VCS PD&MR, and information from sources other than those used, if available, the team's sectoral or local expertise and, if necessary, independent background investigations.

2.3 Interviews

The remote site visit for the project location, by the assessment team, was conducted on 23/09/2023 and the following stakeholders were interviewed.

S N	Name	Organization
1	Mr. P. Harish	Asset Manager, CLP (Mahbubnagar site)
2	Mr. V. Shyam	Assistant Engineer, O&M (Mahbubnagar site)
3	Mr. Omkar Yadav	Asset Manager, CLP (Dhule site)
4	Mr. Milind Rupawale	Site In charge (Tornado)
5	Mr. Arvind Sonawane	Site In charge (Gale)

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

2.4 Site Visits

In accordance with the guidelines provided under paragraph 4.1.12 of VCS standard v04.5, onsite visit shall be conducted at verification under the following circumstances:

- The first verification of the project after validation
- Verification of project baseline reassessments; and
- Verifications that assess a project description deviation where the deviation impacts the applicability of the methodology, additionality, or the appropriateness of the baseline scenario.

Since the project undergoing 5th verification and Applus team conducted physical site visit for previous verification, hence above conditions do not apply, and audit will be conducted remotely.

However, to achieve a reasonable level of assurance, the assessment team has followed the alternative means to substantiate the verification criteria as described in the below table:

Assessment Criteria	Means of verification/source documents	Assessment opinion
Description of project activity	Commissioning certificates /1/ PPA signed with the respective state utility /13/ VCS verification report for 4 th monitoring period/05/. Virtual interview with site personnel on 22/09/2023/19/.	The information's with reference to project capacity, technology, plant equipment's and commissioning dates as provided in section 1.1 of MR are found consistent with the documents.
Compliance of the project implementation with the registered project design document	Monthly JMRs issued by the respective state utility /09/. Geographical co-ordinates of project activity verified through Google Map ¹ Photograph of equipment's installed at site and screen shots of SCADA system /19/ VCS verification report for 4 th monitoring period/05/.	Monthly JMRs issued by the respective state utilities indicate the following information: Commissioning date, Date of PPA signed with DISCOM, Capacity of project and name of project participant. Location of project is verified through Google Map and found consistent with registered joint VCS PD&MR.

¹ <https://www.gps-coordinates.net/>

	Virtual interview with site personnel on 22/09/2023	Photograph of equipment's and screen shots of SCADA system are verified to check the operational status of project activity. Grid connectivity of the project is confirmed through the PPAs. All the information's regarding the project implementation as discuss above are further verified through VCS PD and found consistent.
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	Virtual with site personnel on 22/09/2023 PPA signed with the respective state utility/13/ Monthly JMRs issued by the respective state utility /09/. Invoices raised by project developer to the respective state utility /08/	The organizational structure, responsibilities and competencies of the personnel confirmed through virtual interview. Frequency of monitoring of parameters listed under approved monitoring plan is verified through credit notes/Invoices. The methods used for measuring, recording, storing, aggregating, and reporting the data on monitored parameters are verified though PPAs and conversations with site personnel.

		Procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the MR is confirmed through quality policy documents/20/ and found satisfactory.
Compliance with the calibration frequency requirements for measuring instruments	Calibration certificates of meters /07/ PPA signed with the respective state utility/13/ Photograph of energy meters indicating sr. No, accuracy class, make /19/. Central Electricity Authority (Installation and Operation of Meters) Regulations/16/	Calibration frequency and energy meter specifications (Sr. No, make accuracy class) is verified through calibration certificates and further verified through photographs and found consistent. Responsibility of calibration and maintenance of energy meters is solely under control of state utility; this is verified through the PPA signed for respective locations.
Assessment of data and calculation of emission reductions or net removals	Monthly credit notes issued by the state utility /09/. Invoices raised by project developer to the state utility /08/ CEA CO₂ Baseline Database for the Indian Power Sector /11/ Previous VCS verification report /02/.	Monthly values of monitoring parameter used in ER calculation are verified through credit reports and cross verified with the invoices. Methods, formulae and emission factor for calculating baseline emissions have been followed are in accordance with the applied methodology and as described in the approved VCS verification report /02/.

It is noteworthy that no sampling plan for verification is applied as 100% data is verified for the current monitoring period. Most of the reference document referred by the assessment team (above table) are issued by the state utility, an external government agency, hence is deemed authentic.

Based on the above assessment it can be concluded that the assessment team has verified sufficient appropriate audit evidence, to reduce audit risk to an acceptably low level as requisite to achieve reasonable level of assurance for the current verification.

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and interaction with site personnel during the onsite visit. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and non-conformities, which may be of following types.

CAR (Corrective Action Request) is raised if one of the following occurs:

Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient.

Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants.

Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions.

Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants. Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CLs raised by the Applus+ Certification during verification shall be resolved prior to submitting a request for issuance.

FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period. During the current verification, 02 Corrective Action request (CARs), 00 Forward Action request (FARs), and 01 Clarification request (CLs) were raised and successfully closed. All the findings that are raised and communicated to project participant during the verification are included under Appendix 3. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise.

2.5.1 Forward Action Requests

The project activity is undergoing fifth verification under VCS; there were no FARs raised during the validation or previous verification/02/.

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

Project activity is undergoing periodic verification, validation of project description deviations identified during the current monitoring period is provided under section 3.3 of this report.

3.1 Participation under Other GHG Programs

The Project is registered under VCS only (VCS ID-1890).

