



GREENFIELD SOLAR POWER MISSION BY FORTUM INDIA



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Client	Infinite Environmental Solutions Limited
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Summary:

VKU Certification Pvt. Ltd. (hereinafter referred to as VKU) has been commissioned by Infinite Environmental Solutions Limited (hereinafter referred to as Infinite Solutions) to conduct the fourth verification of the greenhouse gas emission reductions reported for the "**Greenfield Solar Power Mission by Fortum India**" project activity (VCS ID 2069) in India. The verification covered the monitoring period from **01-January-2024 to 30-June-2024 (inclusive of both start and end dates)**, within the first crediting period from 19-March-2021, to 18-March 2031 (inclusive of both start and end dates). This verification was undertaken in accordance with relevant requirements for VCS activities.

Purpose of the Verification: The primary objective of the verification process is to obtain an impartial evaluation of the ex-post determination of the monitored reductions in greenhouse gas (GHG) emissions. This verification aims to ensure that the monitoring methodology was implemented in strict accordance with the monitoring plan, and that the monitoring data used to validate the reductions in anthropogenic emissions from sources is comprehensive, conclusive, and presented with utmost clarity and transparency.

The verification scope of the project is:

- To verify that the project is implemented as described in the registered VCS PD/03/.
- To evaluate the project's adherence to relevant regulations, including the legislation of the host country (India).
- To verify the implementation and functionality of the monitoring system, ensuring the generation of Verified Carbon Units without any instances of double counting.

- To verify the accuracy, completeness, consistency, transparency, and absence of significant errors or omissions in the reported data by examining monitoring records and emissions reduction calculations.
- To ensure that the actual monitoring systems and procedures align with those described in the monitoring plan.
- To assess the GHG emission reduction data and provide a conclusion with a reasonable level of assurance regarding the absence of material misstatements.
- To verify that the reported GHG emission data is adequately supported by evidence.

VKU conducted the verification process in accordance with its own established procedures, aligning with the requirements set forth in the VCS Program Guide version 4.4/6/, VCS standard version 4.6/7/, VCS Validation and Verification Manual version 3.2/9/, CDM M&P, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

These requirements encompass Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance provided by COP/MOP & CDM Executive Board, and other applicable rules, including the Host Country (India) legislation. Furthermore, standard auditing techniques were applied throughout the verification process.

The verification process encompassed a desk review, on-site inspection assessment, resolution of any outstanding matters, and the issuance of the final verification report and certification. This comprehensive verification aimed to ensure that the reported emission reductions are thorough and precise, aligning with the relevant VCS requirements, thus enabling the project to obtain certification.

VKU diligently followed a rule-based approach during the verification process, ensuring strict adherence to the applicable VCS requirements. The verification encompassed a comprehensive assessment of the project activity's operations, monitoring procedures, and GHG emission reduction calculations.

As a result, a total of (05) findings were raised, which includes: 05 Corrective Action Request (CARs); 01 Clarification Requests (CLs) and 00 Forward Action Required (FARs). All the raised findings were successfully resolved/closed after necessary corrections/clarifications by the client. The same has been discussed in Appendix 3 of this verification report.

The assessment team ensured that the reported emission reductions are complete and accurate by verifying 100% of the data, along with the supporting documents and evidences. This was performed during desk review and also by conducting personnel interviews and focussed group discussions

during onsite audit to project. Verification of data has been carried out in accordance with applicable VCS requirements, therefore the assessment team has detected no further uncertainties.

The GHG emission reductions were calculated based on the approved methodology ACM0002: Grid connected electricity generation from renewable sources- version 19.0/16/ and Tool to calculate the emission factor for an electricity system; Version 07.0/17/, Tool for the demonstration and assessment of additionality/18/ and the monitoring plan included in the registered VCS PD (version 02) dated 19-December-2019/3/.

Verification Conclusion:

Based on VKU's thorough assessment, it is their professional judgment that the project activity conclusion, "Greenfield Solar Power Mission by Fortum India" (VCS ID 2069) in State: Rajasthan, Country: India fully complies with the applicable requirements of VCS standard version 4.6 /7/ and associated guidelines. The project has successfully implemented the designated baseline and monitoring methodology outlined in ACM0002: Grid-connected electricity generation from renewable sources- Version 19.0/16/.

The monitoring system in place is effective and reliable, ensuring reasonable level of measurement and precision level allowed by the methodology and the VCS standards without any significant discrepancies. As a result, VKU is able to objectively state that the project has achieved an emission reduction of 287,746 tCO₂e under first crediting period (19-March-2021 to 18-March-2031; Including both dates) during the fourth verification of the project activity for monitoring period from 01-January-2024 to 30-June-2024 (Inclusive of both start and end dates). This certification affirms the project's substantial contributions towards mitigating greenhouse gas emissions.

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1 INTRODUCTION

1.1 Objective

Infinite Environmental Solutions Limited (hereafter referred as Infinite Solutions) commissioned VKU Certification Pvt Ltd (here after referred as VKU) to carry out fourth verification of the project **“Greenfield Solar Power Mission by Fortum India”** (VCS ID 2069) in India for the period from **01-January-2024 to 30-June-2024** (Inclusive of both start and end dates) under first crediting period from 19-March-2021 to 18-March-2031 (Inclusive of both start and end dates).

In this report, a concise overview is presented regarding the verification results carried out in compliance with the requirements of the Verified Carbon Standard (VCS) and the United Nations Framework Convention on Climate Change (UNFCCC) criteria for Clean Development Mechanism (CDM). VKU adhered to its customary verification process, which is in accordance with Verra Standard version 4.6/7/ for verification. This approach guarantees the uniformity of project operations, monitoring, and reporting.

The objective of the verification is to have an independent evaluation of a project activity by an accredited validation and verification body. This evaluation is conducted in accordance with the stipulations outlined in the VCS Program Guide Version 4.4/6/, VCS standard version 4.6/7/, and the applicable GHG program. The verification is based on the VCS Project Description, registered under version 02 on 19-December-2019/3/.

This is the fourth verification of first crediting period 19-March-2021 to 18-March-2031 (Including both dates). The duration of this monitoring period is six months from 01-January-2024 to 30-June-2024 (inclusive of both start and end dates). The project activity follows a renewable crediting period of 10 years, which can be extended a maximum of two times¹, as outlined in section 1.9 of VCS Project Description version 02 dated 19-December-2019/3/.

The verification process aimed to confirm the seamless implementation and full functionality of the monitoring system, ensuring the accurate generation of Verified Carbon Units (VCUs) without any instances of double counting/29/. Additionally, a thorough examination of the monitoring records and emissions reduction calculations has been carried out to ensure the reported data

¹ The project activity adopts renewable crediting period of 10 years period which can be renewed for maximum 2 times. As per Appendix 3 of VCS Standard, version 4.6, “Registered projects and projects that complete validation on or before 19-March-2020 remain eligible to apply the crediting period requirements under VCS Version 3”.

is complete, consistent, transparent, and free from significant errors or omissions. This aims to establish the reliability and integrity of the data.

1.2 Scope and Criteria

The scope of this verification is independent, objective review and ex-post determination of the monitored reductions in GHG emissions from the **“Greenfield Solar Power Mission by Fortum India”**. The verification of this project is based on the validated & registered VCS PD/3/ & previous monitoring reports along with supporting documents submitted by the project proponent to the VKU assessment team. The documents thus submitted to the VKU Assessment team were reviewed against the following guidance & protocols:

- i. VCS Programme Guide (Version 4.4) /6/
- ii. VCS Standard (Version 4.6) /7/
- iii. VCS Program Definitions (Version 4.4)/10/
- iv. VCS validation and verification manual (version 3.2)/9/
- v. CDM Approved Methodology “ACM0002 Grid-connected electricity generation from renewable sources (version 19.0)/ 16/
- vi. Tool to calculate the emission factor for an electricity system Version 07.0/17/
- vii. Tool for the demonstration and assessment of additionality, Version 7.0/18/

The steps involved are as follows:

- To assess the project’s compliance with other relevant rules including the host country (India) legislation.
- To verify that the project is implemented as described in the registered VCS PD/3/.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions without any double counting/29/.
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.
- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;

- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement is sufficiently supported by evidence.
- To verify that reported GHG emission data is sufficiently supported by evidence.
- The verification process ensure that the reported emission reductions are complete and accurate in order to be certified.

The method and criteria used for verification consisted of the following phases:

- Desk review of VCS Project Description, registered under version 02 on 19-December-2019/3/and other supporting documents listed in Table-04;
- Interviews & Focussed Group Discussions with Stakeholders & PP representatives involved in project's implementation during the onsite visit of project/51/.
- Resolution of outstanding issues and issuance of final verification report, completeness check and applicable VCS Verification Deed of Representation.
- Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring report.

1.3 Level of Assurance

All the revisions of the verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent VKU's procedure, with a "**Reasonable level of assurance**", as per section 04 clause 4.1.2 & Clause 4.1.10 of the VCS Standard version 4.6/7/.

The threshold for quantitative materiality with respect to the aggregate of errors, omissions, and misrepresentations, relative to the total reported GHG emission reductions and/or removals was to 1% percent, as required by clause 4.1.10 of the VCS standard version 4.6/7/

The verification report is based on the Monitoring report /1/, registered VCS PD /3/ and supporting documents that are made available to the VKU's assessment team references provided in Table 4 and information collected through performing interviews with PP Representatives/Local Stakeholders during onsite visit/51/.

The technical review has been performed by a technical reviewer(s) qualified in accordance with VKU's qualification procedure.

Table No. 01: The verification team and the technical reviewer consist of the following personnel:

Role/Qualification of the Verification Team	Last Name	First Name
VCS Team Leader ² & Technical Expert TA 1.2	Kumar	Barun
Validator/Verifier Trainee	Bhana	Sanjana
Project Trainee	Kumari	Komal
Technical Reviewer & Technical Expert TA 1.2	Joshi	Akhilesh

1.4 Summary Description of the Project

Project Overview:

The project activity involves electricity generation by renewable source (solar) and the electricity delivered by the project activity as per power purchase agreement (PPA) / 23/ with Solar Energy Corporation of India Limited (SECI), a government-appointed organization responsible for the development of Grid-connected Solar PV Power Projects, to facilitate the sale of electricity by the corresponding private parties (PPs). A PPA /23/ have been executed for 250 MW capacity between M/s Fortum Solar Plus Pvt. Ltd. (On behalf of Fortum India Private Limited) and Solar Energy Corporation of India Limited and will subsequently sell it to DISCOM/Unified Indian Grid after bundling it with the Thermal Power allotted by the Ministry of Power, Government of India. Fortum India Private Limited is the project proponent of the project activity. The The total GHG emission reductions or removals estimated for this monitoring period are 205,771 tCO_{2e} and the actual emission reductions generated in this monitoring period are 287,746 tCO_{2e}.

Table no. 02: By implementing the project activity, the following GHG sources of emissions are reduced/avoided:

Baseline/Source	Generation of electricity by fossil fuel- dominated grid connected power plants
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² Team leader, also fulfils the role of Validator-Verifier for this project, as detailed in Appendix 4 competence statement."

Project Equipment/Sink	Avoidance of GHG emission into the atmosphere is due to generation of electricity by renewable means i.e., Photovoltaic Modules/Installed Solar Power Plant of this project and exporting to Unified Indian Grid which is in line with 3.1.1 of ISO:14064 part -2. Renewable Energy Projects do not create sinks, they avoid emissions through their technology i.e., Through installed Solar Power Project.
Baseline GHG emission source reduced/avoided	CO ₂ emissions from fossil fuels and other fuel fired grid connected plants/projects.

The project activity involves installation of 250 MW (AC) solar power project. The power produced displaces an equivalent amount of power from the grid, which is fed mainly by fossil fuel fired power plants. This project was commissioned on **19-March-2021** which is the earliest date of commissioning of 1st 150 MW out of total 250 MW and the full project was commissioned on **01-May-2021** which is the date of commissioning of remaining 100 MW out of 250 MW solar power project activity and run satisfactorily since then which was verified against the registered VCS PD/3/ Previous Verification report /5/ and commissioning certificates/30/ which were submitted by the PP to the assessment team as a response to the feedback raised by the assessment team during verification assessment as per section 3.26 and clause 3.26.3 of the VCS Standard version 4.6/7/ it is an obligation for the project proponent to make available to the validation/verification body the required supporting documents.

The project aims to generate electricity from renewable solar energy. Solar modules produce 800-volt DC electricity, which is converted to 33 KV AC by an inverter transformer. This AC electricity is then stepped up to 220 KV by a PSS transformer and delivered to the Jodhpur Vidyut Vitaran Nigam Limited (JDVVNL) substation via two dedicated feeders, each capable of handling 125 MW. Ultimately, this electricity is supplied to the Unified Indian Grid from the RVPNL Jaisalmer - II substation in Bhensara, Jaisalmer, Rajasthan.

Table No 3: Commissioning Dates of the Project Activity

Project Proponents	Capacity	Date of commissioning	Project location	Connection to the Grid	State /Country
Fortum India Private Limited	150 MW	19-March-2021	Village - Luna Khurd, Luna	Indian Grid	(Rajasthan) India
	100 MW	01-May-2021	Kala and Betina, District-Jaisalmer		

Hence VKU in adherence to the section 3.1, clause 3.1.8 of the VCS Standard version 4.6/7/ confirms that the capacity of the project has been verified from the commissioning certificates/30/ and later verified during onsite audit/49/ while interviewing the site personnel /51/ and hence declare that the project capacity is in line with the defined methodology ACM0002 version 19.0/16/.

The net electricity generated by the project activity that was evacuated to the grid during the current monitoring period (4th monitoring period) from **01-January-2024 to 30-June-2024** (inclusive of both the dates) is **307,159 MWh**. The total emission reductions achieved in this monitoring period i.e., from **01-January-2024 to 30-June-2024** (inclusive of both the dates) is **287,746 tCO₂e**.

2 VERIFICATION PROCESS

The registered VCS project “**Greenfield Solar Power Mission by Fortum India**” (VCS ID 2069) is undergoing fourth periodic verification of fixed crediting period under VCS with VKU Certification Pvt. Ltd. from **01-January-2024 to 30-June-2024** (inclusive of both the dates).

The approach adopted to ensure the quality of emission reductions is described in the following sections.

2.1 Method and Criteria

Verification has been conducted using VKU's procedures in line with the requirements specified in the VCS Requirements, i.e., VCS Program guide version 4.4/6/, VCS standard Version 4.6/7/. The project doesn't fall under category of "grouped projects" and during onsite visit /51/ assessment team reviewed 100% data such as generation records/26/, calibration certificates/25/, invoices/28/, JMRs/27/, PPAs/23/, Grievance Records/33/, technical specifications/31/, Single Line Diagram/32/ etc (as mentioned in section 2.2 of this report) for the verification of GHG emission reduction generated by the project.

GHG emission reductions are based on the approved Baseline and monitoring methodology ACM0002 "Grid-connected electricity generation from renewable sources" Version 19.0/16/

Tools used for GHG Calculations are as follows as per registered PD/3/:

- Tool to calculate the emission factor for an electricity system, Version 07.0
- Tool for the demonstration and assessment of additionality - Version 07.0.0

Scope: 01 Energy Industries (renewable- and non-renewable sources)

Project type: Type I - Renewable energy projects

This is not a grouped and also a non-AFOLU project.

Keeping in line with ISO (14064-3; 2019, clause 06 & 14065-2020, clause 09) Standard guidelines assessment team has framed down the process for completing the verification and has followed the same throughout the execution of audit of the project. The verification consisted of the following phases.

1. **Planning and Intimation to VERRA about site visit:** The assessment team plans the GHG programme site visit and starts with a desk review. Assessment team also submitted a digital NOVS (Notice of validation/Verification service) Form/45/ to verri, 15 business days before the opening meeting with the project proponent.
2. Decision to take site visit was based on independent risk assessment, as defined in section 4.1.13 of VCS standard version 4.6/7/
3. **Strategic Analysis:** Assessment team performed strategic analysis to understand the activities and complexity of the project and to determine the nature and extent of the verification activities. The results of the strategic analysis shall be used in the risk assessment.
4. **Risk Assessment:** Assessment team performed risk assessment of the GHG statement to identify the risk of a material misstatement or nonconformity with the criteria.

5. **Evidence Gathering Activities:** Using risk-based approach assessment team prepared evidence gathering activities, to collect sufficient and appropriate evidence upon which the conclusion shall be based. It will also determine whether the GHG statement conforms to the criteria, taking into account the principles of the standards or GHG programme that apply to the GHG statement.
6. **Evidence Gathering Plan:** The evidence-gathering plan is prepared based on the results of the VKU's Assessment Team's risk assessment. It was designed to lower the verification risk to an acceptable level. · The evidence-gathering plan thus specify the type and extent of evidence-gathering activities.
7. Need for site visit is identified and site visit is planned (14-September-2024).
8. **Audit and Sampling Plan:** An audit plan is prepared, including all sub-elements required for an integrated verification process aligned with the contract, scope, objectives, level of assurance and materiality.
9. **Client Confirmation and Approval:** The site visit audit plan is sent to the client for review and confirmation/approval via email.
10. **Document Review:** Relevant documents, such as the previous verification reports, monitoring plan, methodology, VCS PD and QA/QC procedures are thoroughly reviewed.
11. **On-Site Assessment:** This includes interviews and evaluation of the actual project scenario.
12. **Resolution of Discrepancies:** Any non-conformities identified during the assessment are addressed and resolved.
13. **Independent Review:** A technical reviewer provides an independent assessment.
14. **Final Verification:** After completeness/quality checks, the verification report and certification are issued.

The following sections outline each step in more detail.

2.2 Document Review

During document review, VKU has applied standard auditing techniques to assess the quality of information provided. The verification was performed primarily based on the review of VCS monitoring report (MR) for “**Greenfield Solar Power Mission by Fortum India**”, Version 01 dated 20-August-2024, Version 02 dated 07-October-2024 and final MR version 2.2 dated 27-January-2025 /1/, the emission reduction calculations spreadsheet for “**Greenfield Solar Power Mission by Fortum India**”, Version 01 dated 20-August-2024, Version 02 dated 07-October-2024 and final ER sheet version 2.1 dated 05-November-2024 /2/ were assessed as part of the verification. In addition, the registered VCS PD/3/ has been specifically referred for the baseline estimations and the monitoring plan for the project was reviewed. The following **table 04** lists the documentation that were reviewed during the verification by the assessment team.

As per section 3.26 and clause 3.26.3 of the VCS standard version 4.6/7/ it is an obligation for the project proponent to make available to the assessment team the required supporting documents and data needed to support statements and data as documented in the monitoring report. Thus, the assessment team reviewed the following documents during verification:

Table No. 04: Lists of the documentation that were reviewed during the current verification: -

Current Verification References & Documents	
/1/	Infinite Environmental Solutions Limited: VCS monitoring report for “Greenfield Solar Power Mission by Fortum India” in India. - Version 1 dated 20-August-2024 - Version 2.0 dated 07-October-2024 - Version 2.1 dated 05-November-2024 - Version 2.2 dated 27-01-2025
/2/	Infinite Environmental Solutions Limited: Emission Reduction Calculation Spreadsheet for “Greenfield Solar Power Mission by Fortum India” in India. - Version 1 dated 20-August-2024 - Version 2.0 dated 07-October-2024 - Version 2.1 dated 05-November-2024
/3/	EKI: Registered VCS PD for the project ‘Greenfield Solar Power Mission by Fortum India’ version 02 dated 19-December-2019

/4/	Earthood Services Private Limited: Validation Report “Greenfield Solar Power Mission by Fortum India”, Version 01, dated 30-December-2019
/5/	Previous verification reports available on project webpage³. Verification report of 3 rd Monitoring Period: VKU Certification Private Limited: VCS Verification Report “Greenfield Solar Power Mission by Fortum India version 1 dated 14-May-2024
/6/	VCS: VCS Program Guide, version 4.4 dated 29 August 2023
/7/	VCS: <u>VCS Standard, version 4.6 dated 21 March 2024⁴</u>
/8/	VCS: Monitoring report Template VCS Version 4.4 dated 16 April 2024
/9/	VCS validation and verification manual version 3.2 dated 19 October 2016
/10/	VCS Program Definitions version 4.5 dated 16-April-2024
/11/	UNFCCC: Project search: https://cdm.unfccc.int/Projects/projsearch.html
/12/	VERRA Webpage: https://registry.terra.org/app/projectDetail/VCS/2069
/13/	Gold Standard Foundation: https://registry.goldstandard.org/projects?q=&page=1
/14/	Renewable Energy Certificate Registry of INDIA - Registered RE Generator List (recregistryindia.nic.in)
/15/	I-REC Standard - The International REC Standard Foundation (irecstandard.org)
/16/	CDM Executive Board: Baseline and Monitoring Methodology "ACM0002: Grid-connected electricity generation from renewable sources version 19.0
/17/	Tool to calculate the emission factor for an electricity system version 7
/18/	Tool for the demonstration and assessment of additionality, Version 07.0.0 0 (EB 70, Annex 08)
/19/	CO2 Baseline Database for the Indian Power Sector User Guide Version 14.0
/20/	Ministry of Environment, Forest and Climate Change (MoEF&CC) Notification dated 14-September-2006 (S.O. 1533(E)

³ <https://registry.terra.org/app/projectDetail/VCS/2069>

⁴ As per the notification regarding VCS program updates and effective dates, the version 4.7 of VCS standards is effective for all project requests submitted to the Verra Registry on or after 1 January 2025, therefore the version 4.6 of VCS standards is applicable and acceptable to the VVB.

/21/	The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September-2013
/22/	Amendments Notified on 26-June-2010 No. 502/6/2009/DP&D/D-I https://cea.nic.in/wp-content/uploads/2020/02/meter_reg.pdf Metering Regulations Archives - Central Electricity Authority (cea.nic.in)
/23/	PPA: Power Purchase Agreements signed between Project Proponent (Fortum solar plus Private Limited) and Solar Energy Corporation of India (SECI ⁵) dated 3-June-2019 ⁶ .
/24/	Agreement: Operation and Maintenance Agreement made between Project Proponent i.e. (Fortum India Private Limited) and Param Renewable Energy Private Limited. From November, 2023 for current monitoring period dated 01-December-2023.
/25/	Certificates of Calibration for all the meters belongs to project activity, Dated 22-March-2024
/26/	Generation Log Book of current monitoring period
/27/	Monthly JMRs issued by RRVPNL for the current verification period
/28/	Invoice issued by PP to SECI (Solar Energy Corporation of India Ltd.)
/29/	Letter of declaration from PP (Fortum India Private Limited) dated 02-August 2024 regarding not having created or sought any other form of environmental credit for the current verification period (01-January-2024 to 30-June-2024, inclusive of both start and end dates)
/30/	Commissioning certificates of the project activity issued by state electricity authority (Rajasthan Renewable Energy Corporation Limited) for 150 MW and by Solar Energy Corporation of India Ltd. for 100 MW dated 01-May-2021 and 19-March-2021
/31/	Technical Specifications of Solar Project
/32/	Single Line Diagram of the project activity
/33/	Grievance Register present at the project implemented site.
/34/	Breakdown Details for current Monitoring period

⁵ (SECI) has been identified by Government of India as a nodal agency for developing and facilitating the establishment of the grid connected solar power capacity in India.

⁶ Fortum Solar Plus Private Limited” was the project proponent of the project activity. However, the name of “Fortum Solar Plus Private Limited” has been changed to “SPRNG Solar Plus Private Limited” on 14-June-2022. SPRNG Solar Plus Private Limited (Formerly known as “Fortum Solar Plus Private Limited”) is responsible for overall management of current 250 MW project activity and deviation regarding the same has been taken by PP as mentioned in the section 3.2 of this report.

/35/	Certificate of Incorporation pursuant to change of company name
/36/	Name change intimation ⁷
/37/	Employment Data/Record for current monitoring period
/38/	Environment & Social Impact Assessment Report (September 2020) for 250 MW Rajasthan Solar Project, by R.S Envirolink Technologies Private Limited.
/39/	Fortum's General EHS Requirements for contractors dated 15-December-2020
/40/	Waste Management Record: - E-Waste Tie up Letter between INDIAN WIND AND SOLAR SYNDICATE, Solapur and M/S SPRNG SOLAR PLUS PVT LTD dated 26-February-2024 - Hazardous Waste Agreement Letter between INDIAN WIND AND SOLAR SYNDICATE and M/S Param Renewable Energy Private Limited dated 01-March-2024. - Fortum_recycling_and_waste_operational_policy - Waste Management Register
/41/	Fortum's Policy: - Fortum Sustainability Policy dated 31-January-2024 - Fortum_People_Policy dated 05-February-2020
/42/	Training records i.e. Training of Site Personnel conducted during current monitoring period
/43/	Attendance sheet record for current monitoring period
/44/	Minutes of Meeting (ESG weekly meeting) for current monitoring period.
/45/	Notice of Validation/Verification Services (NOVS) Form: VCS_2069

⁷ **Approved deviation taken in the first monitoring period** - As per the registered VCS PD "Fortum Solar Plus Private Limited" was the project proponent of the project activity. However, the name of "Fortum Solar Plus Private Limited" has been changed to "SPRNG Solar Plus Private Limited" on 14-June-2022. SPRNG Solar Plus Private Limited (Formerly known as "Fortum Solar Plus Private Limited") is responsible for overall management of current 250 MW project activity, but as per the declaration submitted to VERRA, all the Carbon Credits rights were transferred from "SPRNG Solar Plus Private Limited" (Formerly known as "Fortum Solar Plus Private Limited") to "Fortum India Private Limited" during last verification (1st Monitoring Period) and therefore "Fortum India Private Limited" is acting as the project proponent for the said project activity.

/46/	Audit and sampling plan_ VKU.VER.208.24_VCS_2069
/47/	Attendance sheet of onsite audit_ VKU.VER.208.24_VCS_2069
/48/	GPS map camera used for location during onsite visit and Google earth for desk review of the “Greenfield Solar Power Mission by Fortum India”
/49/	Site Visit Photographs dated 14-September-2024
/50/	Grievance Register present on site and its Photographs for desk review
/51/	On site personnel interviews of PP and other personnel conducted on 14-September-2024
/52/	ISO 14064-3:2019: Greenhouse gases – Part 3: Specification with guidance for the verification and validation of greenhouse gas statements
/53/	ISO 14065:2020: General principles and requirements for bodies validating and verifying environmental information
/54/	ISO/IEC 17029:2019: Conformity assessment – General principles and requirements for validation and verification bodies
/55/	Calculation Sheet for project’s Renewable Energy contribution- SDG 7.2.1
/56/	Government of India Ministry of Power -Central Electricity authority https://cea.nic.in/?lang=en https://cea.nic.in/dashboard/?lang=en

2.3 Interviews

An on-site inspection has been performed by the assessment team at project site located in villages Luna Khurd, Luna Kala and Betina of district Jaisalmer in Rajasthan of India. The representatives of the PP were interviewed personally by assessment team on 14-September-2024/51/. The interviews specifically targeted individuals responsible for monitoring the project activity, data collection and management, Calibration details, as well as those involved in the quality assurance and quality control (QA/QC) procedures. The tables serve to identify the individuals interviewed and provide relevant information regarding their roles within the project. Key personnel interviewed during the opening meeting and closing meeting session of the onsite audit, and the main topics of the interviews are summarized in the table below:

Table no. 05: The details of the people interviewed during onsite visit (14-September-2024) are mentioned below.

Location of Opening & Closing meeting - Jaisalmer district of Rajasthan, India

Date of Opening & Closing meeting - 14-September-2024

S. No.	Name & Gender	Designation	Topic of Discussion
1	Mahesh Jeengar (Male)	Deputy Manager (SPRNG Energy Pvt. Ltd.)	- Data archiving, breakdown details Maintenance of generation records and Calibration of meters - SCADA monitoring - Project Implementation and technical details of the Project. - Training requirement of the personnel - O&M of the plant site and personnel responsible for monitoring of required monitored parameters and implementation of QA/QC Procedure
2	Tapel Mekwana (Male)	Senior Manager (SPRNG Energy Pvt. Ltd.)	
3	Mahendra Singh (Male)	Assistant Manager	
4	Sunn Singh (Male)	Engineer	
5	Surendra Singh (Male)	Engineer	

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, emergency procedures, internal audit, Procedures for handling non-conformances with the validated monitoring plan, personal training and archiving procedures. The assessment based on the feedback received during onsite audit interview coupled with the documentation included in VKU specific checklist for onsite audit.

During Onsite Visit, local stakeholders involved in the projects /47/ have been also interviewed to verify implementation of grievance mechanism and process of its resolution. It also included confirmation of sustainable development claims and verification of the socio-economic impact made by the project on the local community.

Assessment team has checked records and observed that the PP has provided opportunities for the locals to express their opinions and grievances, Project proponent has put efforts to resolve any issues through effective communication & consultation with stakeholders. Assessment team could verify & confirm all the above statements via focussed group discussions and personal interview/51/ with stakeholders as tabulated below:

Table 06: The details of the stakeholder interviewed during onsite visit (14-September-2024) are mentioned below:

S. No.	Name and Gender	Organization/Position	Topic
1	Dillip Singh (Male)	Driver	- Execution of Project activity and its impact on the economic, social and environmental parameters on the local people of the area & around the situated project activity - The ongoing communication procedure and the address of their grievance mechanism followed by the project proponent - Scope and generation of employment in the locality due to the implementation of said project activity in the area.
2	Hussankhaa (Male)	Office boy	
3	Kump Singh (Male)	Security Guard	

The VKU Assessment Team meticulously documented the information obtained during the interviews with site personnel. This data was recorded using VKU's dedicated form, specifically VKU.F46W, known as the Attendance Sheet for Audit/47/. Through a comprehensive process involving documentation, desk review, document verification and interviews with site personnel and local stakeholders, VKU Assessment team affirms that no negative comments received during the stakeholder consultation interview conducted on site.

2.4 Site Visits

Location of site visit: Luna Khurd, Luna Kala and Betina

District: Jaisalmer

State: Rajasthan

District: India

The longitude and latitude of the project activity is mentioned below⁸.

Latitude	26° 40' 18.21"N
Longitude	71° 32' 07.70" E

Decision to take site visit was based on independent risk assessment, as defined in section 4.1.13 of VCS standard version 4.6/7/.

An On-site visit was undertaken by the verification team to the project site located in villages Luna Khurd, Luna Kala and Betina district of Jaisalmer district of Rajasthan, India on **14-September-2024** to carry out the following:

- An assessment of the implementation of the registered project activity in accordance with the VCS PD /3/ and MR/1/.
- A review of information flows that have been used to generate, aggregating and reporting of the monitoring parameters.
- Interviews/51/ with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in registered VCS PD /3/.
- A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data source.
- A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the VCS PD/3/, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline.
- A review of calculations and assumptions made in determining the GHG data and emission reductions.
- An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

⁸ Since at the time of project registration, project activity was not commissioned and the location details were tentative, therefore there is slight change in final location of the commissioned project. The geo coordinates are revised as 26° 40' 18.21"N 71° 32' 07.70" E, in line with the deviation from project description approved during 1st verification.

2.5 Resolution of Findings

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

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

- If monitoring and reporting reveal non-conformities with the monitoring plan or methodology, or if the evidence offered to demonstrate conformity is insufficient;
- Errors in the application of assumptions, data, or calculations of emission reductions have been made, which will affect the estimate of emission reductions;
- The project's proponent has not addressed issues encountered in a FAR during previous verification to be assessed during this verification.

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

A forward action request is also raised in cases where any required deviation/information is not fulfilled in current verification and thus needs to be taken up in consequent verification for better transparency thus holding the applicability of the methodology eligible to the project activity and there is no impact of the same on additionality, baseline scenario & emission reduction calculation of project.

Keeping in line with the VCS standard version 4.6, Clause 4.1.21/7/, Assessment team has documented a summary of total **01 CLs, 05 CARs and 00 FARs** were raised during this verification which were closed successfully and details are given under Appendix 3 of this report.

2.5.1 Forward Action Requests

This is the fourth periodic verification of the project activity under first crediting period and no FAR was raised during current verification and there was no FAR found from previous verification report/5/ which needs to be closed in current verification (01-January-2024 to 30-June-2024 Including both dates).

2.6 Eligibility for Validation Activities

It is to confirm that during current verification there is no validation assessment undertaken either by VKU itself or parallelly by any other certification bodies, as the same has been confirmed with focussed group discussions and interview with the concerned personnel during on site visit/51/.

Assessment team assessed the VERRA's website at the time of submission of this report: <https://verra.org/validation-verification/vku-certification-pvt-ltd/#vcs> wherein the scope of services of VKU Certification Pvt. Ltd. is mentioned as verification as well as validation. Thus, ensuring that the accreditation details mentioned in the above link is consistent and correct.

3 VALIDATION FINDINGS

The project is already registered under VCS with reference number 2069 and is a large-scale solar project commissioned in two phases which is not part of a grouped or bundled project activity. The Validation of the project was done by the Earthood Services Private Limited and 1st verification of the project was done by LGAI Technology centre S.A (Applus+ Certification). Ltd. The 2nd and 3rd verification of the project was done by VKU Certification Pvt. Ltd⁹. The renewable crediting period is from 19-March-2021 to 18-March-2031 (Including both dates). **The assessment is for the 4th monitoring period from 01-January-2024 to 30-June-2024 (Including both dates).** There have been no changes observed till now from validation (except project description deviations as mentioned in section 3.2) to the project activity hence, integrity and credibility of the emissions reductions are continued to be well maintained.

3.1 Methodology Deviations

During the current monitoring period 01-January-2024 to 30-June-2024 (Including both dates), no methodology deviation has been observed and even in the validation Report /4/ last verification report/5/, no methodology deviations were observed affirming the project's steadfast commitment to upholding the designated methodologies and ensuring accurate and reliable results.

⁹ The assessment team conducting the current verification is new for the project activity.

3.2 Project Description Deviations

During onsite audit, it has been confirmed that the project activity is operational as per project description in the registered VCS PD/3/ and the project remains in compliance with the applied methodology and VCS requirements. The project has not requested for any deviations from Project Description under current monitoring period (01-January-2024 to 30-June-2024 Inclusive of both start and end dates).

However, the following project description deviations were approved during the (1st monitoring period)/05/:

1. **Deviation 01:** According to the registered VCS Project Description (PD)/2/, the project proponent (PP) initially selected a crediting period from 1st December 2020 to 30th November 2030, with an expected project commissioning date of 01-December-2020. However, the actual project commissioning took place on 19th March 2021. This information was verified through a commissioning certificate issued by the state utility and was found to be accurate. The project proponent requested a deviation in the start date of the crediting period to align it with the project's commissioning date of 19-March-2021. The verification/validation body (VVB) assessed this deviation and confirmed that it does not impact the applicability of the methodology, additionality, or the appropriateness of the baseline scenario for the project activity. As a result, the proposed deviation was deemed acceptable to VKU.
2. **Deviation 02:** During the verification process, it was identified that the geographical coordinates mentioned in the monitoring report (MR) differed from those specified in the registered VCS Project Description (PD) /2/. This discrepancy arose because, at the time of registration, the project activity had not been commissioned yet. As a result, the actual coordinates differed from those stated in the registered VCS PD /2/. To address this issue, a site visit was conducted during the verification process to verify the actual geographical coordinates. The verification/validation body (VVB) confirmed that the proposed deviation in the geographical coordinates does not impact the applicability of the methodology, additionality, or the appropriateness of the baseline scenario for the project activity. Therefore, the proposed deviation was deemed acceptable to VKU.

3. **Deviation 03:** During the verification process, it was observed that there is a disparity in the technical specifications of the equipment (specifically, the PV module type and its capacity) used for the actual installation on the project site compared to the details provided in the registered VCS Project Description (PD) /3/. This discrepancy arose because, at the time of registration, the project had not yet been commissioned, and the precise technical specifications were not available. To address this issue, a site visit was conducted during the verification process to physically verify the technical specifications of the equipment that was installed and commissioned. It was confirmed during the site visit that the revised technical specifications do not affect the project's installed capacity. The verification/validation body (VVB) assessed the situation and confirmed that the proposed deviation in the technical specifications does not impact the applicability of the methodology, additionality, or the appropriateness of the baseline scenario for the Project activity. Consequently, the proposed deviation was deemed acceptable to VKU.
4. **Deviation 04:** The project proponent (PP) has undergone a transfer of the project activity registry account from the previous account holder, "EKI Energy Services Limited" (Account ID-1851), to "Fortum India Private Limited" (Account ID-4660). As a result, the sole responsibility for communication and issuance now lies with Fortum India Private Limited. Additionally, a declaration has been submitted to VERRA stating that all Carbon Credits rights have been transferred from "Sprng Solar Plus Private Limited" (formerly known as "Fortum Solar Plus Private Limited") to "Fortum India Private Limited." Consequently, "Fortum India Private Limited" will act as the project proponent for the project activity. In light of these changes, the name of the project proponent has been revised in the monitoring report (MR). The verification/validation body (VVB) has confirmed that the proposed deviation does not impact the applicability of the methodology, additionality, or the appropriateness of the baseline scenario for the Project activity. Therefore, the proposed deviation has been deemed acceptable to VKU.
5. **Deviation 05:** Infinite Environmental Solutions LLP7 (Infinite Solutions) has replaced EKI Energy Services Limited as the new entity involved in the project activity, taking on the role of the project consultant. The verification/validation body (VVB) has confirmed that this proposed deviation does not impact the applicability of the methodology, additionality, or the appropriateness of the baseline scenario for the Project activity. As a result, the proposed deviation has been deemed acceptable to VKU.

The Verification team has reviewed this deviation against the documentary evidences and approved previous verification reports/5/ available at Verra project webpage. It has been verified from the commissioning certificate /30/, technical specification of the project activity/31/, declaration letter/29/ and cross verified through interviewing the concerned personnels during onsite visit by the assessment team. Hence VVB has confirmed this deviation.

3.3 New Project Activity Instances in Grouped Projects

As per VCS PD version 02 dated 19-December-2019/3/ and previous verification reports/5/, the project is not a grouped project. This can further be confirmed as per para 3.5.8 of VCS standard Version 4.6/7/. Therefore, this section is not applicable.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

There is no need of baseline reassessment of the monitoring period as the baseline scenario are accurate, realistic, and valid.

4 VERIFICATION FINDINGS

4.1 Project Details

Based on the verification of monitoring results, on-site assessment and desk review conducted by the assessment team, it has been verified that the project implementation and operation are in compliance with the registered VCS PD /3/ version 02/03/ and the approved monitoring plan. The primary objective of the project activity is installation and operation of 250 MW solar power project of total capacity 250 MW (Phase I-150 MW and phase II-100 MW) at Jaisalmer, Rajasthan, the project's approach contributes to mitigating GHG emissions by displacement of fossil fuel-based electricity provided to the grid by more GHG-intensive means, by installation of a new renewable (which is less GHG intensive) power plant.