The PP has submitted the declaration/15/ which states that the net GHG emission reductions generated by the project activity will not be used for compliance with any other emissions trading program or to meet binding limits on GHG emissions for the same monitoring period.

3.2 Methodology Deviations

There is no methodology deviation identified during the current monitoring period.

3.3 Project Description Deviations

Project deviation (current monitoring period):

No project deviation identified during the current monitoring period.

Project deviation (previous monitoring period):

The following project deviations are considered during the previous monitoring period:

1. As per the registered PD, the sub-project owned by SE Solar Limited (of capacity 100 MW_{AC}), located in Mahbubnagar district in the state of Telangana, India. It is to be noted SE Solar Limited was also subsidiary of CLP India Private Limited. Post registration of the project, on entity SE Solar Limited has been legally merged with CLP India private Limited and dissolved. This is verified through the order issued by National Company Law Tribunal (NCLT) on 20/02/2020/22/. Since the ownership of sub-project is changed, hence this instance is considered as project deviation in the current monitoring period.
2. In accordance with the registered PD, CLP Wind Farms (India) Private Limited was the Project Proponent of this project activity. Later, CLP Wind Farms (India) Private Limited has transferred all the rights to SE Solar Limited and the communication sent to VCS registry in this regard. As described above (point 1), the entity SE Solar Limited has been legally merged with CLP India private Limited, hence the CLP India Private Limited became the project participant as reflected at VCS project webpage. This change is considered as project deviation.
3. The energy meters installed for 50 MW_{AC} Gale Solar Project and for 20 MW_{AC} Tornado Solar Project were replaced with new meters on 05/11/2020 and 09/07/2020 respectively due to malfunctioning of existing meters. The assessment team has verified the JMRs for the concerned months indicating the serial numbers of existing and new meters. Since the calibration, maintenance and replacement of energy meters is completely under control of state utility, the project proponent has considered this instance as project deviation in line with the clause 3.18.2 of the VCS standard version 4.5.

The project deviations as listed above don't have any adverse impact on the applicability of methodology, additionality and appropriateness of the baseline scenario and the project remains in compliance with the VCS rules.

3.4 Grouped Project

Not applicable. The project activity is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity consists of the installation of 170 MW_{AC} Solar Photovoltaic Project in the state of Telangana and Maharashtra. The project activity was commissioned in three phases as mentioned in section 1.4 of this report and details is checked and confirmed from the commissioning certificates/12/ of the project activity.

This proposed solar power project will reduce the GHG emissions generated by the current generation energy mix in India's Power Grid, which is dominated by fossil fuel based grid connected power plants. The power generated through the proposed project activity being supplied to Indian grid through a contractual arrangement (PPA) with the Southern Power Distribution Company of Telangana (TSSPDCL) and Solar Energy Corporation of India Limited (SECI) for the sub-project located in Telangana and Maharashtra state respectively.

The technical specification of the project activity equipment's has been checked through latest photographs and are found to be consistent with the mentioned under section 3.1 of MR. The status of the project activity is verified through screenshots of the SCADA system/19/, indicating the real-time generation data and hence it is confirmed that the project is fully functioning.

The monitoring plan of registered Joint VCS PD&MR/01/ includes the following monitoring parameters:

For Telangana location:

EG_{PJ, Veltloor, y}: Quantity of net electricity generation supplied by the project Veltloor plant to the grid in year y,

This parameter being calculated on monthly basis as difference of electricity exported (EG_{Export, Veltloor}) to the grid and electricity imported ((EG_{Import, Veltloor}) from the grid by the project and those are being measured by energy meters of accuracy class 0.2s located at project site. These export and import parameters are measured continuously and at least monthly recording. This is in line with methodology and is accepted.

Monthly values of EG_{PJ, Veltloor, y} obtained directly from the monthly JMRs issued by TSSPDCL/09/. The invoicing being done against electricity supplied by the project plant to the grid. The measurement results are cross checked with records of invoices, and it is in line with applied methodology. Thus, this parameter is considered in emission reduction calculations.

For Maharashtra location:

EG_{PJ, Gale, y}: Quantity of net electricity generation supplied by the project Gale plant to the grid in year y,

EG_{PJ, Tornado, y}: Quantity of net electricity generation supplied by the project Tornado plant to the grid in year y,

Both the parameters being calculated on monthly basis as difference of electricity exported to the grid and electricity imported from the grid by the project as:

$EG_{PJ,Gale,y} = EG_{Export, Gele} - EG_{Import, Gale}$ and

$EG_{PJ,Tornado,y} = EG_{Export, Tornado} - EG_{Import, Tornado}$

Both the parameters are being measured by energy meters of accuracy class 0.2s located at project site. These export and import parameters are measured continuously and at least monthly recording. This is in line with methodology and is accepted.

Monthly values of $EG_{PJ,Gale,y}$ and $EG_{PJ,Tornado,y}$ obtained directly from the monthly JMRs issued by MSEDCL/09/. The invoicing being done against electricity supplied by the project plant to the grid. The measurement results are cross checked with records of invoices and it is in line with applied methodology. Thus, this parameter is considered in emission reduction calculations.

Joint Meter Reading at both the locations is being taken jointly by the officials of state utility and project participant's representative on monthly basis and accordingly monthly JMR is being prepared. The monitoring methodology applies consistently the choice of the option selected for monitoring of baseline emissions. The monitoring plan provide procedures for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period. This is checked through discussion with consultant and the project participant during the site visit.

As verified during the remote site visit that there is one set of energy meters (Main, check and standby meter) installed for each sub-project (100 MW, 50 MW and 20 MW) at respective project site and are under control of respective state utility (TSSPDCL and MSEDCL), sealed in presence of both the state utility official & representative of PP.

The VCS MR/04/ has been reviewed to check that the procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the MR. The monitoring plan completely describes all measures to be implemented for monitoring all parameters required. The monitoring plan described the positioning of the equipment. Calibration frequency for Energy meters is once in 5 years. Also, CEA Notification/16/ No. 502/70/CEA/DP&D dated 17/03/2006 which is considered as national standard mentions that "All interface meters shall be tested at least once in five years." Hence calibration frequency once in 5 years considered for the project activity is found to be appropriate.

The information relating to the project implementation, provided in the Monitoring Report /04/ is consistent with that stated in the registered Joint VCS PD&MR /01/. The data and variables provided in the monitoring report are the same as stated in the registered Joint VCS PD&MR /01/. Total emission reductions achieved under this monitoring period 21/09/2022 to 31/08/2023 (including both days) is 301,399 tCO_{2e}.

Assessment team concludes the following:

- a) There are no material discrepancies between project implementation and the project description provided in the registered Joint VCS PD&MR /01/.
- b) The monitoring plan is implemented completely and monitoring system (i.e., process and

schedule for obtaining, recording, compiling, and analysing the monitored data and parameters) is appropriate.

- c) There are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology/10/.
- d) The GHG emission reductions or removals generated by the project have not included in an emissions trading program or any other mechanism that includes GHG allowance trading/15/.
- e) The project has not received or sought any other form of environmental credit or has become eligible to do so since validation or previous verification/15/.
- f) The project is registered under VCS only.
- g) The project activity is complying with indicators for sustainable development in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India as discussed under section 1.11 of MR.

The audit history table is provided below:

Audit Type	Period	Program	VVB Name	Number of years
Validation and Verification	07/08/2017 to 31/03/2019	<u>VCS</u>	LGAI Technological Center S.A. (Applus+ Certification)	1 year, 7 months, 25 days
Verification	01/04/2019 to 20/07/2020	<u>VCS</u>	Earthood Services Private Limited	1 year, 3 months, 20 days
Verification	21/07/2020 to 20/05/2021	<u>VCS</u>	Earthood Services Private Limited	10 months
Verification	21/05/2021 to 20/09/2022	<u>VCS</u>	LGAI Technological Center S.A. (Applus+ Certification)	1 year, 4 months
Verification	21/09/2022 to 31/08/2023	<u>VCS</u>	LGAI Technological Center S.A.	11 months

			(Applus+ Certification)	
Total	07/08/2017 to 31/08/2023	-	-	~6 years

The assessment team has checked the information about the audit history as provided in the above table and confirmed that the information provided are accurate.

In view of the information's as verified above the assessment team can conclude that the project has been implemented as described in the project description.

4.2 Safeguards

4.2.1 No Net Harm

There is no negative impact to any socio-economic conditions of the region due to the project activity. The type of project activities requires to conduct EIA assessment are categorized under the schedule 1 of Ministry of Environment and Forest notification dated 14/09/2006 and further notification number 3067 from MoEF dated 01/12/2009. The proposed project activity does not fall under the listed categories and hence not required an EIA to be done. This project activity will not involve any negative environmental or socio-economic impacts, as the project activity involves generation of power using solar energy which is a clean source of energy. Hence no mitigation measures are required.

4.2.2 Local Stakeholder Consultation

The PP conducted a consultation meeting with the local stakeholders separately at project locations and details is provided under the below table:

Project Location	SPD	Date of meeting	Mode of invitation	Meeting Venue
District: Mahabubnagar State: Telangana	100 MW _{AC} Solar Power Plant by SE Solar Limited	18/07/2018	Public notice and Personal Invitation letter	Veltoor Site, Telangana
District: Dhule State: Maharashtra	50 MW _{AC} Solar Project by Gale Solar farms Private Limited and 20 MW _{AC} Tornado	17/06/2018	Public notice and Personal Invitation letter	Site office in Dhule district, Maharashtra

	Solar Project by Tornado Solar farms Private Limited			
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The stakeholders comprised of villagers from nearby villages, employees of project developers and those of contractors working at the site. The stakeholders were invited through public notice and personal invitation letters. The stakeholders identified by the project participant were local villagers who are the major population of the area, local communities, and project employees, including the contractors. The assessment team verified the list of participants who attended the stakeholder meeting and confirms the stakeholders identified were relevant. The assessment team also verified the minutes of meeting to note that no negative comments were received.

The project activity undergoing fifth verification and local stakeholder consultation was appropriately conducted prior to validation to inform the design of the project and maximize participation from stakeholders during the validation.

The project proponent has implemented mechanism for ongoing communication with local stakeholders to allow stakeholders to raise concerns about potential negative impacts during implementation and operation of the project activity. The project proponent has placed a grievance register and a grievance box at respective site office/21/, where the local villagers can register their concerns.

The assessment team has checked the copy of grievance register maintained at respective site office/21/ and confirmed that no formal complaints were received during the current monitoring period.

4.3 AFOLU-Specific Safeguards

Not applicable to the project activity.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The calculation of the emission reductions is found to be correct. The details of the reported and the verified values for all parameters are listed in section 4.5 of this report.