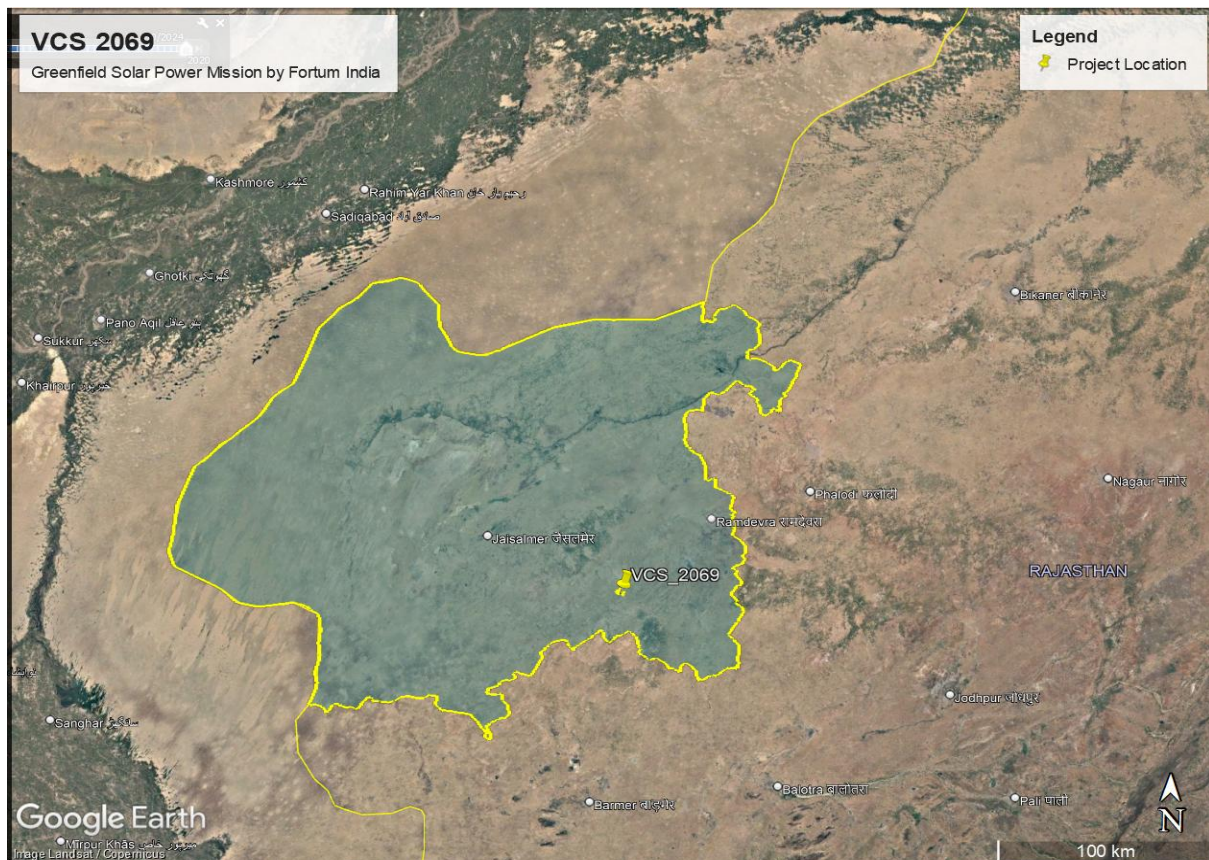
During the current monitoring period, the solar modules generate 800-volt DC electricity, which is then converted into 33 KV AC electricity by an inverter transformer. The AC electricity is supplied to a PSS transformer, which further steps up the voltage from 33 kilovolts to 220 kilovolts. The electricity is then evacuated through two incoming feeders, each with a capacity of 125 kilovolts, at the Jodhpur Vidyut Vitaran Nigam Limited (JDVNL) 400/220 KV GSS, RVPNL Jaisalmer - II substation in Bhensara, Jaisalmer, Rajasthan. This electricity is subsequently supplied to the Unified Indian Grid.

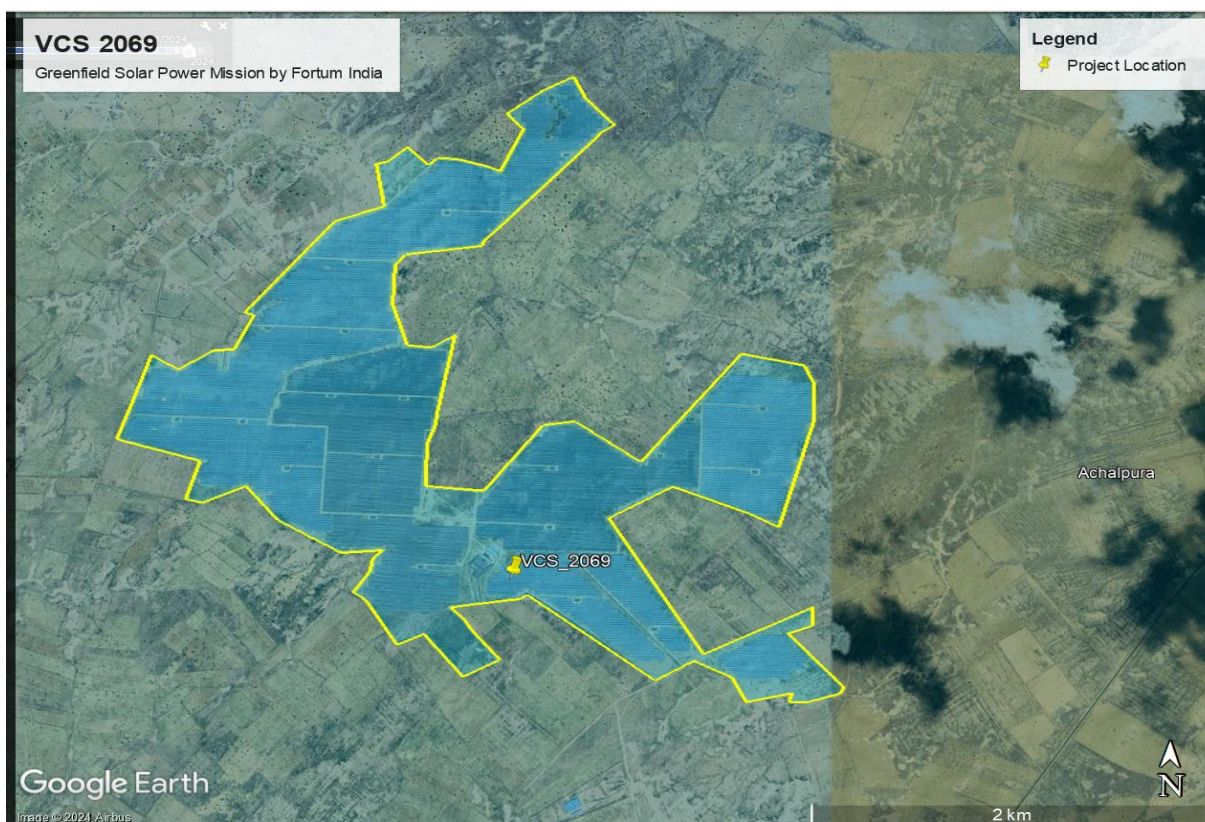
The details of the project are mentioned in the table below:

Project Investors' Name	Commissioning Date	Capacity in MW	Location			
			District	State	Longitude	Latitude
Fortum India Private Limited	19-March-2021	150	Jaisalmer	Rajasthan	26°40'18.21'' N	71°32'07.70'' E
	01-May-2021	100				

The above mentioned commissioning dates of both the sites are verified via commissioning certificates/30/ provided by PD.

Project activity is connected to Unified Indian Grid. Under this project activity 250 MW of Solar PV technology is being implemented at the above location. The Latitude and Longitude of the project location which are verified via google earth pro software/ 48/.





The above figures illustrate the location of the project activity in Jaisalmer district of Rajasthan, India as verified via Google earth pro /48/ and also verified during the onsite visit.

The ownership of the project activity and carbon credits is held by Fortum India Private Limited, as outlined in section 3.2 of this report regarding the deviation taken during the first verification period. This has been verified through the interviews /51/ and document reviews conducted during the onsite visit, as well as a review of previous verification reports /5/.

Technology Details of solar power Technology:

PV Module Make	Suntech & Jinko
PV Module type	Suntech – Mono Facial (Polycrystalline) & Jinko – Bifacial (Monocrystalline)
Module Ratings	Suntech (Mono Facial) - 340 & 345 Wp
	Jinko (Bifacial) - 395 & 400 Wp
Total no. of module	Jinko (Bifacial) – 124488 (395Wp) & 184576 (400Wp) Suntech (Mono Facial) – 305310 (340Wp) & 307860 (345 Wp)

Open Circuit Voltage (Voc) of individual panel	Suntech (Mono Facial) – 46.0V (340Wp), 46.2V (345Wp) & Jinko (Bifacial) - 48.26V (395 Wp), 48.35V (400 Wp)
Short Circuit Current (Isc) of individual panel	Suntech (Mono Facial) - 9.39A (340 Wp), 9.48A (345 Wp) & Jinko (Bifacial) - 10.23A (395 Wp), 10.32A (400 Wp)
Temperature Coefficient of Pmax	Suntech (Mono facial) - 0.38 %/ °C & Jinko (Bifacial) - 0.35 %/ °C
Tilt	Fixed tilt structure at 18 deg (Suntech – Mono facial) & 20 deg (Jinko - Bifacial)
Number of ICoRs	10 Nos
Number of RMUs	10 Nos
No of inverters per ICoRs	78*2 Nos
Step up transformer location, capacity, input and output voltages	20 Inverter duty Transformer at different location within the plant of capacity 12.6MVA, 33/0.8/0.8/0.8/0.8 kV
The net electricity as input to the panel at MCR and output	2 Outgoing HT Panels with 125MW output capacity each & Each O/G panel has 5 incomers connected with 25MW capacity.
Transformer specifications at the switchyard	2 Nos. of Power transformer used as 125/150MVA, ONAN/ONAF, 220kV/33kV, YNyn0.
Electric arc insulation in power transformers	Oil type
Number of Feeders	2 Outgoing HT panels and 5 Incoming feeders with 1 Spare Incoming feeder. Also, per incoming feeder capacity of 25MW, 2 Outgoing feeders; 2 Auxiliary Transformer feeders.
The output voltage generated from the plant and synchronized with the grid	220kV
Inverter Make	Huawei
Inverter Capacity	160 KW
No. of Inverter	1563 Nos
Inverter capacity voltage at the output side	800 V
Main Control Room	1 MCR Located at the center of the plant

This information has been verified by document review and interview with concerned personnel present during onsite audit of the project activity, the assessment team confirms that all the components of

installed technology are fully functional and found to be in line with the details provided in the registered VCS PD/3/.

Based on comprehensive interviews/51/, thorough onsite inspections, and meticulous scrutiny of documentation as mentioned in section 2.2 of this report, it can be confidently asserted that the project activity has diligently adhered to the requisite procedures, monitoring parameters, emergency protocols, and baseline emission standards delineated in the registered VCS registered PD /3/. During the current monitoring period, it has been observed that no unforeseen incident or event occurred, which can impact the operation of the project activity which has been verified from breakdown records. The project undergone continuous operation and details of breakdown are given in appendix 3 of MR which is acceptable to the assessment team and evident from JMR as per Monthly Generation Report.

The breakdowns were attributed to various major reasons, which may include:

- Equipment malfunction: Instances where the project equipment experienced technical failures or malfunctions, leading to temporary shutdowns.
- Maintenance activities: Planned maintenance interventions carried out to ensure the proper functioning and longevity of the project equipment.
- Ground Fault, Device fault
- MC4 burn
- Low Insulation Resistance
- Manual shutdowns
- Module damage
- Cable Burn
- Inverter MPPT Off
- INV. Device fault
- Inv. Y-Con.Burn
- Abnormal Residual Current
- IDT Tripped
- Connection melt

The project activity is under operation for a total of hours 2,184 hours during the current monitoring period (182 days). The breakdown occurred for a duration of 548.75 hours for this project activity and it is beyond the control of PP. The summary of breakdown details in the current monitoring period has been described in appendix 3 of MR/1/. It is important to note that the plant was not entirely shut down during these breakdown hours/34/; only the affected parts were temporarily taken out of operation. This was assessed by assessment team during site visit with the help of interviews of site personnel /51/. By checking the records at the site and desk review of the MR/1/ and breakdown sheet/34/ submitted by PP for current monitoring period. Moreover, there is no unforeseen incident which can affect the applicability of the methodology and it do not have a significant impact on the calculation of emission reductions and thus the same is acceptable to the assessment team.

Based on the interviews conducted with site personnel during the onsite visit, The monitoring plan which includes organisational structure, Data measurement, Data collection and archiving, Internal audit, Emergency preparedness has been followed onsite as outlined in the registered VCS PD. The applied methodology has been effectively implemented, monitoring all the specified parameters in the current monitoring report. Also, it has been confirmed that all quality assurance and quality control (QA/QC) procedures specified in the registered VCS PD /3/ have been followed during the operation of the project activity.

To ensure the effective operation of the project activity and accurate monitoring of emission reductions, staff receive comprehensive training. The Shift In-charge and Plant In-charge are specifically trained in equipment operation, data recording, report writing, maintenance, and emergency procedures, all in accordance with the monitoring plan. The training details have been verified through training records /42/ and interviews conducted during the onsite visit. The specifics of the training are as follows.

S. No.	Date	Training
1.	04-January-2024	Permit to work procedure
2.	06-January-2024	Lifesaving rules
3.	08-January-2024	Fire Safety management
4.	11-January-2024	HSSE & SP Handholding
5.	18-January-2024	Fault Identification method from CB to String
6.	18-January-2024	Defensive driving
7.	19-January-2024	Road accident (Mock Drill)
8.	20-January-2024	Preventing theft & BBS
9.	20-January-2024	SPRNG Guidelines on wildlife management
10.	25-January-2024	Inverter Overview and operation including parts and flow charts
11.	27-January-2024	GRM & UA & UC Training
12.	31-January-2024	Electric Shock Mock Drill
13.	03-February-2024	LOTO Procedure & Use of PPEs

14.	04-February-2024	ESG Training
15.	05-February-2024	BBS Training
16.	05-February-2024	First Aid & CPR
17.	11-February-2024	Material handling & Storage
18.	12-February-2024	Incident & Accident investigation procedure
19.	14-February-2024	First Aid & CPR
20.	15-February-2024	Fire Fighting
21.	16-February-2024	HSSE General discussion and awareness training
22.	20-February-2024	Frisking
23.	27-February-2024	Waste handling/management plan
24.	28-February-2024	5s Management training
25.	28-February-2024	Awareness training on animals and snake bite
26.	05-March-2024	Firefighting trainings demonstration
27.	12-March-2024	Material/Input/Prevent Theft
28.	15-March-2024	Night Work Activities
29.	17-March-2024	Night Work Activities
30.	17-March-2024	Electrical Safety
31.	21-March-2024	Heat Stress (Mock Drill)
32.	23-March-2024	Incident management system
33.	23-March-2024	Electrical Safety Solar O&M
34.	23-March-2024	General awareness LOTO Procedure
35.	29-March-2024	Incident management system
36.	29-March-2024	Electrical Safety Solar O&M
37.	30-March-2024	LOTO Procedure & Use of PPEs

38.	30-March-2024	PTW Training
39.	30-March-2024	Patrolling, Guarding and monitoring premises
40.	01-April-2024	Heat stress mock drill
41.	02-April-2024	Kaizen awareness & reporting
42.	02-April-2024	Wildlife management training
43.	04-April-2024	Snake and Scorpion Bite
44.	06-April-2024	Use of PPEs
45.	19-April-2024	Fire fighting
46.	19-April-2024	Use of Crowd Control equipment
47.	22-April-2024	Mock Drill Snake bite
48.	23-April-2024	Patrolling, Guarding and monitoring premises
49.	25-April-2024	Fire Fighting Mock drill
50.	27-April-2024	Lock-out & Tag Out training
51.	28-April-2024	Permit to work procedure
52.	14-May-2024	SPRNG Guidelines on wildlife management
53.	20-May-2024	Spillage of Oil mock drill
54.	20-May-2024	Safety and Defensive driving
55.	08-June-2024	Oil Spillage Mock Drill
56.	22-June-2024	Traffic Management training
57.	24-June-2024	Emergency response & Crisis management
58.	27-June-2024	Awareness training on Snake bite

The following table below, describe i) the evidence gathering activities for each item, ii) the evidence checked, and iii) the conclusion of the assessment of the project's conformance with the relevant VCS Program requirements.

Item	Evidence gathering activities, evidence checked, and assessment conclusion:				
Audit history	Audit type	Period	Program	Validation/ verification body name	Number of years
	Validation and verification	19-March-2021 to 18-March-2031	VCS	Earthood Services Private Limited	10 year 00 months 00 days ¹⁰
	Verification	19-March-2021 to 31-March-2022	VCS	LGAI Technological Center, S.A (Applus+Certification)	1 year 00 months 13 days ¹¹
	Verification	01-April-2022 to 31-March-2023	VCS	VKU Certification Private Limited	1 year 00 months 00 days ¹²
	Verification	01-April-2023 to 31-December-2023	VCS	VKU Certification Private Limited	00 year 09 months 00 days
	Verification	01-January-2024 to 30-June-2024	VCS	VKU Certification Private Limited	0 Year 06 months 00 days

¹⁰ [Verra Search Page](#)

	Total	19-March-2021 to June-2024	VCS	-	03 Years, 03 Months, 12 days
	Evidence Gathering activities: Keeping in line with the requirements stated in ISO 14064-3: 2019 (E) section 6.1.3 & program requirement, the assessment team has performed the desk-review of previous verification reports /5/ to confirm the duration of the current monitoring period & the crediting period of this project activity.				
	Evidence Checked: Upon engaging VKU for verification services, the project proponent provided comprehensive details regarding the project activity, including its audit history. This encompassed specifics such as the crediting period, monitoring Period, and the number of prior verifications conducted. Thus, initially itself VKU confirmed the audit history by cross-checking the registered VCS Project Description /3/ and validation reports/4/ and previous verification reports /5/all of which have received approval from Verra and are readily accessible to the VVB on <u>Verra's webpage</u> /12/.				
	Conclusion: VVB concludes that the above stated activities conducted and evidence collected to confirm the audit history align with ISO 14064-03/52/ and program requirements which is deemed accurate and satisfactory to VKU's assessment team.				
Double counting and participation under other GHG programs	Project's GHG Program Status, Cross-Verification of GHG Benefits & Rejection by other GHG programs: The project has not applied under any other GHG program except VCS for current monitoring period, 01-January-2024 to 30-June-2024 (Inclusive of both dates). Evidence Gathering Activities: AT has performed the desk-review to confirm the Project's GHG Program Status, Cross-Verification of GHG Benefits & Rejection by other GHG programs. Evidence Checked: The Project is not rejected by other GHG programs. A declaration/29/ for the same is checked and found correct by the assessment team. PP declares through the declaration /29/ that Net GHG emission reductions or removals				

	generated by the Project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits any specific monitoring period under two mechanisms. AT has also cross-checked the issuance records available on the Verra website and thus confirmed & ensured that the emission reduction generated from the project activity are not & will not be double counted hence accepted by the assessment team. The project is registered under VCS only with project ID 2069. This has been confirmed by checking VERRA registry website/12/ and similar exercise was performed for CDM/GS/GCC/UCR registries with similar project title/capacity and Project Proponents but the assessment team was not able to trace any such project registered under any of the above stated registries or under any other similar mechanisms. The project is not included in an emissions trading program or any other mechanism that includes GHG allowance trading. Conclusion: An exercise of independently searching for such project registration or claim for current monitoring period was performed for other GHG related benefits & based on independent assessment, declaration submitted by PP/29/ and by cross-checked the issuance records available on the Verra website, AT accepted the claim that there is no double counting from this project activity for current monitoring period.
No double claiming with emissions trading programs or binding emission limits	Evidence Gathering Activities: The project is not included in an emissions trading program or any other mechanism that includes GHG allowance trading. Evidence Checked: Verification through Declaration: The PP declares through the declaration /29/ that Net GHG emission reductions or removals generated by the Project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits any specific monitoring period under two mechanisms. Conclusion: The assessment team confirms that the GHG emission reductions or removals generated by the project have not been included in any emissions trading program or any other mechanism that includes GHG allowance trading.