The monitoring parameters (EG PJ, Vellore, y, EG PJ, Gale, y and EG PJ, Tornado, y) is directly sourced from monthly JMRs issued by respective state utility. The PP has provided the complete set of data for all the monitored parameters in the ER spreadsheet/06/. This data has been verified as described in section 4.5 below. The formulae & method used to calculate the baseline emissions, project emissions and leakage are appropriate and in line with the approved methodology ACM0002 version 19.

The PP has calculated the grid emission factor as per the combined margin approach described in the 'Tool to calculate the emission factor for an electricity system', version 07.0. The grid emission factor has been calculated as the weighted average of OM & BM; and has been fixed ex-ante for the entire crediting period.

The OM and BM have been obtained from a publicly available source i.e. "CO2 Baseline Database for Indian Power sector", version 14/11/ published by Central Electricity Authority, Ministry of Power, and Government of India. The OM has been determined as the average of the previous 3 years values obtained from the CEA database/11/. The value of BM has been identified directly from the CEA database. The combined margin emission factor was arrived at by applying weights of 75% for OM and 25% for BM, as specified in the tool. The OM and BM have been calculated to be 0.9610 tCO₂/MWh and 0.8644 tCO₂/MWh respectively. Applying the weights, the grid emission factor has been calculated to be 0.9368 t CO₂/MWh.

As per CER excel spreadsheet/06/ submitted by the PP, the net emission reductions for the current monitoring period were verified as 301,399 tCO₂e for the current monitoring period.

The assessment team able to confirm that the GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

All the data recorded is following the registered VCS PD and Monitoring Report. The assessment team has checked the monthly JMR reports for electricity generated and supplied by project activity/09/ for the current monitoring period to verify the values of monitoring parameters reported in ER calculation sheet and found to be consistent. Since the monthly JMRs prepared and issued by state utility, they are found to be reliable and authentic.

The CLP India Private Limited is responsible for the operations, maintenance and monitoring of the project activity, whose operation and maintenance activities are ISO 9001:2015 (Quality Management System) certified/20/. Hence it is confirmed that the management system of the VCS project is in place; with the responsibilities properly identified. The same was also verified during the interview of site personnel.

The monitoring of the project activity is found to be in accordance with the monitoring methodology described in ACM0002, Version 19 /10/. The monitoring mechanism is effective and reliable. During the remote site visit, personnel involved at various levels of the operation of the project activity have been interviewed to confirm that the plant personnel are conscious of the importance of the monitoring activities. The verification of the plant records are also substantiating consistency in recording and reporting of monitored data.

The assessment team has checked the screenshots of online monitoring SCADA system and confirmed that the monitoring systems were operational. The meters comply with appropriate

quality standards applicable for the used technology. The accuracy class of the meters installed for the project activity was verified through the registered Joint VCS PD&MR /01/, MR /04/, and calibration certificates, latest photographs of meters and cross-checked against the PPAs/13/ signed for the project activity, found to be consistent.

The supporting records of monthly JMRs/09/ issued by the respective state utility and invoices raised to TSSPDCL & SECI for the entire monitoring period were checked and found to be sufficient to enable verification of emission reductions.

The following parameter has been verified for current monitoring period:

Parameter 1: Quantity of net electricity generation supplied by the project Veltoor plant to the grid in year y, $EG_{PJ, Veltoor, y}$ (MWh):

Means of verification		
	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is calculated as difference of $EG_{Export, Veltoor}$ and $EG_{Import, Veltoor}$ and recorded monthly basis in line with the approved monitoring plan. $EG_{PJ, Veltoor, y} = EG_{Export, Veltoor} - EG_{Import, Veltoor}$ Where, $EG_{Export, Veltoor} = \text{Electricity exported by the project activity to the grid}$ $EG_{Import, Veltoor} = \text{Electricity imported by the project activity from the grid}$
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. In line with the approved monitoring plan, this parameter is recorded on monthly basis in the JMRs issued by state utility.
	Monitoring equipment	This parameter is measured through ABT meters installed at project site.
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the	The accuracy of the monitoring equipment used to measure the input values used to calculate this parameter is 0.2s as verified from the calibration certificates and physical inspection of meters,

	accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	which is as per the registered Joint VCS PD&MR /01/ and the norm defined in the PPA/13/.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. Calibration certificates/07/ are verified and confirmed that accuracy of monitoring instruments is valid for the entire range.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years /01/.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	Yes. The calibration frequency is in line with the monitoring plan as outlined in the registered Joint VCS PD&MR /01/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes, the calibration is conducted by state utility (TSSPDCL) which is a NABL Accredited entity/07/.
	How were the values in the monitoring report verified?	The monthly values of this parameter are directly sourced from JMRs prepared by state utility /09/.

		The PP has correctly reported the monthly values in the emission reduction spread sheet/06/. The value of $EG_{PJ, Veltor, y}$ for the current monitoring period is 192,374.01 MWh.
	If applicable, has the reported data been cross-checked with other available data?	Monthly reported values of $EG_{PJ, Veltor, y}$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /08/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, all the stakeholders, namely, the Grid Authority (TSSPDCL)), and the PP implemented the adequate QA/QC procedures. The electricity exported and imported by project activity is recorded by main and check meters (billing meters) installed at project site. All the tri-vector energy meters have the capability of continuous measurement, which was verified during the site visit and calibration certificates of energy meters. Joint meter reading is taken by the officials of TSSPDCL in the presence of the PPs representative at the metering points.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1, CAR #1, and CAR #2 were raised and resolved.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

Parameter 2: Quantity of net electricity generation supplied by the project Gale plant to the grid in year y, $EG_{PJ, Gale, y}$ (MWh):

Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is calculated as difference of $EG_{Export, Gale}$ and $EG_{Import, Gale}$ and recorded monthly basis in line with the approved monitoring plan. $EG_{PJ, Gale, y} = EG_{Export, Gale} - EG_{Import, Gale}$ Where, $EG_{Export, Gale}$ = Electricity exported by the project activity to the grid $EG_{Import, Gale}$ = Electricity imported by the project activity from the grid
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. In line with the approved monitoring plan, this parameter is recorded on monthly basis in the JMRs issued by state utility.
	Monitoring equipment	This parameter is measured through ABT meters installed at project site.
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	The accuracy of the monitoring equipment used to measure the input values used to calculate this parameter is 0.2s as verified from the calibration certificates and physical inspection of meters, which is as per the registered Joint VCS PD&MR /01/ and the norm defined in the PPA/13/.

	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. Calibration certificates/07/ are verified and confirmed that accuracy of monitoring instruments is valid for the entire range.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years /01/.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	Yes. The calibration frequency is in line with the monitoring plan as outlined in the registered Joint VCS PD&MR /01/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes, the calibration is conducted by state utility (MSEDCL) which is a NABL Accredited entity/07/.
	How were the values in the monitoring report verified?	The monthly values of this parameter are directly sourced from JMRs prepared by state utility /09/. The PP has correctly reported the monthly values in the emission reduction spread sheet/06/. The value of $EG_{PJ, Gale, y}$ for the current monitoring period is 92,107.91 MWh.
	If applicable, has the reported data been cross-checked with other available data?	Monthly reported values of $EG_{PJ, Gale, y}$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /08/ to state utility and found to be consistent.

	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, all the stakeholders, namely, the Grid Authority (MSEDCL), and the PP implemented the adequate QA/QC procedures. The electricity exported and imported by project activity is recorded by main and check meters (billing meters) installed at project site. All the tri-vector energy meters have the capability of continuous measurement, which was verified during the site visit and through calibration certificates of energy meters. Joint meter reading is taken by the officials of MSEDCL in the presence of the PPs representative at the metering points.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1, CAR #1, and CAR #2 were raised and resolved.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

Parameter 3: Quantity of net electricity generation supplied by the project Tornado plant to the grid in year y, $EG_{PJ, Tornado, y}$ (MWh):

Means of verification		
	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is calculated as difference of $EG_{Export, Tornado}$ and $EG_{Import, Tornado}$ and recorded monthly basis in line with the approved monitoring plan.

		$EG_{PJ, Tornado,y} = EG_{Export, Tornado} - EG_{Import, Tornado}$ Where, $EG_{Export, Tornado} = \text{Electricity exported by the project activity to the grid}$ $EG_{Import, Tornado} = \text{Electricity imported by the project activity from the grid}$
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. In line with the approved monitoring plan, this parameter is recorded on monthly basis in the JMRs issued by state utility.
	Monitoring equipment	This parameter is measured through ABT meters installed at project site.
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	The accuracy of the monitoring equipment used to measure the input values used to calculate this parameter is 0.2s as verified from the calibration certificates and through physical inspection of meters, which is as per the registered Joint VCS PD&MR /01/ and the norm defined in the PPA/13/.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. Calibration certificates/07/ are verified and confirmed that accuracy of monitoring instruments is valid for the entire range.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years /01/.

	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	Yes. The calibration frequency is in line with the monitoring plan as outlined in the registered Joint VCS PD&MR /01/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes, the calibration is conducted by state utility (MSEDCL) which is a NABL Accredited entity/07/.
	How were the values in the monitoring report verified?	The monthly values of this parameter are directly sourced from JMRs prepared by state utility /09/. The PP has correctly reported the monthly values in the emission reduction spread sheet/06/. The value of $EG_{PJ, Tornado, y}$ for the current monitoring period is 37,251.71 MWh.
	If applicable, has the reported data been cross-checked with other available data?	Monthly reported values of $EG_{PJ, Tornado, y}$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /08/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, all the stakeholders, namely, the Grid Authority (MSEDCL)), and the PP implemented the adequate QA/QC procedures. The electricity exported and imported by project activity is recorded by main and check meters (billing meters) installed at project site. All the tri-vector energy meters have the capability of continuous measurement, which was verified during

		the site visit and through calibration certificates of energy meters. Joint meter reading is taken by the officials of MSEDCL in the presence of the PPs representative at the metering points.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1, CAR #1, and CAR #2 were raised and resolved.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan.	

Parameters fixed ex ante:

$EF_{grid,OM,y}$; tCO_{2e}/MWh : it is the operating margin emission factor of Indian grid fixed for the entire crediting period and the value is considered as $0.9610 tCO_{2e}/MWh$, that is consistent with the registered VCS PD and MR.

$EF_{grid,BM,y}$; tCO_{2e}/MWh : it is build margin emission factor of Indian grid fixed for the entire crediting period and the value is considered as $0.8644 tCO_{2e}/MWh$, that is consistent with the registered VCS PD and MR.