No double claiming with other forms of environmental credit	Evidence Gathering Activities: The project has not sought or received another form of GHG-related environmental credit Issuance Records Confirmation: The assessment team has also cross-checked the issuance records available on the Verra website and thus confirmed & ensured that the emission reduction generated from the project activity are not & will not be double counted hence accepted by the assessment team. Evidence Checked: Verification through Declaration: The PP declares through the declaration /29/ that the project has sought or received another form of GHG-related environmental credit, including REC (renewable energy certificates) & I-REC (International- renewable energy certificates) during this monitoring period. Conclusion: The assessment team confirms that there is No double claiming with other forms of environmental credit by the project activity.
Supply chain (scope 3) emissions double claiming	Evidence Gathering Activities: Since, the project Activity is a solar power project and does not involve any supply chain in the project such as manufacturers, wholesalers, distributors and retailers. So, no indirect upstream and downstream GHG emissions are involved in the project activity. Thus, the Scope 3 emissions are not applicable in this project activity. Evidence Checked: Verification through the registered PD /3/, Previous verification reports/5/ and witness of the project activity and interviews conducted during the onsite visit. Conclusion: As per clause 3.24.7 of VCS standard version 4.6 “Where the project proponent(s) or authorized representative is a buyer or seller of a product (i.e., a good or service) that is in a supply chain and whose product emissions footprint is changed by the project activities specified in the project description. project activity is solar PV power project for which the product is electricity, which does not affect the emission footprint of any product that are part of a supply chain. Hence, this is deemed acceptable to the VVB.

Sustainable development contributions

Evidence Gathering Activities: As per the VCS Standard Version 4.6 of Appendix 03: Document History and Effective dates, For V4.2, serial number 04 states that “it is required by project proponents to demonstrate contributions to a minimum of three SDGs in all monitoring reports verified after the effective date. Effective immediately for all projects that request registration on or after 20-January-2023. Projects that request registration before 20-January-2023 shall demonstrate contributions to at least three SDGs by 20-January-2025”. This is project's fourth Periodic Verification for the Monitoring Period from 01-January-2024 to 30-June- 2024 (Inclusive of both start and end dates) is registered before 20-January-2023, so the Project Proponent (PP) must demonstrate contributions to at least three SDGs by 20-January-2025. For the current monitoring period, the PP is voluntarily showing contributions to three SDGs, as indicated below: The Project activity has implemented activities that results in 3 SDG Contributions; 7.2, 8.5 and 13.0

SDG 7.2.1 i.e. (Renewable energy share in the total final energy consumption) About 307,159 MWh of renewable electricity has been supplied to Indian Electricity grid during the current monitoring period which helps to increase the renewable energy share in the energy mix and contribution accounts for 0.03% of total energy (electricity) supplied to Indian grid .

As a part of this project activity lifetime, a total of 1,925,706 MWh (581,277 MWh in 1st verification + 600,047 MWh in 2nd verification + 437,223 MWh 3rd verification + 307,159 MWh in 4th verification) during current monitoring period of renewable electricity has been supplied to the Indian grid by the project activity since commissioning. This lifetime contribution represents 0.04% of total energy (electricity) supplied to Indian grid.

The VVB has reviewed the SDG indicator description and the reported contributions in the revised Monitoring Report. The contributions are now presented in alignment with SDG Target 7.2, which focuses on the "Renewable energy share in total final energy consumption."

SDG Indicator 7.2.1 tracks the "Renewable energy share in total final energy consumption" and is relevant to this project, as it supplies 100% renewable energy to the grid. The energy produced by the project contributes to the overall increase in renewable

energy share in the total final energy consumption. national level, thus supporting the SDG Indicator 7.2.1.

Project contributions during current monitoring period

For the current monitoring period, the project's contribution (increase in renewable energy share) in total electricity supplied to Indian grid has been calculated and verified as **0.03%**.

Project's lifetime contribution

For project's life time the project's the project's contribution (increase in renewable energy share) in total electricity supplied to Indian grid has been calculated and verified as approximately **0.04%**.

VVB has verified the above stated percentages based on the supporting calculation sheet /55/ provided by PD which has been crosschecked with the data available on Government of India's Ministry of Power (Central Electricity Authority)¹³ /56/, which is a reliable and authoritative source for national-level electricity generation data.

Therefore, it is confirmed that the contributions outlined in Table 1 of Section 1.12 of the revised MR, both for the current period and the project lifetime, are in alignment with SDG Target 7.2.1 and Section 3.17 of the VCS Standards Version 4.7. The VVB finds the calculations to be accurate and acceptable.

SDG 8.5 i.e. (By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value) A total of 68 people is employed during this reporting period (07 skilled, 21 semiskilled, 41 unskilled)

163 people employed since start date of the project activity due to installation of this project.

SDG 13.2.2: Total greenhouse gas emissions per year

¹³ <https://cea.nic.in/?lang=en>

<https://cea.nic.in/dashboard/?lang=en>

<https://cea.nic.in/api-for-central-electricity-authority-data/?lang=en>

<https://cea.nic.in/renewable-generation-report/?lang=en>

By generating 307,159 MWh of renewable electricity the project has avoided the emission of 287,746 tCO₂e in the atmosphere.

Due to installation of this project activity PP has prevented the release of emission of 1,803,998 tCO₂e (544,539 tCO₂e in 1st MP + 562,123 in 2nd MP + 409,590 in 3rd MP + 287,746 tCO₂e during current MP) in the atmosphere. Thus, proving that the project generated eco-friendly, GHG free power which contributes to sustainable development of the region.

Evidence Checked: The above stated SDG contributions has been verified via following means.

SDG 13 - VVB has referred previous verification reports approved by VERRA /05/, JMRs/27/, Invoices/28/

SDG 7.2 - VVB has referred previous verification reports approved by VERRA /05/, JMRs/27/, Invoices/28/

Calculation sheet for SDG 7.2.1/55/

Government of India's Ministry of Power (Central Electricity Authority)¹⁴

SDG 8.5 -verified by the assessment team from the employment records /37/ submitted by the PP to the VVB along with that assessment team interviewed the new employees hired during the current monitoring period to confirm about minimum wage requirement if followed at site. Onsite assessment team confirmed that PP is stringently following the state regulations for minimum wage criteria.

VVB's Conclusion: VKU found the above claimed SDG contributions correct and deemed satisfactory.

¹⁴ <https://cea.nic.in/?lang=en>

<https://cea.nic.in/dashboard/?lang=en>

	It is confirmed that, all the above stated SDG claims (SDG 13, SDG 7.2 and SDG 8.5) both for the current period and the project lifetime, are in alignment with Section 3.17 of the VCS Standards Version 4.7
Additional information relevant to the project	AT confirms that as per information provided in the monitoring report /1/ submitted by the PP to the VVB of no commercially sensitive information has been excluded from the public versions of project documents & thus conforms with the VCS Program requirements on what may be excluded. The information was cross-checked by interviewing the concerned personnel during the personnel interviews/51/.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	Evidence Gathering Activities: To identify the stakeholders, PP undertook a stakeholder analysis. The information from the stakeholder analysis is then utilized to assess the interests of the stakeholders that should be addressed in the project plan, policy, program, or other action. The importance of such an analysis lies in the role played by this understanding in the assessment of the socio-political environment surrounding the project. It allows for: • Identification of key stakeholders • Identification of the interests, concerns and potential risks surrounding the stakeholders, as well as conflicts of interests (if any); • Identification of relations between stakeholders that may enable "coalitions" of project sponsorship, ownership and co-operation as well as the mechanisms which may have a role in influencing other stakeholders; • Key groups/ individuals to be pinpointed who need to be informed about the project;

	Identification of the impact and influence of the project on the stakeholders and of the stakeholders on the project. Evidence Checked: The accuracy and comprehensiveness of the information gathered through the “Stakeholder Analysis” reported in ESIA Report /38/ has been verified by cross-checking with interview/focussed group discussions with relevant experts and stakeholder representatives volunteered during the onsite audit conducted by the VVB.
Legal or customary tenure/access rights	Evidence Gathering Activities: Information on legal/customary tenure rights of stakeholders, IPs, LCs and rights holders has been gathered from the ESIA report. Evidence Checked: As it's now the 4th verification year, the evidence from initial verification regarding land tenure and stakeholder consultations has been reviewed for continued validity at the time of project validations, VVB could only confirm the above stated information with the project proponent & stakeholders during the interview process and discussions conducted during the onsite visit. Also, the review of ESIA report /38/ has been done. Conclusion: Based on the review of the Environment and social impact assessment report and interviews during the onsite visit /51/ VVB concludes that, • There is no legal or customary tenure/access rights to territories and resources, including collective and conflicting rights, held by stakeholders, indigenous people (IPs), local communities (LCs), and customary rights holders. • The total land required for setting up of the 250 MW solar power plant is private land except around 300-acre land which is under the ownership of government. • land acquisition was completed earlier at the time of validation. • There is no forest land involved in the land required for the project. The PP had appointed a local land aggregator for expediting land procurement for the project. Local land aggregator was responsible for discussing, negotiating and ensuring that sale deed registry execution of identified land parcels between landowner and PP is carried out smoothly. • Consultations with the majority of landowners revealed a willingness to sell land parcels mainly due to the land being acquired almost barren land full of gravels.

	Landowners had stopped agricultural practices on the land parcels left suitable for agriculture due to erratic rainfall and loss in agricultural production over the last few decades. The VVB confirms ongoing compliance with VCS 4.6 standards on stakeholder engagement, land acquisition and tenure rights consideration based on evidence from initial verification
Stakeholder diversity and changes over time	Evidence Gathering Activities: As per desk review with registered PD, interview with stakeholders and assessment of monitoring report. It is deduced that the social, economic, and cultural diversity within stakeholder groups was identified and assessed during the Environmental and Social Impact Assessment (ESIA) conducted for the project. The ESIA report /38/ provided the following information The project site has locational advantages with no ecologically sensitive areas, national parks, wildlife sanctuaries, biosphere reserves, or reserved/protected forests within a 10 km radius. - No cultural heritage sites were identified in the close vicinity of the project site - The project is located across three villages: Loona Khurd, Loona Kalan, and Sadrasar. - The area has an average family size of 6.3 and a sex ratio of 893 females per 1000 males. - According to the 2011 Census of India, 20.88% of the total population belongs to the Scheduled Caste community, while 7.93% belongs to the Scheduled Tribe community. - The majority of the Scheduled Caste population resides in Loona Khurd village, while the Scheduled Tribe population resides in Sadrasar village. Evidence Checked- The information gathered during the ESIA /38/ process was cross-checked and verified through site visits, consultations with stakeholders, and review of relevant documents and data sources. The project PP has submitted the ESIA report /38/ to the VVB, which provides the baseline data on the social, economic, and cultural diversity of the stakeholder groups at the time of validation. While the 2021 Census of India data is not yet publicly available, the PP has relied on the continuous interactions and ongoing communication with stakeholders to monitor any significant changes in the composition of stakeholder groups during the monitoring period.

	Conclusion: Based on the evidence gathered during the ESIA process and verified by the VVB, it is concluded that the social, economic, and cultural diversity within stakeholder groups was properly identified and documented at the time of validation. PP has maintained continuous interactions and ongoing communication with stakeholders to monitor any changes in the composition of stakeholder groups during the monitoring period According to the information provided by the PP, the social, economic, and cultural diversity within stakeholder groups has remained stable over time, with no significant changes observed in the composition of each group during the monitoring period. The VVB's conclusion is based on the ESIA report/38/ and the PP's ongoing stakeholder engagement efforts, ensuring compliance with relevant standards and best practices for monitoring and addressing potential changes in stakeholder dynamics.
Expected changes in well-being	Evidence Gathering Activities: As per desk review with registered PD, interview with stakeholders and assessment of monitoring report. The assessment of changes in stakeholder well-being, characteristics, and ecosystem services was conducted through the following: Environmental and Social Impact Assessment Report: The ESIA provided a baseline assessment of stakeholder well-being, characteristics, and ecosystem services important to stakeholders. Continuous stakeholder interactions and ongoing communication: The PP has maintained regular interactions and communication with stakeholders to monitor any changes during the project's operational phase. Evidence Checked: The following evidences has been crosschecked by the VVB. ESIA Report: The information and conclusions outlined in the ESIA report /38/ have been thoroughly verified through site visits, stakeholder consultations, and a review of relevant documents. Stakeholder Engagement Records: The evaluation of the project proponent's documentation on ongoing stakeholder interactions, including attendance sheets and feedback mechanisms, has been completed. Conclusion: Based on the evidence gathered and verified i.e ESIA report and the PP's continuous stakeholder engagement efforts, and

	Interviews with stakeholders, the VVB concludes that No significant changes in stakeholder well-being and characteristics, including changes to ecosystem services identified as important to stakeholders, have been recorded during the current monitoring period. The operation and maintenance staff and other workers are housed within the plant premises or in nearby towns (Jaisalmer or Pokhran), with an expected improvement in their quality of life. Local villagers who meet the qualification criteria are given preference for employment opportunities in the solar project. The PP recognizes the importance of providing skill development training to eligible youth, enabling them to secure jobs in the solar project. The Solar PV Project has been set-up on land mix of fallow land, unculturable waste land, barren scrub land and barren rocky parcels were acquired on willing buyer-willing seller basis. No displacement of population took place. During operational phase, positive impacts are envisaged on the social environment.
Location of stakeholders	Evidence Gathering Activities: As per desk review with registered PD, interview with stakeholders and assessment of monitoring report. The location of stakeholders, local communities, indigenous peoples, customary rights holders, and areas outside the project area that may experience impacts were identified through the following: Stakeholder mapping and analysis during the ESIA: A comprehensive stakeholder mapping exercise was conducted to identify the stakeholders residing within the project area (three villages: Loona Khurd, Loona Kalan, and Sadrasar) and its immediate vicinity. Site visits and field assessments: VVB has conducted onsite visit and field assessments to verify the location of stakeholders and identify any potential areas outside the project boundary that may experience indirect impacts. Consultations with local authorities and community representatives at the time of validation: The PP consulted with local authorities and community representatives to gather information on the presence of indigenous peoples, customary rights holders, and any areas of significance beyond the project boundary

	Evidence Checked: The review and verification of the following documents has been done. • Local Stakeholder mapping and analysis in ESIA Report /38/ • Grievance Records /33/ • Interviews with local stakeholders /51/ Conclusion: Based on the evidence gathered and verified, the VVB concludes the following: The majority of identified stakeholders, including local communities, reside within the three villages (Loona Khurd, Loona Kalan, and Sadrasar) that constitute the project area. The project land is primarily private land, with approximately 300 acres under government ownership, and no forest land involved. Therefore, there are no legal or customary tenure/access rights to territories and resources, including collective and conflicting rights, held by stakeholders, indigenous people (IPs), local communities (LCs), and customary rights holders. Based on the definition and legal framework in India, the District of Jaisalmer, where the project is located, is not a Scheduled V area. Consequently, there are no specific indigenous people/local communities identified within the project implementation area. The PP has not identified any areas outside the project boundary that are predicted to experience indirect impacts, such as environmental changes or socio-economic shifts, due to the nature of the solar project. The VVB's conclusion ensures compliance with the VCS Standard version 4.6, clause 3.18.1, by providing a detailed description of the location of stakeholders, local communities, indigenous peoples, customary rights holders, and areas outside the project area that may be impacted.
Location of resources	Evidence Gathering Activities: The ownership of resources and territories associated with the project, as well as the land acquisition process, were assessed through the desk review of ESIA report and interviews during onsite visit. Evidence Checked: ESIA Report /38/, Focussed Group Discussion and Personnel interviews with PP & local stakeholders /51/ Conclusion: Based on the evidence gathered and verified, the VVB concludes that, All the resources and the territories associated with the project are owned by the Project Proponent. Land acquired for the project is on willing buyer - willing seller basis. Land acquisition did not

	result in rehabilitation and resettlement. There is no settlement on the land acquired. Therefore, no territories and resources of stakeholders directly intersect with the project area. This ensures the compliance with relevant standards and best practices related to land ownership, acquisition, and stakeholder engagement. The evidence demonstrates that the project was developed without infringing on stakeholders' territories and resources, and the land acquisition process was conducted through willing transactions without any displacement or resettlement requirements
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4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	Evidence Gathering Activities: The project proponent has taken the following steps for effective stakeholder communication during the monitoring period: • Communication Plan: Implemented the validated communication plan for stakeholder engagement. • Input/Grievance Register: Maintained on-site for stakeholders to record feedback and concerns. • Comment Box: Placed at the main gate for anonymous or confidential feedback. Evidence Checked: The Validation and Verification Body (VVB) has reviewed and verified the evidence provided by the project proponent, including: The validated communication plan and its implementation records in registered PD Input/Grievance Register and its accessibility with the local stakeholders. Records of stakeholder consultation meetings, including attendance sheets, meeting minutes, and follow-up actions Photographic evidence of the comment/suggestion box at the main gate. Conclusion: Based on the evidence gathered and verified, it is concluded that, project proponent took all appropriate measures to communicate and consult with stakeholders during the current

	monitoring period in line with the validated plan and the requirements of the VCS Standard version 4.6 clause 3.18.5. The project proponent has implemented the validated communication plan and maintained accessible channels for stakeholders to provide feedback, raise concerns, and participate in consultation meetings. The Input/Grievance Register /50/ and comment/suggestion box provide publicly accessible platforms for stakeholders to engage with the project. The VVB's conclusion ensures that the project proponent has fulfilled the requirements for ongoing communication and consultation with stakeholders, promoting transparency and addressing stakeholder concerns throughout the monitoring period.
Date(s) of stakeholder consultation	Evidence Gathering Activities: The date of stakeholder consultation has been verified through the Review of the registered PD and via interviews with the concerned personals/51/ Evidence Checked: review of registered PD /3/, Validation report/ 4/ and interviews during the onsite visit /51/. Conclusion: Based on the evidence gathered and verified, the VVB concludes that the date of stakeholder consultation for this project is 02-May-2019. The date was cross-checked against the information provided in the registered PD, and further corroborated through interview discussions with the PP and site in-charge during the onsite audit. The VVB's conclusion ensures that the date of stakeholder consultation is accurately recorded and verified, in line with the requirements of the applicable standards and best practices for stakeholder engagement and project documentation.
Communication of monitored results	Evidence Gathering Activities: Reviewed the grievance register to verify the documentation of grievances, investigations, and resolutions related to the communication of monitoring results. Verified the maintenance of a grievance register and complaint box for stakeholder feedback. Confirmed the utilization of stakeholder engagement platforms for ongoing communication and ensuring transparency and accountability. Evidence Checked:

	• Grievance register/50/ • Records of community meetings, informational materials, and interactive workshops • Complaint box record Conclusion: Based on the evidence gathered and reviewed, it is confirmed that: Monitoring results were communicated through various channels, including the grievance register (by documenting grievances, investigations, and resolutions), community meetings, informational materials, and interactive workshops, to ensure effective and timely communication with stakeholders. For ongoing communication, the PP maintains a grievance register and a complaint box for stakeholder feedback, and utilizes stakeholder engagement platforms to ensure transparency and accountability.
Consultation records	Evidence Gathering Activities: Reviewed the process for documenting and recording the outcomes of ongoing communication related to comments or grievances received. • Verified the procedure for acknowledging and storing comments or grievances in the Grievance register. • Reviewed records of monthly management meetings to confirm the discussion and resolution of grievances and any required management input or approval Evidence Checked: • Grievance register • Procedure for grievance acknowledgment and storage • Onsite visit and interviews /51/ Conclusion: Based on the evidence gathered and reviewed, it is confirmed that: The outcomes of ongoing communication are documented and recorded as follows: Once a comment or grievance is received, it is acknowledged, and a copy is stored in the Grievance register.