$EF_{grid,CM,y}$; tCO_{2e}/MWh : it is the combined margin emission factor of Indian grid fixed for the entire crediting period and the value is considered as $0.9368 tCO_{2e}/MWh$, that is consistent with the registered VCS PD and MR.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate. The installation and working conditions of the meters were checked during the onsite visit and were found to be satisfactory. Details of meters are provided in below table:

Sub-project	Meter Sr.No.	Calibration Date	Calibration validity date	Calibration delay (Y/N)
100 MW _{AC} Veltoor Solar Project in Telangana	Main Meter: XD551230	14/12/2018	13/12/2023	N
	Check Meter: XD551231	14/12/2018	13/12/2023	
	Standby Meter: XD551232	14/12/2018	13/12/2023	
50 MW _{AC} Gale Solar Project in Dhule, Maharashtra	Main Meter (old): XD462713	31/01/2019	30/01/2024	N
	Main Meter (new): X1305565	05/11/2020	04/11/2025	
	Check Meter (old): XD462714	31/01/2019	30/01/2024	
	Check Meter (new): X1305566	05/11/2020	04/11/2025	
	Standby Meter (old): XD462712	31/01/2019	30/01/2024	
	Standby Meter (new): XD462715	05/11/2020	04/11/2025	
20 MW _{AC} Tornado Solar Project in Dhule, Maharashtra	Main Meter (old): 02832488	31/01/2019	30/01/2024	N
	Main Meter (new): 02892240	09/07/2020	08/07/2025	
	Check Meter(old): 02832490	31/01/2019	30/01/2024	
	Check Meter(new): 02892241	09/07/2020	08/07/2025	
	Standby Meter(old): 02832501	31/01/2019	30/01/2024	
	Standby Meter(new): 2892242	09/07/2020	08/07/2025	

It is evident from the above table that calibration of all the existing meters was valid during the current monitoring period, hence no delay in calibration of meters identified. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006 and its amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I /16/ which is considered as national standard, mentions that for voltage of 650 V up to 33 Kv, 0.5s accuracy class or above is recommended. Hence, the accuracy

classes of 0.2s for the energy meters installed at the project activity site are found to be appropriate.

The details of monitoring equipment are involved in the project activity and their calibration details/07/ are mentioned under Appendix-1 of the VCS MR/04/. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006/16/ which is considered as national standard mentions that "All interface meters shall be tested at least once in five years." Hence, the stipulated calibration frequency once in 5 years is appropriate.

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

GHG Calculations:

The emission reduction as per the applied methodology equals the baseline emissions (project emissions and leakage emissions for such project activities is considered zero). The formula provided for the calculation of baseline emissions is:

$$BE_y = EG_{PJ,y} * EF_{CO2,grid,y}$$

Where:

BE_y : Baseline emissions in year y (tCO_{2e}/yr)

$EG_{PJ,y}$: Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)

For renewable energy projects $EG_{PJ,y} = EG_{facility,y}$

$EF_{CO2,grid,y}$: CO₂ emission factor of the grid in year y (tCO₂/MWh)

The net electricity supplied to the grid by the project activity during the current monitoring period = $EG_{PJ, Veltor, y} + EG_{PJ, Gale, y} + EG_{PJ, Tornado, y}$

$$= 192,374.01 + 92,107.91 + 37,251.71$$

$$= 321,733.63 \text{ MWh}$$

Thus, $BE_y = 321,733.63 \text{ MWh} * 0.9368 \text{ tCO}_2/\text{MWh}$

$$= 301,399 \text{ tCO}_2(\text{round down value})$$

As per the applied methodology, emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

As per paragraph 34 of the applied methodology ACM0002 v 19.0 "For most renewable energy power generation project activities, $PE_y = 0$, hence

$$ER_y = 301,399 - 0$$

$$ER_y = 301,399 \text{ tCO}_2$$

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

4.6 Non-Permanence Risk Analysis

Not applicable for the project activity.

5 VERIFICATION OPINION

Applus+ Certification, contracted by CLP India Private Limited, to perform the independent verification of the emission reductions for the VCS project activity “Grid Connected Solar Energy Project” (VCS ID- 1890) in India for the monitoring period 21/09/2022 to 31/08/2023 as reported in the Monitoring Report Version 1.1 dated 04/10/2023. The CLP India Private Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity. Applus+ Certification commenced the verification based on the baseline and monitoring methodology ACM0002 Version 19.0, the monitoring plan contained in the registered VCS PD&MR Version 03, dated 06/08/2019 and VCS standard guidelines version 4.5, Monitoring Report Version 1.1 dated 04/10/2023 as per the process described under Section 2 of this report. Applus+ Certification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these.

Applus+ Certification planned and performed the verification by obtaining evidence and other information and explanations that Applus+ Certification considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 21/09/2022 to 31/08/2023 (both days included) are fairly stated in the Monitoring Report Version 1.1 dated 04/10/2023. The GHG emission reductions were calculated correctly based on the approved baseline and monitoring methodology ACM0002, Version 19, and the VCS standard version 4.5.

As summary the verification team able to conclude that:

- The project is in line with all relevant host country criteria (India) and all relevant VCS version 4 program guidelines requirements.

- Verification of the GHG statement was conducted in accordance with ISO 14064-3:2019.
- A reasonable level of assurance has been applied.

Verification period: From 21/09/2022 to 31/08/2023 (including both days)

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2022(21/09/2022 to 31/12/2022)	201,408	0.00	0.00	201,408
2023(01/01/2023 to 31/08/2023)	99,991	0.00	0.00	99,991
Total	301,399	0.00	0.00	301,399

Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PD:

Year	Ex-ante emissions reductions/removals	Achieved emissions reductions/removals	Percent difference	Justification for the difference
21/09/2022 to 31/08/2023	273,639	301,399	10.14 %	Please see the justification below this table
Total	273,639	301,681	10.14 %	Please see the justification below this table

The actual emission reduction achieved during the current monitoring period are slightly higher than the estimated amount of emission reductions as determined in the registered VCS PD&MR, which is due to the high PLF achieved by the project activity during the monitoring period.

It is to be noted that PLF is completely governed by the availability of sunlight, which is a natural phenomenon and same is beyond the control of PP. The assessment team has checked the sensitivity analysis and confirmed that the increase in the actual ERs achieved in the monitoring period is well within the threshold limits of variation (+21.57%), hence doesn't have any adverse impact on additionality. Therefore, the assessment team has concluded the increase in emission reduction of the project activity is justified and acceptable.

APPENDIX 1: DOCUMENT REFERENCES

S.No	Title of Document	Version	Date
1.	Registered joint VCS PD&MR	03	06/08/2019
2.	Joint VCS Validation and Verification Report for the monitoring period from 07/08/2017 to 31/03/2019	03	06/08/2019
3.	VCS Monitoring Report	01	08/09/2023
4.	VCS Monitoring Report (Final)	1.1	04/10/2023
5.	VCS verification report (MP04: 21/05/2021 to 20/09/2022)	02	05/03/2023
6.	ER spread sheet (corresponding to the final monitoring report)	1.1	04/10/2023
7.	Certificates of Calibration for all the meters	-	-
8.	Invoice issued by PP to TSSPDCL	For the period 21/09/2022 to 31/08/2023	-
	Invoice issued by PP to SECI		
9.	Monthly JMRs issued by TSSPDCL	For the period 21/09/2022 to 31/08/2023	-
	Monthly JMRs issued by MSEDCL		
10.	Approved Consolidated Methodology ACM0002	19	-
11.	CEA Database	version 14	Dec 2018
12.	Commissioning Certificates for 100 MW _{AC} by SE Solar Limited	-	17/08/2017
	Commissioning Certificates for 50 MW _{AC} by Gale Solar Farms Limited		27/03/2018
	Commissioning Certificates for 20 MW _{AC} by Tornado Solar Farms Limited		13/12/2017
13.	Power Purchase Agreement (PPA) signed with TSSPDCL for 100 MW _{AC} by SE Solar Limited	-	29/02/2016
	Power Purchase Agreement (PPA) signed with MSEDCL for 50 MW _{AC} by Gale Solar Farms Limited		11/04/2016

S.No	Title of Document	Version	Date
	Power Purchase Agreement (PPA) signed with MSEDCL for 20 MW _{AC} by Tornado Solar Farms Limited		11/04/2016
14.	VCS webpage for the project, VCS ID 1890. https://registry.terra.org/app/projectDetail/VCS/1890	-	-
15.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period	-	-
16.	Central Electricity Authority (Installation and Operation of Meters) Regulations Notified on 17/03/2006 <u>No. 502/70/CEA/DP&D</u> Amendments Notified on 26/06/2010 <u>No. 502/6/2009/DP&D/D-I</u>	-	-
17.	VCS Standard	Version 4.5	29/08/2023
18.	VCS Program Guide	Version 4.4	29/08/2023
19.	Observations and interactions with PPs representatives during remote site visit Latest photographs/videos of project site and equipment's	-	23/09/2023
20.	- ISO 9001:2015 certification for Scope of Design, Development and Operation of Solar Power plant - Quality policy implemented at site	-	-
21.	Copy of Grievance register/suggestion box placed at respective site office	-	-
22.	Order issued by National Company Law Tribunal (NCLT) regarding merger of SE solar Limited with CLP India Limited.	-	20/02/2020
23.	Communication with VEERA regarding name change of project proponent	-	04/12/2019

APPENDIX 2: ABBREVIATIONS

Abbreviations	Full texts
ABT	Availability Based Tariff
BEF	Baseline Emission Factor
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CL	Clarification Request
CMS	Central Monitoring System
CMP	Conference of Parties Serving as Meeting of Parties
CO2	Carbon dioxide
DISCOM	Distribution Company
EB	Executive Board
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
JMR	Joint Meter Reading
kW	Kilowatt
kWh	Kilowatt hour
MFR	Multi-Function Relay
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MWh	Megawatt-hour
PD	Project Description
PLF	Plant Load Factor
PP	Project Proponent
QA/QC	Quality Assurance and Quality Control
SECI	Solar Energy Corporation of India Limited
TSSPDCL	The Southern Power Distribution Company of Telangana
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 3: FINDINGS OVERVIEW