	• The Grievance Redressal Officer (GRO) may decide to take action, or if further suggestion or approval from management is required, it is discussed and resolved during the monthly management meetings. • Comments or grievances received are presented to the management during the monthly meetings, along with the action taken to resolve them. • If any input or approval is required from the management, it is discussed and resolved during the monthly management meetings. The management may decide to further assess or carry out additional investigations if necessary. The process for documenting and addressing comments or grievances received, including the involvement of the GRO and management, has been verified through the interviews with the site personnels during the onsite visit.
Stakeholder input	Evidence Gathered: Stakeholder consultation and input analysis procedures Evidence Checked: No stakeholder inputs received during the current monitoring period & interviews during the onsite assessment. Conclusion: The review of the consultation process shows that all stakeholder inputs are being thoroughly analysed for technical feasibility, potential impacts, and alignment with project goals. While no inputs were received during the current monitoring period, the project proponent is committed to transparency and inclusivity, ensuring that stakeholders remain informed and engaged in decision-making. This approach complies with Section 3.18 of the VCS Standard Version 4.6.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	Evidence gathering Activities: reviewed the registered PD Checked for any ongoing or unresolved conflicts during the current monitoring period and the project's influence on such conflicts.

	Reviewed the process and documentation related to obtaining consent from concerned parties, including local communities (LCs). Verified the measures taken to ensure a transparent and inclusive process, such as engaging in meaningful dialogue, providing relevant information in accessible formats, and addressing concerns or questions raised. Evidences Checked: Review of the registered PD & Personal interviews and focussed group discussion with the PP and site in-charge Conclusion: Consent from concerned parties, including local communities (LCs) was obtained through a transparent and inclusive process. This involved engaging in meaningful dialogue, providing relevant information in accessible formats, and addressing any concerns or questions raised. Agreements were reached through consensus-building and ensuring that all parties had the opportunity to express their views and negotiate terms. Transparency was maintained by documenting the process and agreements reached and ensuring that all stakeholders understood the implications of their consent. During the current monitoring period there are no ongoing or unresolved conflicts and the project neither exacerbate nor influence the outcomes of unresolved conflicts
Outcome of FPIC discussion	Evidence gathering Activities: Reviewed the Free, Prior, and Informed Consent (FPIC) process. Verified the transparency agreement between the project proponent and concerned parties, including local communities (LCs). Checked the disclosure of comprehensive project information, potential impacts, and mitigation measures to stakeholders during the Local Stakeholder Consultation (LSC). Confirmed the accessibility of information provided, including the use of local languages. Verified the project proponent's declaration regarding no encroachment of land, non-relocation of people, and avoidance of forced physical or economic displacement. Evidences Checked: Personal interviews and focussed group discussion with the PP and site in-charge Conclusion: Based on the evidence gathered and reviewed, it is confirmed that: The outcome of the FPIC process resulted in a transparent agreement between the project proponent and all concerned parties, including local communities (LCs).

	• Prior to establishing the agreement, comprehensive information regarding the project's scope, potential impacts, and mitigation measures was disclosed to stakeholders in accessible formats and local languages during the LSC. • The project proponent has declared that the project has not encroached on any land, does not relocate people, or cause forced physical or economic displacement. 4. All project activities have been conducted in accordance with regulatory norms and terms outlined in the transparent • agreement, ensuring the protection of rights and interests of all stakeholders involved. • The audit has verified the FPIC process, the establishment of a transparent agreement, the disclosure of relevant information, and compliance with regulatory norms and agreed terms, thereby confirming the protection of stakeholder rights and interests.
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4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	Evidence Gathering Activities: • Reviewed the grievance register or relevant records to verify if any grievances were received during the current monitoring period. • Checked the procedures for grievance resolution, including steps taken to address grievances and document the outcomes. Evidence Checked: • Grievance register or relevant records /50/ • Grievance resolution procedures Conclusion: Based on the evidence gathered and reviewed, it is confirmed that: • There were no grievances recorded or received during the current monitoring period.

	The procedures for grievance resolution, including steps to address grievances and document the outcomes, were reviewed, but no grievances were received during this period to assess the implementation of these procedures. No grievances were recorded during current monitoring period. However, the existence of procedures and the maintenance of records were confirmed.
Grievance redress procedure	Based on the onsite visit observations and interviews it has been confirmed that. To resolve the issue/ comments PP is maintaining a grievance register and a complaint / suggestion box have been provided at project site for stakeholders to provide their feedback/ comments/ suggestions. The grievance register is located at the administrative office at the plant and also at the Entrance (Main Gate) of the plant. Thus, it is an appropriate publicly accessible location at which local stakeholders can provide their feedback on the project.

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No comments were received outside of the public comment period and also during the current monitoring period.	Since there were no comments received during the current monitoring period and outside of the public comment period, no actions were taken and there are no updates to project design. As a part of continuous feedback from stakeholders, PP is maintaining a grievance register and a complaint/ suggestion box for feedback collection, ensuring effective communication and resolution of concerns.	Evidence Gathering Activities: - Reviewed records to verify if any comments were received outside the public comment period and during the current monitoring period. - Checked the grievance register and complaint/suggestion box for any feedback received from stakeholders. - Reviewed records of the Local Stakeholder Consultation during the validation phase to understand the comments and concerns raised by stakeholders. Evidence Checked:

During the Local Stakeholder Consultation at the time of validation the villagers raised questions about the project's benefits, employment opportunities, land fertility, and future plans. They were assured of local employment, no impact on land fertility, and promised economic development contributing to improved infrastructure and facilities in the area. During the Local Stakeholder Consultation at the time of validation the villagers raised questions about the project's benefits, employment opportunities, land fertility, and future plans. They were assured of local employment, no impact on land fertility, and promised economic development contributing to improved infrastructure and facilities in the area.	There were no other major comments or protests raised by the stakeholders till now. The local stakeholders were totally in support of setting up of the project in the region.	• Records of comments received (if any) • Grievance register • Complaint/suggestion box records • Local Stakeholder Consultation records during validation VVB's Conclusion: Based on the evidence gathered and reviewed, it is confirmed that: No comments were received outside the public comment period and during the current monitoring period. The grievance register and complaint/suggestion box demonstrate the PP's commitment to ongoing stakeholder engagement and feedback mechanisms.
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4.2.6 Risks to Local Stakeholders and the Environment

4.2.6.1 Management Experience

Evidence gathering activities- Through the onsite visit and Interviews

Evidence checked- Onsite visit, interviews & focussed group discussion, O&M agreement

Conclusion- Based on, the onsite visit interviews, review of the O&M agreement /24/ with Param Renewable Energy Pvt. Ltd. (O&M entity for current monitoring period), and assessment of the company websites¹⁵ collectively affirm that the management team leading the solar project possesses significant expertise and experience in executing similar renewable energy initiatives. Their successful track record in project design, community engagement, and overall implementation reinforces their capability to manage the project effectively. Given the team's extensive experience, there has been no necessity to involve new entities or form partnerships for this project. This established proficiency ensures that all project activities will be aligned with the project's goals, paving the way for successful outcomes. The extensive experience of the existing management team, there has been no need to involve new entities or form partnerships with other organizations for this project. The team's established track record ensures that all project activities are managed effectively and in alignment with the project's goals.

4.2.6.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion	
Natural and human induced risks to stakeholders' wellbeing	No risk has been identified	Evidence gathering activities – Desk review of the registered PD, Personal interviews & focussed grouped discussion during onsite visit and the supporting evidences provided by PD. Evidence checked – interviews during onsite visit & the following evidences has been checked. - Grievance register /50/ - ESIA report /38/ - Fortum people policy and Sustainability policies /41/ Conclusion- Based on the comprehensive review of the relevant documents and interviews conducted during the onsite visit, it has been confirmed that there are no

¹⁵ <https://www.paramrenewable.com/>

<https://sprngenergy.com/>

		anticipated natural or human-induced risks to stakeholders' well-being during the current monitoring period. The project is not expected to have any negative impacts on stakeholders. The PP is committed to maintaining open and transparent communication with stakeholders, implementing effective mechanisms for grievance redressal, providing a platform for stakeholders to voice their concerns and a feedback box to facilitate ongoing dialogue, ensuring that stakeholder voices are actively heard and addressed. Furthermore, the PP has established well-maintained policies focused on stakeholder well-being, which effectively mitigate any potential risks. The VVB confirms that the project activity comply with the safeguards mentioned in Section 3.19 of the VCS Standards Version 4.6, reinforcing the project's commitment to stakeholder well-being.
Risks to stakeholder participation	No risk has been identified	Evidence gathering activities – Desk review of the registered PD, Personal interviews & focussed grouped discussion during onsite visit and the supporting evidences provided by PD. Assessed the potential risks to stakeholder participation in the project activities. • Verified the measures taken by the PP to ensure open and transparent dialogue with stakeholders. • Confirmed the inclusion and participation of women in the consultation process • Checked if all aspects of the project, including environmental and social impacts and mitigation measures, were discussed during the consultations. Evidence checked – The registered PD/3/ and grievance register have been reviewed. Additionally, Environmental and Social Impact Assessment (ESIA)

		report, have been reviewed. This documentation includes: - Records of Stakeholder consultations during validation - Women's participation records - Consultations with affected communities and individuals - Information disclosure materials related to project impacts and mitigation measures Conclusion- Based on the evidence gathered and reviewed, it is confirmed that, the project does not pose any risks to stakeholder participation. The PP is ensuring Open and transparent dialogue with the stakeholders. The women's participation in the consultation is being ensured. All aspects of the project, environmental and social impacts, and mitigation measures were discussed during these consultations. Hence, VVB verified the PP's efforts to mitigate risks to stakeholder participation, promote open and transparent dialogue, ensure women's participation, and conduct meaningful consultations with affected communities, adhering to the required processes and information disclosure.
Working conditions	No risk has been identified	Evidence gathering activities – During the onsite visit and interviews, the following aspects were reviewed: - Working conditions, safety protocols, training programs, and the provision of personal protective equipment for employees. - Employment practices, including fair wages, job security, and opportunities for skill development. - Compliance with internationally recognized human and labour rights standards and relevant labour laws.

		• The project's contribution to socio-economic development in the region. Evidence checked – During the onsite visit the following evidences has been checked. • Sustainability policy/41/ • People policy/41/ • Training records for current monitoring period /42/ • Health and safety protocols followed at site • employment contracts and wage records • Environmental and Socio-economic impact assessment reports/38/ Conclusion- Based on the onsite interviews and evidence gathered during the onsite visit, it is confirmed that the PP has maintained exemplary working conditions that prioritize the safety, health, and well-being of all employees. Robust safety protocols and adequate personal protective equipment have effectively mitigated potential risks associated with working conditions. Additionally, rigorous training sessions are conducted to further enhance safety. The PP complies with fair employment practices and honours internationally accepted human and labour rights and labour standards. The working conditions on the project are exemplary, reflecting the PP's dedication to fostering a safe, prosperous, and sustainable working environment. Hence it has been confirmed that, PP's commitment to maintaining exemplary working conditions, ensuring employee safety and well-being, adhering to fair employment practices and labour standards, and contributing to the socio-economic development of the region through its workforce management practices.
Safety of women and girls	No risk has been identified	Evidence gathering activities - During the onsite visit and interviews, the following aspects were reviewed:

- Reviewed the safety protocols, workplace safety regulations, and their implementation by the PP
- Verified the measures taken to mitigate potential risks related to the safety of women and girls in the workplace.
- Assessed the work environment and the level of participation and contribution of women and girls in the project's success.

Evidence checked – Onsite interviews, Policies and initiatives promoting a respectful and inclusive work environment /41/, Workplace safety assessments and incident reports, Employment records and participation levels of women and girls, Health and safety protocols followed at site

Conclusion- Based on the evidence gathered and reviewed, it is confirmed that: The PP offers a safe and healthy workplace for all employees, including women and girls, by maintaining stringent safety protocols and adhering to relevant Indian regulations governing workplace safety.

Compliance with The Factories Act, 1948, and the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013, has been ensured, effectively mitigating potential risks related to the safety of women and girls.

Through comprehensive training programs and the promotion of a culture of respect and equality, the project provides a safe and secure workplace for women and girls. However currently at site there are no women/girl employees. The women/girl employees are working at head-office as confirmed via interviews during the onsite visit.

Hence, it has been verified that the PP's efforts in maintaining a safe and secure workplace, particularly for women and girls, through adherence to regulations, implementation of safety protocols, promotion of a respectful and inclusive culture, and enabling the

		active participation and contribution of women and girls in the project's success.
Safety of minority and marginalized groups, including children	No risk has been identified	Evidence gathering activities - During the onsite visit and interviews, the following aspects were reviewed. • Equal rights and non-discrimination policies and practices. • Proactive engagement with local communities, stakeholder consultations, and sensitivity to cultural diversity. • Assessed the creation of a safe and supportive environment for the participation and empowerment of minority and marginalized groups, including children. Evidence checked – Onsite interviews, equal rights and non-discrimination policies and practices /41/, ESIA report /38/. Conclusion- Based on the evidence gathered and interviews conducted during the onsite visit, it is clear that the safety of minority and marginalized groups, including children, has been a fundamental consideration in the environmental and social impact assessment of the project activity. The PP has established comprehensive policies that affirm its commitment to being an equal rights employer. It has been confirmed that, PP strictly prohibits any form of discrimination, including that based on race, religion, political opinion, gender, age, national origin, sexual orientation, marital status, or disability. Additionally, all types of harassment are expressly forbidden, with mechanisms in place to address and eliminate any such incidents promptly. The PP not only appreciates the value of diversity but also considers it a competitive advantage. This commitment to inclusivity and respect for all individuals underscores the PP's dedication to fostering a safe and equitable working environment for everyone involved in the project.

Pollutants (air, noise, discharges to water, generation and release of hazardous materials and chemical pesticides and fertilizers	No risk has been identified	Evidence gathering activities – Reviewed the inherent characteristics and operational processes of the solar power project. Assessed the potential risks related to pollutants, including air emissions, noise pollution, water discharges, waste generation, and hazardous material releases. Evidence checked – Interviews /51/ and via onsite visit the following records/evidences has been verified • Technical specifications and operational data of the plant site. • Waste management records and Regulatory compliance records related to environmental aspects. • ESIA Repot /38/ Conclusion- Based on the onsite observations, document review and interviews, it has been confirmed that there is minimal risk associated related to pollutants as it is a solar power project. Solar energy generation is a clean and renewable energy source that does not produce air pollutants such as carbon dioxide, sulphur dioxide, or nitrogen oxides during operation. The solar panels operate silently, eliminating the risk of noise pollution. The project does not discharge pollutants to water bodies, generate significant amounts of waste, or release hazardous materials during its lifecycle. The environmental footprint of the solar power project is significantly lower compared to traditional power plants, making it a sustainable and environmentally friendly energy option with minimal risks related to pollutants. As per the onsite audit conclusion with PP & site in-charge the end of the project's lifecycle, the solar modules will either be revamped or replaced and continue with their operation.
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		It has been verified that, PP complies with all the legal compliances of the host country and has the minimal risks related to pollutants associated with the solar power project, its environmentally friendly nature, and the plans in place for responsible end-of-life management.
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4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	Evidence gathering activities: Desk-review, Personal interview & focussed grouped discussion. - Reviewed Fortum's People Policy on non-discrimination Evidence checked: - Fortum's People Policy on non-discrimination/41/ - Confirmation that no discrimination has been identified or reported in the current monitoring period through onsite interviews. Assessment Conclusion: As per the review of Fortum People Policy, “Fortum is an equal rights employer. No discrimination of any kind based on race, religion, political opinion, gender, age, national origin, sexual orientation, marital status or disability is allowed in the project. All types of harassment are prohibited and will be eliminated immediately. Fortum appreciates diversity and considers it a competitive advantage.” During the current monitoring period, no instances of discrimination have been reported or identified within the project. Comprehensive policies are in place to prevent and address such issues promptly and effectively.

	This commitment to maintaining a respectful and inclusive environment underscores the project's dedication to upholding ethical standards and ensuring the well-being of all stakeholders involved.
Sexual harassment	Evidence gathering activities: Desk-review, Personal interview & focussed grouped discussion. - Reviewed Fortum's policy on prohibition of harassment - Noted adherence to the Sexual Harassment of Women at Workplace Act, 2013 Evidence checked : - Fortum Policy statements on equal opportunity, non-discrimination, and prohibiting harassment - Checked monitoring data for any reported instances during the period during the onsite visit. - Specific reference to Chapter IV, Article 19 (a) of the Sexual Harassment Act on employer's duty to provide a safe workplace. Conclusion – As per the review of the Fortum policies /41/ and the interviews during the onsite visit/51/, it has been confirmed that, PP adheres to the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013. As per chapter IV, article 19 “Duties of Employer” clause (a) Every employer shall provide a safe working environment at the workplace with shall include safety from the persons coming into contact at the workplace. During the current monitoring period, no instances of sexual harassment have been reported or identified within the project.
Gender equity in labor and work	Evidence gathering activity: Review of Fortum policies regarding gender equality in labor and work place and interviews during onsite visit. Evidences checked- Fortum People Policy and interviews during onsite visit. Specific reference to chapter – II, article 4 of the Equal Remuneration Act, 1976 clause (1)

	Conclusion- As per the review of Fortum People Policy /41/, Fortum complies with fair employment practices and honours internationally accepted human and labour rights and labour standards.” “Fortum offers fair, transparent and competitive rewards to its employees at all levels. Salaries are based on applicable laws and agreements in accordance with specific practices in respective countries.” As per the interviews during the onsite visit it has been confirmed that equal opportunities in terms of gender and equal pay for equal labour are ensured through transparent hiring processes, non-discriminatory policies, and regular reviews of pay scales to address any disparities. During the current monitoring period no instances of discrimination or disparity in payments have been reported or identified within the project. Additionally, ongoing programs promote gender inclusivity and address unconscious biases within the workforce.
Forced labor	Evidence gathering activities - Onsite observations, Personnel interviews & focussed grouped discussion. Noted compliance with labour laws and human rights standards. The project complies with the Bonded Labour System (Abolition) Act, 1976. Evidences checked – following aspects has been checked during the onsite visit • Project's strict ethical sourcing policies for vetting suppliers/contractors • Adherence to relevant Indian laws prohibiting bonded/forced labour and child labour • Processes for regular audits and inspections to verify compliance within workforce • No instances of forced labour identified during the monitoring period. Conclusion- Based on the witness of the site during the onsite visit and interviews VVB concludes that, project enforces strict ethical sourcing policies, including thorough vetting of suppliers and contractors, to ensure compliance with labour laws and human rights standards. The project complies with the Bonded Labour System (Abolition) Act, 1976.