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

FAR ID	NA	Section no.	XX	Date :DD/MM/YYYY
Description of FAR				
Not applicable				
Project participant response				Date :DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	Section no.	2.2	Date : 28/09/2023
Description of CL				
1. Current monitoring period is started from 21/09/2022 to 31/08/2023.It is not clear how the net electricity supplied to the grid during first and last month of monitoring period is calculated. Kindly clarify about the billing cycles followed at both locations. 2. Please submit the monthly credit notes/JMRs and corresponding invoices for the current monitoring period.				
Project participant response				Date : 05/10/2023
1. There is a change in billing cycle at Veltor project site from 20th of every month to 1st of every month w.e.f 1 April 2023. The billing cycle of Gale and tornado remains same i.e. from 1st of every month to 30th of every month. Since previous monitoring period ends on 20/09/2023, the current monitoring period starts from 21/09/2022 by taking generation data on prorata basis for Veltor gale and tornado site. However, the billing cycle for all the projects site Veltor Gale and Tornado will remain same from 1 April 2023. 2. PP has submitted the monthly credit notes/JMRs and corresponding invoices for the current monitoring period to DOE.				
Documentation provided by project participant				
MR version 1.1				
DOE assessment				Date: 31/10/2023
The PP has calculated the net electricity supplied to the grid during first month (Veltor site) prorata basis as start date of monitoring period does not coincide with the billing cycle date, the approach is found to be appropriate, hence accepted. The PP has submitted the monthly credit notes/JMRs and corresponding invoices for the current monitoring period, found to be appropriate. CL #1 is closed.				

Table 3. CAR from this verification

CAR ID	01	Section no.	3.3	Date : 28/09/2023
Description of CAR				
1. Please submit the declaration confirming that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions.				
Project participant response				Date : 05/10/2023

PP has submitted the declaration confirming that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions.	
Documentation provided by project participant	
VCS Declaration letter	
DOE assessment	Date: 31/10/2023
The PP has submitted declaration confirming that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions, found to be satisfactory. CAR #1 is closed.	

CAR ID	02	Section no.	4.1	Date : 28/09/2023
Description of CAR				
MR section 5.4: Justification regarding the difference between actual ERs achieved and estimated ERs is not provided appropriately. Please provide the assessment regarding the impacts on additionality due to increase in actual ERs as compared to estimated ERs. Kindly submit the calibration certificates for all the meters installed for the project activity.				
Project participant response				Date : 05/10/2023
The actual emission reductions achieved during the current monitoring period are 10.14% higher than the estimated ERs for comparable period. Wind availability is a natural phenomenon which is beyond the control of CLP. Moreover, actual PLF achieved for Veltor project site during current monitoring period is 22.23% which is 12.24% higher than compared to estimated PLF of 20.70 % as per registered VCS PD. The actual PLF achieved for Gale project site during current monitoring period is 22.25% which is 1.27% higher than compared to estimated PLF of 21.97 % as per registered VCS PD. Similarly, actual PLF achieved for Tornado project site during current monitoring period is 22.49 % which is 2.39% higher than compared to estimated PLF of 21.97 % as per registered VCS PD. Sensitivity analysis as per registered VCS project documents (PD) shows that the Equity IRR is crossing the benchmark if PLF is increased by more than 20.42%. Hence, PLF increase of 12.95% (Veltor), 1.27% (Gale) and 2.39% (Tornado) is well below additionality limits and there is no adverse impact on additionality due to this variation. PP has submitted calibration certificates for all the meters of project activity to DOE.				
Documentation provided by project participant				
MR version 1.1 Calibration certificates				
DOE assessment				Date: 31/10/2023
The actual emission reduction achieved during the current monitoring period are slightly higher than the estimated amount of emission reductions as determined in the registered VCS PD&MR, which is due to the high PLF achieved by the project activity during the monitoring period. It is to be noted that PLF is completely governed by the availability of sunlight, which is a natural phenomenon and same is beyond the control of PP. The assessment team has checked the sensitivity analysis and confirmed that the increase in the actual ERs achieved in the monitoring period is well within standard limits of variation (+/-10%), hence doesn't have any adverse impact on additionality. Therefore, the assessment team has concluded the increase in emission reduction of the project activity is justified and acceptable. CAR #2 is closed.				

Table 1. FAR from this verification

FAR ID	XX	Section No.	XX	Date :
Description of FAR				
NA				
Project participant response				Date : DD/MM/YYYY

NA	
Documentation provided by project participant	
NA	
VWB assessment	Date: DD/MM/YYYY
NA	

APPENDIX 4: COMPETENCY STATEMENTS

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

The composition of audit team shall be approved by the Applus+ Certification ensuring that the required skills are covered by the team. The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- 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	Qualification	Coverage of scope	Coverage of technical Area	Financial aspect	Host country Experience	Attendance to the On-Site Assessment
Ravi Kant Soni	Lead Auditor (LA)	Yes (1)	Yes (1.2)	N/A	Yes	NA
Ravi Kant Soni	Technical Expert (TE)	Yes (1)	Yes (1.2)	N/A	Yes	NA
Simon Shen	Technical Reviewer (TR)	Yes (1)	Yes (1.2)	N/A	Y	N

Ravi Kant Soni is a certified lead auditor for Lead Auditor ISO 14001:2004&Lead Auditor ISO 14064:2006 GHG Inventory and verification. He has more than 10 years of work experience across Climate Change, Environmental Management & Monitoring, Health & Safety Management, and Statutory Compliance. He was involved in more than 100 CDM validation and verifications activities and Gold Standard, VER projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1 technical area 1.2. He has done Mater in Technology (Energy Management) from a premier institute, School of Energy &

Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from M.I.T.S Gwalior Jiwaji University Gwalior, India.

Simon Shen (master's degree in Thermal Energy Engineering, bachelor's degree in environmental engineering) is a Lead Auditor appointed by Applus+ Certification for the GHG project assessment. He is based in Shanghai. He has several years of work experience in environmental protection field. Before he joined Applus+ Certification, he had been worked for TÜV SÜD as a GHG Validator/Verifier and ISO 9001/14001 Lead Auditor for 5.5 years.