	Regular audits and inspections are conducted to verify that no instances of human trafficking, forced labour, or child labour occur within the project's supply chain or workforce.
Child labor	Evidence gathering activities – Onsite observations, Personnel interviews & focussed grouped discussion. Noted compliance with labour laws and human rights standards and the Child Labour (Prohibition and Regulation) Act. Evidences checked – following aspects has been checked during the onsite visit • Project's strict ethical sourcing policies for vetting suppliers/contractors • Adherence to relevant Indian laws prohibiting bonded/forced labor and child labour • Processes for regular audits and inspections to verify compliance within workforce • No instances of child labour identified during the monitoring period. Conclusion- based on the witness of the site during the onsite visit and interviews VVB concludes that, the project enforces strict ethical sourcing policies, including thorough vetting of suppliers and contractors, to ensure compliance with labour laws and human rights standards. The project complies with the Child Labour (Prohibition and Regulation) Act. Regular audits and inspections are conducted to verify that no instances of human trafficking, forced labour, or child labour occur within the project's supply chain or workforce.
Human trafficking	Evidence gathering activities - Onsite observations, Personnel interviews Noted compliance with Bonded Labour System (Abolition) Act, 1976& focussed grouped discussion. Factories Act, 1948 Evidences checked – following aspects has been checked during the onsite visit • Project's strict ethical sourcing policies for vetting suppliers/contractors

	• Adherence to relevant Indian laws prohibiting bonded/forced labour and child labour • Processes for regular audits and inspections to verify compliance within workforce • No instances of Human trafficking identified during the monitoring period. Conclusion- based on the witness of the site during the onsite visit and interviews VVB concludes that, The project enforces strict ethical sourcing policies, including thorough vetting of suppliers and contractors, to ensure compliance with labor laws and human rights standards. The project complies with the Factories Act, 1948. Regular audits and inspections are conducted to verify that no instances of human trafficking, forced labor, or child labor occur within the project's supply chain or workforce.
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4.2.7.2 Human Rights

The following demonstrations show how the project is committed to safeguard the rights of Indigenous People (Ips), Local communities (LCs), and customary right holders, while following the international human rights law¹⁶, the UNDRIP¹⁷ and ILO Convention 169-

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk has been identified	Evidence gathering activities: Desk-review of Policies, Personal interview & focussed grouped discussion. Evidence checked: people policies provided by PP , grievance register and Interview with site personnel/51/ Assessment Conclusion: The project incorporates mechanisms for grievance redressal, providing a platform for stakeholders to voice their concerns and lodge grievances. Moreover, there is a comment/feedback box in place to facilitate open communication and ensure that stakeholders' voices are heard and considered. By upholding these practices, the project aligns with applicable The project maintains a commitment to upholding the rights of IPs, LCs, and customary rights holders, aligning with international human rights standards, including the UN Declaration on the Rights of Indigenous Peoples and ILO Convention 169.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk has been identified	Evidence Gathering Activities: Focussed Group discussion with nearby stakeholders that volunteered during the onsite audit & potentially affected by the project were carried out, ensuring their free, prior, and informed consent. Engagement with stakeholders regarding knowledge holders to understand their cultural practices, traditional lands, and sacred sites. Assessment of the potential impacts on Indigenous Peoples' livelihoods, access to resources, traditional land use patterns and traditional knowledge systems. Evidence Checking: Verification of the accuracy and authenticity of the gathered information through cross-referencing and collaboration with independent experts and stakeholder representatives. Ensuring the comprehensiveness of the evidence, taking into account both tangible and intangible aspects of cultural heritage. Conclusion: The review of the Environmental and Social Impact Assessment confirms that, although no cultural heritage sites or conservation areas were identified within the project scope, the project is dedicated to preserving and protecting cultural heritage as a core component of its activities. Proactive measures are implemented, including comprehensive cultural heritage assessments during the planning phase, strict protocols to minimize disturbances, and collaboration with local communities. By prioritizing cultural heritage preservation, the project reinforces its commitment to responsible and sustainable development practices. No Impact on Tangible ¹⁶ Cultural Heritage: The project activity does not impact any tangible cultural heritage of the stakeholders.

¹⁶ Tangible cultural heritage consists of non-physical intellectual wealth, such as folklore, customs, beliefs, traditions, knowledge, and language

	• No Negative Impact on Intangible Cultural Heritage: There have been no negative impacts of the project activity on the intangible cultural heritage of the stakeholders. Instead, the project fosters cultural harmony by involving diverse groups without affecting their customs, traditions, or beliefs. This conclusion underscores the project's commitment to preserving and respecting the cultural heritage of the stakeholders while promoting sustainable development.
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4.2.7.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No Risk Identified	Evidence gathering activities: Desk-review and Personal interview & focussed grouped discussion. Evidence checked: ESIA report /38/ provide by PP and interviews 51/ conducted during onsite assessment. Conclusion: In conclusion, the project activity involves installation of 250 MW (AC) solar power project & has not incorporated any land or property of the stakeholders, including Indigenous Peoples (IPs), Local Communities (LCs), and customary rights holders. Furthermore, the project has obtained the free, prior and informed consent of the nearby stakeholders, where project is implemented, including the IPs, LCs and customary rights holders. This ensures that their land and property rights are protected and respected throughout the project implementation. Ongoing measures to protect property rights include upholding agreements made before land acquisition, respecting customary rights, and ensuring transparent and equitable compensation processes. Regular consultations and grievance mechanisms are maintained to address any concerns promptly

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	Since the above section 4.2.7.4 is not applicable and there is no benefit sharing in the project, all the environmental rights are exclusive to the PP. Hence, this section is also not applicable.
Benefit sharing during the monitoring period	Not Applicable

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	No Risk has been identified Evidence gathering activities: Desk-review of registered PD, Personal interview & focussed grouped discussion. Evidence checked: Witness of the project implemented area during a onsite -audit. ESIA reports detailing baseline biodiversity assessments and impacts, biodiversity monitoring records maintained by the project, photographs and drone imagery of the project site and surrounding areas from routine inspections, expert testimonies from the project's environmental consultants. Conclusion: No risks to biodiversity or ecosystems were identified. The EIA confirmed the project site did not overlap with protected areas or critical habitats. Monitoring data showed no significant changes in local flora/fauna populations. Site inspections revealed the project's minimal footprint and absence of emissions/effluents that could impact ecosystems
Soil degradation and soil erosion	No Risk has been identified Evidence gathering activities: Review of soil management plans, erosion control measures Evidence checked: Approved soil management and erosion control plans, ESIA Report /38/

		Conclusion: No risks related to soil degradation or erosion were observed. Solar projects typically employ land management practices that minimize soil disturbance, ensuring soil health and stability are preserved
Water consumption and stress	No Risk has been identified	Evidence gathering activities: Review of water use records, and interviews with the project's facility managers. Evidence checked: Logs of water consumption for panel cleaning, testimonies from facility managers regarding water use optimization practices, ESIA Report Assessment/38/ conclusion: No significant risks to water resources were identified. The project's water demands were minimal, primarily for periodic panel cleaning. Local water bodies showed no signs of stress or depletion due to the implementation/operation of project activity.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	Assessment Conclusion: Given that the project activity involves the installation of 250 MW (AC) solar power project & is located at Jaisalmer, Rajasthan which is not situated in or near habitats for rare, threatened, or endangered species, there are no direct impacts on these species or their habitats. The installation and operation of 250 MW (AC) solar power project is typically conducted in industrial or commercial settings that are separate from natural habitats. As a result, the project does not pose a risk to these species or their habitats, and the assessment for this particular aspect is not applicable.
Areas needed for habitat connectivity	Not Applicable

Evidence gathering activities, evidence checked, and assessment conclusion	
Habitats for rare, threatened, and endangered species	Assessment Conclusion: Based on the review of ESIA report /38/ and onsite observations, the project is not located within habitats for rare, threatened, or endangered species, nor does it adversely impact such areas. The project is situated in Jaisalmer, Rajasthan, a region where no rare, endangered, or threatened species have been identified.
Areas for habitat connectivity	The Project is located at Jaisalmer, Rajasthan and there are no rare, endangered and threatened species found in the region.

4.2.8.2 Introduction of Species

The project activity involves installation of 250 MW (AC) solar power project and no planting or species introduction is involved, hence this information is not applicable

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
Not applicable	Since the project does not involve any planting or introduction of species, this section is not applicable.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
Not applicable	There is no invasive species exist in the project area therefore this section is not applicable

Evidence gathering activities, evidence checked, and assessment conclusion	
Invasive species	Not applicable

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	Evidence gathering activities: Not Applicable Evidence checked: Not Applicable

Conclusion: Since the project activity is not an Afforestation and Reforestation (ARR) project, Agroforestry and Agro-silvopastoral Systems (ALM) project, Wetland Restoration and Conservation (WRC) project, nor an Avoided Conversion of Grasslands and Shrublands (ACOGS) project, the information related to these specific project types is not applicable. This means that the project does not fall under any of these categories and therefore does not need to be evaluated based on the criteria specific to these types of projects.

4.3 Accuracy of Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS PD/3/ and the monitoring report /1/. It involves a single parameter to be monitored $EG_{\text{facility},y}$ (Quantity of net electricity generation supplied by the project (250 MW (AC) Solar) plant/unit to the grid in year y ; MWh) according to the monitoring plan and monitoring report/1/. The parameter $EG_{\text{facility},y}$ value is sourced from JMRs/27/ and Invoices/28/. Proper calibrated meters of 0.2s accuracy class installed at site regularly monitor the import and export value which is monthly aggregated in JMRs. ER sheet/2/ prepared by PP has been reviewed by assessment team thoroughly by cross checking the values of JMRs and Invoices submitted by PP and found correct including all the formulae and conversions and aggregations.

The monitoring plan laid in the registered VCS PD/3/ is being followed at the site. The assessment team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the MR/1/. The emission reductions are based on the net electricity generated and exported from the project. PP has provided all the sufficient data for current monitoring period. The values of the parameter net electricity generation supplied to the grid by each phase used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/2/ provided by PP. The verification of each monitoring parameter has been discussed later in section 4.4 of this report. The calculation method and formulae used in calculating baseline emission is in compliance to the methodology used i.e., ACM0002 Version 19.0/16/. The appropriateness of default values used in the monitoring report is elaborated below:

Table No 07: Data and Parameters Available at Validation or Ex-ante parameters:

Parameter	Unit	Description	Value
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EF _{grid,OM,y}	tCO ₂ /MWh	Operating Margin CO ₂ Emission Factor in year y	0.9610 tCO₂/MWh is consistent with the registered VCS PD/3/. Calculated as per “Tool to calculate the emission factor for an electricity system, version 07” as 3-year generation weighted average using data for the years 2015-2016, 2016-2017 & 2017-2018. The data are obtained from “CO₂ Baseline Database for Indian Power Sector” version 14, published by the Central Electricity Authority, Ministry of Power, Government of India.
EF _{grid,BM,y}	tCO ₂ /MWh	Build Margin CO ₂ Emission Factor in year y	0.8644 tCO₂/MWh is consistent with the registered VCS PD/3/. Calculated as per “Tool to calculate the emission factor for an electricity system, version 07” “CO₂ Baseline Database for Indian Power Sector” version 14, published by the Central Electricity Authority, Ministry of Power, Government of India for the calculation of baseline emission.

EF _{grid,CM,y}	tCO ₂ /MWh	Combined Margin CO ₂ Emission Factor in year y	0.9368 tCO ₂ /MWh is consistent with the registered VCS PD/3/. Calculated as per “Tool to calculate the emission factor for an electricity system, version 07” “CO ₂ Baseline Database for Indian Power Sector” version 14, published by the Central Electricity Authority, Ministry of Power, Government of India for the calculation of baseline emission.
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According to applicable methodology ACM0002; Version 19 under section 5.5/16/, Baseline emission methodology Procedure is provided with further description under paragraph about project & leakage emissions. Project emissions in section 5.4 & Leakage emissions in section 5.6 confirms that since project activity is a Solar power project and no other kind of fossil fuel has been used in the current monitoring period on site thus no project emissions are considered according to the methodology used.

Methods and formulae set out in the project description for calculating actual emissions for current monitoring period.

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

Where:

BE_y	Baseline emissions in year y (tCO ₂ e/yr)
EG_{Facility y}	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the VCS project activity in year y (MWh/yr)
EF_{grid,CM,y}	Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (t CO ₂ /MWh)

Table 08: As per calculation mentioned in section 4.4 of registered VCS PD 02 dated 19-December-2019

Estimated Emission Reduction as in VCS PD /3/ for the equivalent period of the current Monitoring period, 01-January-2024 to 30-June-2024 (Inclusive of both the days):	
Monitoring Period Start Date	01-January-2024
Monitoring Period End Date	30-June-2024
Days in Current Monitoring period	182
Annual estimated VCUs as per year over the 10 years of crediting period	412,674 tCO ₂ e
Estimated Emission Reduction as in VCS PD for the current Monitoring period	(Annual Estimated GHG emission reductions as per revised VCS PD/Total days in a year) *days in current monitoring period Year 2024 = $(412,674/365) * 182 = 205,771$ (tCO₂e) Total ERs = 205,771 tCO₂e (Round down value)
Actual Emission Reduction during current monitoring period	287,746 tCO ₂ e
Percent difference	39.84%

The estimated emission reduction for the present monitoring period is 205,771 tCO₂e, however the achieved emission reductions are 287,746 tCO₂e (round down value), or around 39.84% higher than the estimated emission reductions.

In section 5.4 of MR/1/ calculations have been stated. This is further cross checked as compiled in ER/2/ which has been verified by the assessment team from JMRs and cross checked from invoices. The monitoring & measurement of electricity at project metering point is being done on continuous basis; while recording is being done on monthly basis as Joint Meter Reading by the representatives of State Utility & PP.

PP has submitted all the evidences like JMRs/27/ and Invoices/28/ of the current monitoring period to assessment team for verification and assessment of ER Sheet/2/.

Hence assessment team can state that the calculation method and formulae used in calculating baseline emission is following the methodology used i.e., ACM0002: “Grid-connected electricity generation from renewable sources- version 19.0” /16/ furthermore in conformance with section 3.15, clause 3.15.1//3.15.2//3.15.3//3.15.4 of VCS Standard version 4.6/7/.

4.4 Quality of Evidence to Determine Reductions and Removals

During the verification and onsite audit, all relevant documents were checked to assess the correctness and quality of data submitted by the project proponents, which are used to determine emission reductions.

AT reviewed the records required for monitoring, ensuring that they were archived in accordance with the registered monitoring plan. The purpose of this review was to confirm that the project had followed the prescribed procedures for data collection, storage, and reporting. No significant issues, lack of evidence, or missing data were identified during the current verification process. This indicates that the project's monitoring system is effective in ensuring the quality of the monitored data. The verification team also confirmed that the project had implemented appropriate quality assurance and quality control measures for its internal data.

By conducting a comprehensive review of the relevant documents and data, the verification team ensures the integrity and accuracy of the project's monitoring system, providing confidence in the reported emission reductions.

The only monitoring parameter in the project activity is “Quantity of net electricity supplied (MWh) to the grid as a result of the implementation of the project activity in year y”, $EG_{\text{facility},y}$ (MWh). This parameter is monitored through controlled reading of main meters installed at Substation 400/220 KV GSS, RVPNL Jaisalmer-II substation at Bhensara, Jaisalmer, Rajasthan.

Table No: 09 Assessment of Parameter $EG_{\text{facility},y}$ (Quantity of Net Electricity exported to the grid by the project WTGs to the grid during the year y)

Parameter	$EG_{\text{facility},y}$ (Quantity of Net Electricity exported to the grid by the project (solar) plant/unit to the grid in year y)	
Means of verification	Criteria/Requirements	Assessment/Observation

	Measuring /Reading /Recording frequency	Continuous monitoring, hourly measurement and at least monthly recording. The quantity of net electricity generation supplied by the solar power plant to the grid is measured in megawatt-hours (MWh). The calculation of net electricity supplied to the grid is based on the measured values of "export" and "import" of electricity, which are obtained through the dedicated SEB (State Electricity Board) energy meter installed at the delivery point. To determine the net electricity supplied, monthly meter readings are taken from both the main meter and the check meter. These meters are installed at the 400/220 KV GSS (Grid Substation), specifically the RVPNL Jaisalmer-II substation at Bhensara, Jaisalmer, Rajasthan. The readings are certified by representatives of the SEB (in this case, Jodhpur Vidyut Vitaran Nigam Limited, JDVNL) officials as well as representatives of the project proponent.
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		Net electricity supplied to the grid by the project plant in a given month = Export (kwh) - Import (kwh). This is a calculated value.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, The reporting frequency is in line with the monitoring plan as outlined in the section 5.3 of registered VCS PD version 02 dated 19-December-2019/3/ and monitoring methodology/16/. There is no deviation from the stated procedures or adopted methodology i.e., ACM0002 version 19/16/, in the registered monitoring plan. However, there are project description deviations requested in first monitoring period /5/ which was verified by assessment team during desk review and confirmed during onsite visit through interviews with site personnel/51/. The same can be cross checked in section 3.2.2 of MR/1/ and section 3.2 of this report.

	Monitoring equipment	Special Energy Meters (SEMs) of 0.2s accuracy class are used to monitor the electricity to the grid specifically the values of export” and “import” of electricity through the dedicated SEB energy meter installed at the 400/220kV GSS (Grid Substation) located at Bhensara, Jaisalmer, Rajasthan. No monitoring equipment is used to determine Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid in year y $EG_{facility,y}$ (MWh) as it is calculated value of the export to grid and import from grid. However, the export and import values are calculated using measured values, which are continuously measured, and recorded monthly by two sets of meters (main & check meters) used for measuring the electricity export to the grid and electricity import from the grid. The details of meters and calibration details are provided in APPENDIX 2 of MR/01/ and in table 10 of this report.
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	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?	Yes, the accuracy of the monitoring equipment used to measure the input values such as import and export to calculate net electricity generation value is Special Energy Meters (SEMs) of 0.2s accuracy class which stated in section 5.2 of the registered VCS PD/3/ further in line with as per the norm defined in the PPA/23/. Also, the same was verified from the energy meters installed at the site during onsite audit to the Grid Sub Station. The assessment team also checked the calibration records that are issued by an NABL (National Accreditation Board for Testing and Calibration Laboratories accredited laboratory) accredited laboratory states under the Description of equipment under calibration that confirms the accuracy class as 0.2s.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes, the accuracy of monitoring equipment as specified in calibration certificates/25/ is valid for the entire range i.e., 01-January-2024 to 30-June-2024 (Inclusive of both the dates).

	Calibration frequency /interval:	The calibration frequency of the meters used for the monitoring of export, import shall be once in every five years basis as per section 5.2 & 5.3 of registered VCS PD/3/ and PPA /23/. The assessment team confirmed the frequency while interviewing /51/ the site personnel during onsite audit.
	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 of the meters used in the project activity is in accordance with the requirements specified in section 5.2 & 5.3 of the registered VCS PD version/3/. The calibration process follows the guidelines outlined in Article 7, paragraph 7.1.1 of the Power Purchase Agreement (PPA). According to the PPA, the installation, testing, calibration, and reading of meters should adhere to the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 and the Grid Code, as amended and revised from time to time thus conforming with the clause 3.16.5 of VCS Standard version 4.6/7/

	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes, the calibration certificates (document reference /25/) provided by M/s Yash Metrology Laboratory Pvt. Ltd., serve as evidence that the calibration of the energy meters used in the project has been conducted according to the requirements specified in the Power Purchase Agreement (PPA)/23/. The periodic calibration of both the main meters and check meters ensures the accuracy of the measurements thus in compliance with the clause 3.16.5 of VCS Standard version 4.6/7/. In accordance with the emergency procedure outlined in the registered VCS PD /3/and MR/1/, the project proponent is responsible for taking appropriate corrective action if any faulty readings are observed. If an error is found to be beyond the permissible limits, the PP will inform the respective agency to rectify the instrument promptly. This procedure was confirmed during the onsite audit and interviews conducted with the site personnel. /51/.
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		The assessment team, during the onsite audit, verified the implementation of this procedure and found it to be in accordance with the requirements. Therefore, the corrective action process followed by the PP is acceptable and ensures the accuracy and reliability of the measured data for monitoring purposes. Also note that however in this monitoring period no apportioning has been done but the data apportioning details in case the dates of recording are not in line with the monitoring period dates have been mentioned in section 4.3 of MR/1/ in emergency preparedness.
	Is(are) calibration(s) valid for the whole reporting period?	Yes, the calibration frequency mentioned in PD/3/ and in the PPA for once in five years is valid for the whole reporting period i.e., 01-January-2024 to 30 June-2024 (Inclusive of both the dates) and as per the selected frequency there are no delays in the calibration. Hence deemed satisfactory to the VVB.

	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes, the calibration of energy meter is carried out appropriately for the given operational range of voltages i.e., 3*63.5V Current: $I_b=1A$, $I_{max}=2A$ Frequency: 50 Hz. The calibration frequency is once in five years which is also as per the national standards i.e., Central Electricity Authority (Installation and Operation of Meters)/22/. (Please refer Appendix 02 of MR/1/ & Table no 10 for calibration Details) The calibration is carried out appropriately as per the registered monitoring plan and VCS Validation and Verification manual version 3.2/9/.
	How were the values in the monitoring report verified?	Cumulative value of Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid in year y $EG_{facility,y}$ (MWh) for entire monitoring period is reported in the monitoring report/1/, and monthly values in the ER calculation sheet/2/. The monthly values were verified by VKU's assessment team from the JMRs/27/ issued by RRVPNL and found to be consistent Value of this parameter for the current monitoring period was verified as 307,159 MWh. The same is outlined in the ER Sheet submitted by the PP/2/, which

		was verified by VKU from the JMRs/27/ issued to the PP by State utility and cross checked from the Invoices/28/ issued to the SECI by the PP. Additionally, VVB has verified the project contributions for current monitoring period and project's life time contributions percentages based on data from the Government of India's Ministry of Power (Central Electricity Authority)¹⁷, which is a reliable and authoritative source for national-level energy generation data. The PD submitted a supporting calculation sheet /55/, which was cross-verified with data from the Central Electricity Authority website.
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¹⁷ <https://cea.nic.in/?lang=en>

<https://cea.nic.in/dashboard/?lang=en>

<https://cea.nic.in/api-for-central-electricity-authority-data/?lang=en>

<https://cea.nic.in/renewable-generation-report/?lang=en>

	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of Quantity of net electricity generation supplied by the project (Solar) plant/unit to the grid in year y $EG_{\text{facility},y}$ (MWh) has been verified from JMRs /27/ issued to PP by Jodhpur Vidhyut Vitran Nigam Ltd, Jaisalmer which was further cross checked with the monthly invoices /28/ raised by the PP to SECI (Solar Energy Corporation of India Ltd), 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?	Site personnel interview during the onsite audit /51/ with the project stakeholder of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable. Also, a supervisory control and data acquisition (SCADA) system of ABB India is employed at site for overall monitoring of the project, which was observed by the assessment team during onsite audit and confirmed by interviewing the respective SCADA operator and O&M maintenance head.

	In case project proponents 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
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The emission reduction calculation for the project activity is estimated based on the electricity supplied by the Project activity. Since all data has been verified, the assessment team can ascertain that the values adopted for emission reduction calculation are free from material errors.	

Calibration of meters

During the verification assessment of the project activity, accuracy of all the metering equipment's has been checked and found appropriate. The installation and working conditions of the meters were checked during the site inspection and were found to be satisfactory by VKU.

Table No. 10: Details of meters are provided in below table:

Meter	S No.	Make	Model	Type	Class	Calibration Dates	Due date of calibration	Name of the entity
Main	RJB99499	Secure Meters Ltd.	Apex150	P3E	0.2S	22-March-2024	21-March-2029	Yash Metrology Laboratory Pvt. Ltd.
Check	RJB99500	Secure Meters Ltd.	Apex150	P3E	0.2S	22-March-2024	21-March-2029	Yash Metrology Laboratory Pvt. Ltd.

Standby	RJB99501	Secure Meters Ltd.	Apex150	P3E	0.2S	22-March-2024	21-March-2029	Yash Metrology Laboratory Pvt. Ltd.
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Assessment on calibration:

The energy meter calibration certificates/25/ has been checked by assessment team with respect to their calibration validity, accredited entity, accuracy class, make and calibration date and found that the calibration details provided in the MR/1/ are correct. From the verification of above table, assessment team also confirms that the energy meter calibrations are valid for the complete monitoring period i.e., period from 01-January-2024 to 30-June-2024 (Inclusive of both start and end dates).

During the onsite audit, the assessment team conducted a thorough inspection of all the energy meters and confirmed that they were functioning satisfactorily. The calibration of the meters is the responsibility of the state utility, RVPNL, and it is carried out Yash Metrology Laboratory Pvt. Ltd. on a periodic basis /25/. If any faulty readings are observed, the appropriate corrective action is taken by the project proponent. If the error exceeds the permissible limits, the PP informs the respective agency to rectify the instrument promptly.

At the metering point, there are three energy meters: the Main Meter, Check Meter, and Standby Meter. These meters are always operational and undergo regular calibration. If, during calibration, one of the meters exceeds the allowed limits, the other two meters are used to measure the energy generation values. This ensures that there is no disruption in recording the data. The faulty meter is then replaced with a new one to ensure accurate measurement of energy generation. The PP has no control over the replacement of faulty meters, as this process is managed by the state utility, as confirmed in the interviews and discussions conducted by the assessment team with the site personnel /51/ and as stated in the Power Purchase Agreement (PPA) signed between the PP and the state utility /23/.

Hence it can be concluded that the approach followed by the PP is conservative and in line with the guidelines provided under paragraph 3.4.2 of VCS Validation and Verification manual version 3.2/9/ and also in line with the para 366 of CDM Validation and Verification Standard.

The Main and Check meters at the substations are used to constantly monitor the export and import energy. Once a month, an authorized officer from the SEB will read the meters in the presence of either the PP or their representative. Invoices are then created based on the Meter Reading Statement provided to the PP. These invoices can be used to verify the meter readings for the specific project activity.

In cases where the start date of the monitoring period for the project activity does not align with the start date of the Joint Meter Reading (JMR) Statement, the following procedures are followed to apportion the electricity exported to the grid from the solar panels during the intervening period:

- A. The total electricity exported for the entire billing cycle is determined based on the daily generation data (in MWh).
- B. The electricity exported during the intervening period is determined based on the daily generation data (in MWh).
- C. The generation ratio is calculated as B divided by A.
- D. The electricity exported for the entire billing cycle is determined based on the JMR Value (in MWh).
- E. The apportioned value of electricity exported for the intervening period is calculated as C multiplied by D.

Import values are considered for the entire monitoring period, following a conservative approach for the apportioning of net electricity. **Please note that these procedures are not applicable to the current monitoring period but are provided for situations where the monitoring period dates and the JMR Statement dates do not align.**

The registered VCS PD /3/ & MR/1/ and on-site audit observations confirm that the metering equipment are sealed and maintained by the state utility.

The assessment team has verified the monthly JMRs issued by the state utility and confirmed that only the data recorded through main meters is used to calculate quantity of net electricity supplied to the grid consequently for ER calculations.

Based on the information provided and the assessment conducted by the verification team, it can be confidently affirmed that the evidence utilized to determine the reductions and removals of greenhouse gases (GHGs) in the project activity is adequate and appropriate in terms of both quality and quantity. This confirmation aligns with the provisions outlined in section 3.15 of the VCS (Verified Carbon Standard) Standard version 4.6, including clauses 3.15.1, 3.15.2, 3.15.3, and 3.15.4/7/.

GHG Calculations:

The calculation of emission reduction has been done in accordance with the applied methodology section 5.7 i.e., ACM0002 Version 19.0/16/. As per the applied methodology, the values of project emission and leakages as per section 5.4 and 5.6 are considered as zero for the project activity. The equation used for calculation of baseline emission is given below:

Baseline Emissions

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

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

BE_y	Baseline emissions in year y (tCO ₂ e/yr)
EG_{facility, y}	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)
EF_{grid, CM, y}	Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO ₂ /MWh) (i.e., 0.9368 tCO ₂ /MWh).

Where:

Baseline Emission factor = 0.9368 tCO₂/MWh

Parameter	Unit	Value
EG _{facility, y}	MWh	307,159
EF _{grid, CM, y}	tCO ₂ e	0.9368
BE _y	-	307,159* 0.9368
Total		287,746 tCO ₂ e (Rounded Down value)

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where,

ER _y	Emission reductions in tCO ₂ /year
BE _y	Baseline emissions in tCO ₂ /year
PE	Project emissions in tCO ₂ /year
LE _y	Leakage emissions in tCO ₂ /year

Plant was in operational throughout the current monitoring period, and the project activity generated 307,159 MWh of net electricity, resulting in 287,746 tCO₂e GHG reductions.

The assessment team confirms that appropriate methods and formulae for calculating baseline emissions have been followed aligning with the section 3.15 of VCS standard version 4.6 /7/. The assumptions, emission factors and default values that were applied in the calculations are justified in accordance with clause 3.15.4 of VCS standard version 4.6/7/. Also, the appropriate methods and formulae for calculating baseline emissions have been followed aligning with section 5.7, clause 57 of adopted methodology ACM0002, Grid connected electricity generation from renewable sources/16/.

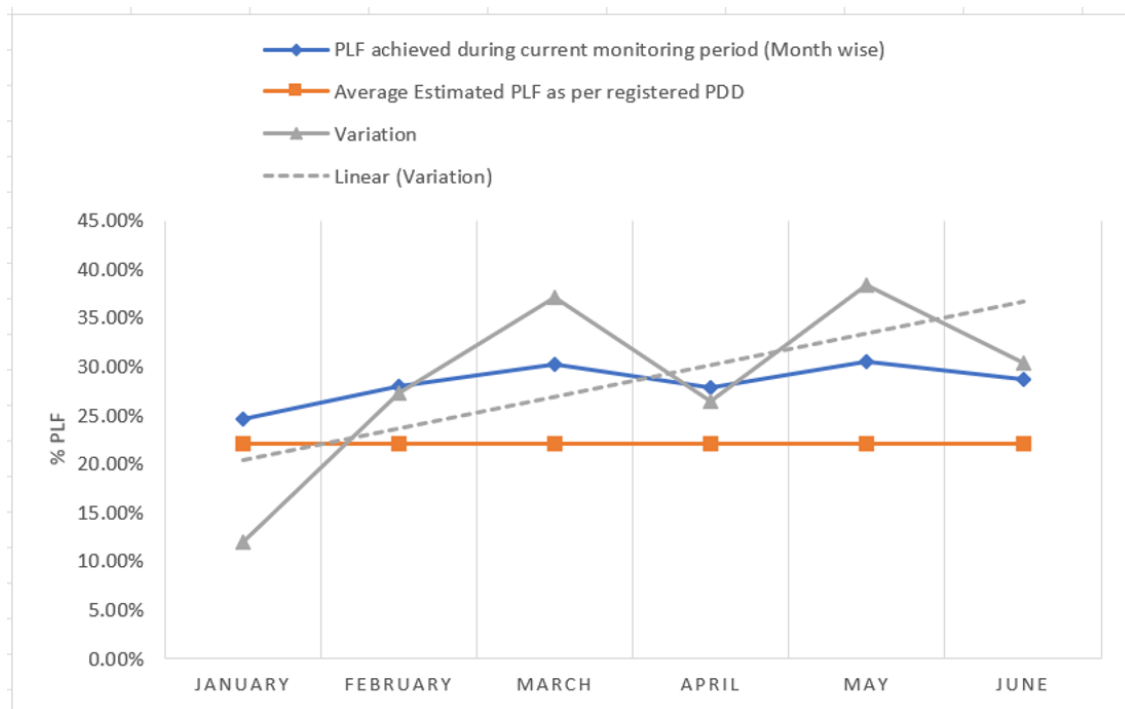
The estimated emission reduction to be achieved from the project activity for the current monitoring period is 205,771 tCO₂e, whereas actual emission reductions achieved are 287,746 tCO₂e (round down value), thus the actual emission reduction achieved is 39.84% higher than the estimated figure to match the monitoring period as per registered VCS PD version 02 dated 19-December-2019/3/.

The assumptions, emission factors and default values that were applied in the calculations are justified. The actual emission reduction achieved are 39.84% high than the estimated figure to match the monitoring period as per registered VCS PD version 02/3/, which is due to the high PLF achieved by the project activity during the current monitoring period which is completely governed by the availability of more sunshine hours which is a natural phenomenon and same is beyond the control of PP.

The reference to the PLF estimation from the registered PD (refer table no 11 in this report) is used to support the claim that the current monitoring period has achieved 39.84% higher emission reductions due to the increase in power output resulting from a higher number of sunshine hours. This suggests that power output is directly related to the amount of sunshine, and that the higher generation observed during the current period is a result of the increased load factor 28.13% for the current monitoring period. This higher generation falls within the sensitivity analysis for PLF as specified in registered PD. The PLF achieved by the project activity is as follows:

Table no 11: Variation of PLF in Greenfield Solar Power Mission by Fortum India (250 MW) from ex-ante estimation for current monitoring period 01-January-2024 to 30-June-2024 (Inclusive of both start and end dates)

Month	PLF achieved during current monitoring period (Month wise)	Average Estimated PLF as per registered PD	Variation
January	24.62%	22%	11.91%
February	27.99%	22%	27.23%
March	30.15%	22%	37.05%
April	27.81%	22%	26.41%
May	30.43%	22%	38.32%
June	28.66%	22%	30.27%
Achieved PLF current Monitoring Period	28.13%	-	-



The estimated PLF as per PD is 22%, and the actual PLF achieved during monitoring period is 28.13%. The increase in the PLF is 27.86 %, which is under the breaching value of Sensitivity i.e. 33.66% as per the registered PD/3/. At the same time upon checking the IRR sheet to check the additionality, it was found that although the achieved PLF is higher than the estimate, it is within the sensitivity bound. Hence assessment team accepted higher emission reductions due to vagaries in sunshine pattern in Jaisalmer, which is beyond the control of the PP.

This comparison is submitted in the ER sheet/2/ along with a justification confirming that this event of higher power generation was an unforeseen situation and also not under the direct control of PP. All the data were made available and have been monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation and project emission calculation, is described above.

VKU is of the opinion that this method of calculation of emission reductions is accurate and results in conservative estimation of emission reduction and is in line with the applicable VCS requirements set out in section 3.15 of VCS Standard version 4.6/7/ and that the verification of the GHG statement was conducted in accordance with ISO 14064-3; 2019/52/.

4.5 Non-Permanence Risk Analysis

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

5 VERIFICATION OPINION

5.1 Verification Summary

VKU Certification Pvt. Ltd. (here after referred as VKU) has performed 4th verification under first crediting period for the project activity “**Greenfield Solar Power Mission by Fortum India**” in India, VCS Registry Project ID **2069**, for the period **01-January-2024 to 30-June-2024 (Inclusive of both start and end date)**, with regard to the relevant requirements for VCS activities. The project activity amounts to **287,746 tCO₂e**.

As described in the report from section 1 to 4, VKU has performed the entire verification according to the verification criteria for projects and their GHG emission reductions or removals set out in VCS standard Version 4.6/7/.

The project proponent of “**Greenfield Solar Power Mission by Fortum India**” is responsible for:

- The preparation of greenhouses gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered VCS PD version 02 dated 19-December-2019/3/.
- The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project.

It is the responsibility of VKU to express an independent verification opinion about the project's conformity with the requirements of VCS standard Version 4.6 /7/and GHG program applied, on the reported greenhouse gas emission reductions from the project.

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

- The project has been implemented and operated as per the registered VCS PD/3/;
- The monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS standard Version 4.6/7/ requirements;
- The monitoring is in place as per the applied baseline and monitoring methodology/16/
- The monitoring plan in the registered VCS PD/3/is as per the applied baseline and monitoring methodology /16/ and applicable tool /17//18/.

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

As per VCS standard version 4.6, clause 4.1.23, 4.1.24 and 4.1.25, VKU is of opinion that GHG emission reduction stated in the monitoring report version 2.2 dated 27-January-2025 and ER sheet version 2.1 dated 05-November-2024 for the **"Greenfield Solar Power Mission by Fortum India"** in India for the period **01-January-2024 to 30-June-2024** (Inclusive of both start and end date) are fairly and correctly stated.

5.2 Verification Conclusion

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

Opinion	Final Documents	Monitoring Period	Emission Reductions achieved	Remarks
Positive opinion ☒ Negative Opinion ☐ Adverse Opinion ☐ Unmodified Opinion ☒ Modified Opinion ☐	Monitoring Report version 2.2 dated 27-January-2025 Emission Reduction Sheet Version 2.1 dated 05-November-2024	01-January -2024 to 30-June-2024 (Inclusive of both the days)	287,746 tCO ₂ e	The GHG emission reductions are calculated on the basis of approved methodology, ACM0002 /16/ and the monitoring plan included in the registered VCS PD /3/

Hence VKU is able to certify that the emission reduction from the project during the current monitoring period 01-January-2024 to 30-June-2024 (Inclusive of both start and end dates) amounts to 287,746 tCO₂e assessed in line with the applicable VCS requirements set out in section 3.15 of VCS Standard version 4.6 /7/

The VVB hereby issues a resolutely **positive and unmodified opinion** in accordance with ISO 14064-3:2019, /52/ Section 09, and the precise provisions of Clause 9.7.1.6 & 9.7.2 of ISO 14065:2020. /53/ This opinion stands in full alignment with the exacting requirements delineated in ISO/IEC 17029:2019, Section 9.7./54/

Our verification process provides a robust and **reasonable level of assurance** regarding the veracity of the reported GHG emission reduction data. This data is devoid of any material

misstatements and is steadfastly supported by the evidence furnished by the Project Proponent, comprehensively presented in Table 04 of this report.

Verification period: From 01-January-2024 to 30-June-2024 (inclusive of both dates)

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

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-January-2024 to 30-June-2024 (inclusive of both dates)	287,746	0	0	287,746	0	287,746
Total	287,746	0	0	287,746	0	287,746

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-January-2024 to 30-June-2024 (inclusive of both dates)	205,771	287,746	39.84%	The observed 39.84% increase in energy generation compared to the initial estimate can be attributed to several interconnected factors. Firstly, Jaisalmer experienced higher-than-anticipated solar irradiation density, resulting in a greater influx of solar energy to the photovoltaic (PV) modules. This increase in irradiation density directly contributed to higher energy output from the solar panels.
Total	205,771	287,746	39.84%	

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

<i>Section</i>	<i>Information</i>	<i>Justification</i>	<i>Assessment method and conclusion</i>
N/A	N/A	N/A	N/A

APPENDIX 2: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
BEF	Baseline Emission Factor
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
EB	Executive Board
EF	Emission Factor
ER	Emission Reductions
NA	Not Applicable
OSV	On Site Visit
PAI	Project Activity Instances
PD	Project Document
PP	Project Proponent
QA/QC	Quality Assurance /Quality Check
Ref.	Document Reference
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VCU	Verified Carbon Unit
VCS	Verified Carbon Standard
VKU	VKU Certification Ltd.
VVS	Validation and Verification Standard
VVB	Validation and verification body
KV	kilovolts
KW	Kilowatt
MR	Monitoring Report
MW	Megawatt
PPA	Power Purchase Agreement
ESIA	Environment and Social Impact Assessment report

APPENDIX 3: AUDIT FINDINGS

Corrective Action Request – 5

Clarification Request – 1

Forward Action Request – 00

Finding No. 01	Date: 19-09-2024
Finding Type- CAR ☐ CL ☒ FAR ☐	
Stage of finding raised:	
Desk Review	☒
On-site/remote/hybrid assessment	☐
Technical Review	☐
Project Review Report by Registry	☐
Requirement	
Clause 3.26 of VCS standard version 4.6 Section 2.1.1 ,2.2.2, 4.2 and 4.3 of MR template version 4.4 Section 3.16 of VCS standard version 4.6	
Non-Conformity	
PP has not provided adequate supporting evidence pertaining to safeguards and stakeholder engagement, operations and maintenance, waste management, name change, electricity generation and implementation of monitoring plan.	
Evidence	
Evidences and records related to the following are not provided	
- The reported justification on stakeholder diversity in accordance with Section 2.1.1 of the MR. - Waste generated during the current monitoring period is not clarified in Section 2.2.2 of the MR V01. - Adequate evidence for the monitored parameter EG facility, y is not available, in Section 4.2 of the MR V01. - Evidence regarding operations and maintenance, QA/QC procedures are not provided in line with Section 4.3 of the MR V01	
1st Response from PP	Date: 07/10/2024
The relevant documents mentioned below are being submitted with the DVR response.	
Documents provided by PP for review	
1. O&M Agreement	

2. Waste management Agreement 3. JMR/Invoices 4. ESIA Report 5. Name Change document_VERRA	
1st Review by Assessment Team	Date: 24-10-2024
Assessment team confirms that PP has submitted sufficient documents to VVB for the verification: • O& M Agreement • Waste Management agreements • JMR & Invoices • ESIA Report • Name change intimation and Certificate of Incorporation pursuant to change of name. Hence, finding is closed.	
CL#01 Closed	

Finding No. 02	Date: 19-09-2024
Finding Type- CAR ☒ CL ☐ FAR ☐	
Stage of finding raised: Desk Review ☒ On-site/remote/hybrid assessment ☐ Technical Review ☐ Project Review Report by Registry ☐	
Requirement	
Clause 3.5.5 of VCS standard version 4.6 VCS MR template version 4.4 VCS rules and requirements	
Non-Conformity	
MR does not adhere to all instructional text with respect to the VCS Monitoring Report template. • Formatting of the title page does not align with the instructions outlined in VCS monitoring report template. • The start date of the second verification period does not follow the date format. • The standard version number mentioned is incorrect according to the latest VCS “rules and requirements”.	
Evidence	
The following sections have been identified with non-conformance: • Title page of MR v01 • Section 1.2 of MR v01 • Title page & Section 1.7 of MR v01	
1st Response from PP	Date: 07/10/2024
Following changes/revisions have been done in the MR version 2.0- • Formatting of the title page has been made in line with the template guidelines, and same has now been followed throughout the report.	

- The start date has been revised in line with the second verification as per the date format mentioned in the template guidelines. - The standard version no. has been updated to version 4.6 according to the latest VCS “rules and requirements”	
Documents provided by PP for review	
Revised MR version 2.0	
1st Review by Assessment Team	Date: 24-10-2024
Assessment team confirms that PP has submitted revised monitoring report for the current monitoring period. - Title page has been updated and is now consistent with the MR template guide. - Date format has been corrected in the revised monitoring report. - Assessment team confirms that version 4.6 of the VCS standard has been used by the PP for this project activity which is as per the notification regarding VCS program updates and effective dates, “the version 4.7 of VCS standards is effective for all project requests submitted to the Verra Registry on or after 1 January 2025”, therefore the version 4.6 of VCS standards is applicable and acceptable to the VVB. Hence, finding is closed. CAR#02 Closed	

Finding No. 03	Date: 19-09-2024
Finding Type- CAR ☒	CL ☐ FAR ☐
Stage of finding raised:	
Desk Review	☒
On-site/remote/hybrid assessment	☐
Technical Review	☐
Project Review Report by Registry	☐
Requirement	
Clause 3.17 of VCS standard version 4.6	
Section 1.2 and 3.1 of MR template version 4.4	
Non-Conformity	
- The reported current project contribution for SDG 8.5 do not aligns with the supporting evidences provided to VVB. - Breakdown details for the current monitoring period are not included in the MR, as per the requirement of Section 3.1 of the MR template version 4.4. - The values of operational hours and breakdown hours are incorrect for current monitoring period. - PLF for the current monitoring period is incorrect.	
Evidence	
The following sections/ evidences have been identified with non-conformance: - Evidences regarding employment records & PP Section 1.2 - Appendix 3 of MR - Appendix 3 of MR	

ER sheet V01	
1st Response from PP	Date: 07/10/2024
- The current project contributions for SDG 8.5 have been in line with employment records for the current monitoring period, being submitted to the assessment team. - Breakdown details for the current monitoring period and other relevant details for the same are now provided in the revised MR version 2.0. - The values of operational hours and the breakdown hours have been corrected in line with the breakdown details for the current monitoring period. - The values for generation and Emission reductions have been made in line with the JMR/Invoices for the current monitoring period, and hence the PLF for the same has now been updated in the MR and ER sheet being provided to the Assessment team.	
Documents provided by PP for review	
- JMR - Electricity Invoices - Breakdown details - Revised MR version 2.0 - Revised ER Sheet version 2.0	
1st Review by Assessment Team	Date: 24-10-2024
- Assessment team confirms that PP has submitted employment record to verify contribution of SDG 8.5 due to the project activity which is found correct. Hence, finding is closed. - Assessment team confirms that PP has mentioned breakdown details in appendix 3 of the revised MR. Hence, finding is closed. - Assessment team confirms that values of operational hours and breakdown hours has been corrected in appendix 3 of revised MR and found correct with the values present in the ER sheet provided by PP. Hence, finding is closed. - Assessment team confirms that PP has updated the values of PLF in the revised monitoring report and is now also found with the ER sheet provided by PP. Hence, finding is closed.	
CAR#03 Closed	

Finding No. 04	Date: 19-09-2024
Finding Type- CAR ☒ CL ☐ FAR ☐	
Stage of finding raised:	
Desk Review	☐
On-site assessment	☒
Technical Review	☐
Project Review Report by Registry	☐
Requirement	
Section 4.1,4.2, 4.3 of MR template version 4.4	
Section 3.16 of VCS standard version 4.6	
Non-Conformity	
During the on -site visit, the following non-conformities were identified: The value of the monitored parameter EG facility, y based on the monthly generation records and Emission reduction for the current monitoring period is inaccurate.	

The calibration dates do not align with the calibration records provided to the VVB.	
Evidence	
The following sections/ evidences have been identified with non-conformance:	
- Monthly generation records for current monitoring period, Section 4.1 and onsite visit - Section 4.3 and onsite visit	
1st Response from PP	Date: 07/10/2024
- The values of the monitored parameter i.e., EGfacility, y have been updated in line with the JMR/Invoices being shared with the assessment team for current monitoring period. - The latest applicable calibration certificates are being provided to the assessment team, and the relevant details are now updated in the MR.	
Documents provided by PP for review	
- JMR/Invoices - Revised MR version 2.0 - Updated ER Sheet version 2.0	
1st Review by Assessment Team	Date: 24-10-2024
- Assessment team confirms that the values of parameter EG Facility and the emission reduction for the current monitoring period has been corrected by PP in the revised monitoring report and ER sheet. It is also found correct with the values verified onsite with the monthly generation records and Invoices or JMR of the current monitoring period. Hence, finding is closed. - Assessment team confirms that PP has now provided calibration report applicable for the current monitoring period and found correct with the serial no. of the meter installed found onsite. Hence, finding is closed.	
CAR#04 Closed	

Finding No. 05	Date: 05-11-2024
Finding Type- CAR ☒ CL ☐ FAR ☐	
Stage of finding raised:	
Desk Review	☐
On-site assessment	☐
Technical Review	☒
Project Review Report by Registry	☐
Requirement	
Instructions & guidelines in MR template version 4.4	
Non-Conformity	
- The instructional text has not been removed in accordance with the “instructions for completing the monitoring report template” specified in the MR template version 4.4. - The value stated for SDG 8 in Section 1.2 of the MR is inconsistent with the data in table 1.	
Evidence	

The following sections of MR version 2.0 have been identified with non-conformance:	
- Section 1.11.1 & Section 1.11.2 - Section 1.12	
1st Response from PP	Date: 05-11-2024
Following corrections have been made-	
- Instructional texts have been removed from the MR being submitted - The value of SDG 8 in section 1.2 of the MR has been made consistent with data in table 1.	
Documents provided by PP for review	
1. Revised MR, version 2.1	
1st Review by Assessment Team	Date: 06-11-2024
- The assessment team has reviewed the Revised MR version 2.1, and the project proponent has made the necessary corrections in Sections 1.11.1, 1.11.2. These corrections have been assessed and found to be accurate, and therefore, they are accepted. - The value of SDG 8 has been made consistent in section 1.12 of MR version 2.1. Corrections have been assessed and found to be accurate, and therefore, they are accepted.	
CAR#05 Closed	

Finding No. 06	Date: 15-01-2025
Finding Type- CAR ☒ CL ☐ FAR ☐	
Stage of finding raised:	
Desk Review	☐
On-site assessment	☐
Technical Review	☐
Project Review Report by Registry	☒
Requirement	
VCS Standard v4.7 Section 3.17	
VCS Monitoring Report, v4.4, Section 1.12	
VCS Verification Report, V4.4	
Non-Conformity	
The SDG indicator description and the reported contributions do not align. For example, the project-specific SDG indicator for SDG target 7.2.1 is “Renewable energy share in the total final energy consumption.” However, under the current and lifetime project contributions, the reported value is of	

the total renewable energy produced by the project activity. The indicator, monitoring period contributions, and project lifetime contribution units must all align and be measured in one unit.

Evidence

MR version 2.1 dated 05-November-2024

1st Response from PP

Date: 27/01/2025

The renewable energy generated by the project; the contributions have now been presented in alignment with the indicator.

For the current monitoring period, the renewable energy share has been calculated as **0.03%** of the total final energy consumption (electricity supplied to Indian Grid). This ensures consistency with SDG 7.2.1 requirements and accurately represents the project's contributions.

The indicator reflects the share of renewable energy generated by the project as part of the total final energy consumption in India, which includes both renewable and non-renewable energy.

- Project's Renewable Energy Generation = 307,159.02 MWh (generated by the project during the monitoring period)
- Total Renewable Energy Consumption (Indian Grid) = 117,535,620 MWh
- Non-Renewable Energy Consumption (Indian Grid) = 796,872,460 MWh

Formula:

$$\text{Renewable Energy Share (\%)} = \frac{\text{Renewable Energy Fed to Grid by project}}{\text{Total Final Energy Consumption (in Indian Grid)}} \times 100$$

Where;

Total Final Energy Consumption (in Indian Grid) = Total renewable energy Consumption + total non-renewable energy consumption

Current Project Contribution:

Calculation:

Total Final Energy Consumption (in Indian Grid) = 117,535,620 + 796,872,460

= 914,408,080 MWh

$$\text{Renewable Energy Share (\%)} = \frac{307,159.02}{914,408,080} \times 100$$

The **Renewable energy share** in **Total final energy consumption in the Indian Grid** i.e the total electricity supplied to Indian grid is approximately **0.03%**.

By generating 307,159.02 MWh of renewable energy, the solar power plant increases the renewable energy share in India's total final energy consumption, thereby advancing SDG 7.2.1. This aligns with the global goal of increasing the share of renewables in the energy mix and reducing dependency on fossil fuels.

Similarly for lifetime contributions:

Since the start of the project activity i.e., on 19/03/2021, the project has supplied 1,925,706.02 MWh of renewable electricity to the Indian Electricity Grid.

- Total Renewable Energy Consumption in Indian Grid = 677,260,123.15 MWh
- Total Non-Renewable Energy Consumption in Indian Grid = 4,774,946,420 MWh
- Total Final Energy Consumption (Indian Grid) = 677,260,123.15 + 4,774,946,420 = 5,452,206,543.15 MWh

$$\text{Renewable Energy Share (\%)} = \frac{1,925,706.02}{5,452,206,543.15} \times 100$$

Since the start of the project activity **Renewable energy share** in **Total final energy consumption** i.e. total electricity supplied to Indian grid is approximately **0.04%**.

The data for Renewable and Non-renewable generation has been referred from CEA Database.

Documents provided by PP for review

1. Revised MR, version 2.2

1st Review by Assessment Team

Date: 28/01/2025

The VVB has reviewed the SDG indicator description and the reported contributions in the revised Monitoring Report. The contributions are now presented in alignment with SDG Target 7.2, which focuses on the "Renewable energy share in total final energy consumption."

SDG Indicator 7.2.1 tracks the "Renewable energy share in total final energy consumption" and is relevant to this project, as it supplies 100% renewable energy to the grid. The energy produced

by the project contributes to the overall increase in renewable energy share in the total final energy consumption. national level, thus supporting the SDG Indicator 7.2.1.

Project contributions during current monitoring period

For the current monitoring period, the project's contribution (increase in renewable energy share) in total electricity supplied to Indian grid has been calculated and verified as **0.03%**.

Project's lifetime contribution

For project's life time the project's the project's contribution (increase in renewable energy share) in total electricity supplied to Indian grid has been calculated and verified as approximately **0.04%**.

VVB has verified the project contributions for current monitoring period and project's life time contributions percentages based on data from the Government of India's Ministry of Power (Central Electricity Authority)¹⁸, which is a reliable and authoritative source for national-level electricity generation data. The PD submitted a supporting calculation sheet, which was cross-verified with data from the Central Electricity Authority website.

Therefore, it is confirmed that the contributions outlined in Table 1 of Section 1.12 of the revised MR, both for the current period and the project lifetime, are in alignment with SDG Target 7.2.1 and Section 3.17 of the VCS Standards Version 4.7. The VVB finds the calculations to be accurate and acceptable.

CAR#06 Closed

¹⁸ <https://cea.nic.in/?lang=en>

<https://cea.nic.in/dashboard/?lang=en>

<https://cea.nic.in/api-for-central-electricity-authority-data/?lang=en>

<https://cea.nic.in/renewable-generation-report/?lang=en>

APPENDIX 4: COMPETENCE STATEMENT

Team Leader and Technical Expert (1.2)



VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Barun Kumar
Nationality	Indian
Countries of Experience	India, South Africa, Kenya, Uganda, DR Congo, Zambia, Madagascar, Fiji, Egypt, Singapore
Educational Qualification	B.Sc. (Environmental Science and Water Management) M.Sc. (Ecology & Environmental Sciences)
Year of Experience	13 Years +
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	SS 1 – TA 1.2 - Renewables SS 3 – TA 3.1 – Energy Demand SS 6 – TA 6.1 – Construction SS 7 – TA 7.1 – Transport SS 13 – TA 13.1 – Solid waste and wastewater SS 14 – TA 14.1 – Forestry He is a GS Approved Auditor

Roles

Project Trainee	NO
Validator/Verifier Trainee	NO
Validator	YES
Verifier	YES
Team Leader	YES
Technical Reviewer	YES
Local Expert (India)	YES
TA Expert (1.2, 3.1, 6.1, 7.1, 13.1, 14.1)	YES
Financial Expert	NO

Reviewed by	Apoorva Gupta (Quality Manager)	Date	12/09/2024
Approved by	Dr. Vikas Kumar Aharwal (Founder & Director)	Date	12/09/2024

Validator/Verifier Trainee



Certification Pvt. Ltd.

VKU.F50W, Competence Statement

COMPETENCE STATEMENT

Name	Sanjana Bhana
Nationality	Indian
Countries of Experience	India
Education Qualification	M.Sc. (Environmental Sciences) B.Sc. (Life Sciences, Biotechnology, Chemistry)
Year of Experience	2.5 Years
Area of Expertise	Climate Change & Environment / Industry
Eligible Sectoral Scope	NA

Roles

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

Reviewed by	Apoorva Gupta (Quality Manager)	Date	06/05/2024
Approved by	Barun Kumar (Technical Manager)	Date	06/05/2024

History of the Document

Version	Date	Amendment Summary*	Prepared By	Approved By
1.2	29/11/2022	Inclusion of Project Trainee, Validator/Verifier Trainee and Local Expert (Country Wise) in roles Table.	Vandana Gupta	Dr. Vikas Kumar Aharwal
1.1	22/07/2021	NA	Ayushi Garg	Vikas Aharwal
1.0	27/03/2020	NA	Ayushi Garg	NA

Project Trainee



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Komal S Kumari
Nationality	Indian
Countries of Experience	India
Education Qualification	M.Sc. Environmental Science B.Sc. Chemistry
Year of Experience	Fresher
Area of Expertise	NA
Eligible Sectoral Scope	NA

Roles

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

Reviewed by	Vandana Gupta (Quality Manager)	Date	04/09/2023
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	04/09/2023

History of Documents

Version	Date	Amendment Summary*	Prepared By	Approved By
1.2	29/11/2022	Inclusion of Project Trainee, Validator/Verifier Trainee and Local Expert (Country Wise) in roles Table.	Vandana Gupta	Dr. Vikas Kumar Aharwal
1.1	22/07/2021	NA	Ayushi Garg	Vikas Aharwal
1.0	27/03/2020	NA	Ayushi Garg	NA

*Amendment Summary adopted in VKU System on 12.10.2022

Technical Reviewer and Technical Expert (1.2)



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Akhilesh Joshi
Nationality	Indian
Countries of Experience	India, China, Sri Lanka, Bangladesh, Pakistan, Bhutan, Myanmar, Lao PDR, Cambodia, Vietnam, Thailand, Malaysia, Turkey, Georgia, Jordan, Madagascar, Zambia, Malawi, Zimbabwe, Mozambique, Kenya, Angola, Uganda, Tanzania, Nigeria, Guatemala, Mexico
Educational Qualification	MBA (Oil & Gas management) BE (Chemical Engineering)
Year of Experience	17 Years
Area of Expertise	Climate Change & Environment / Industry
Eligible Sectoral Scope	SS 1 – TA 1.1 - Thermal Energy generation from fossil fuels as well as thermal electricity from Solar SS 1 – TA 1.2 - Energy generation from renewable Energy sources SS 3 – TA 3.1 - Energy demand SS 4 – TA 4.1 – Manufacturing Industries (Cement sector) SS 8 – TA 8.1 - Mining and Mineral Processes SS 10 – TA 10.1 - Mining and Mineral Processes SS 13 – TA 13.1 - Solid Waste and Wastewater He is a GS Approved Auditor

Roles

Project Trainee	NO
Validator/Verifier Trainee	NO
Validator	YES
Verifier	YES
Team Leader	YES
Technical Reviewer	YES
Local Expert (Country Wise)	YES
TA Expert (1.1, 1.2, 3.1, 4.1, 8.1, 10.1, 13.1)	YES
Financial Expert	YES

Reviewed by	Apoorva Gupta (Quality Manager)	Date	08/09/2024
Approved by	Barun Kumar (Technical Manager)	Date	09/09/2024

History of the Document

Version	Date	Amendment Summary*	Prepared By	Approved By
1.3	30/07/2024	Inclusion of Filling guideline for eligible sectoral scope and other editorial changes	Apoorva Gupta	Dr. Vikas Kumar Aharwal
1.2	29/11/2022	Inclusion of Project Trainee, Validator/Verifier Trainee and Local Expert (Country Wise) in roles Table.	Vandana Gupta	Dr. Vikas Kumar Aharwal
1.1	22/07/2021	NA	Ayushi Garg	Vikas Aharwal
1.0	27/03/2020	NA	Ayushi Garg	NA

*Amendment Summary adopted in VKU System on 12.10.2022