



40 MW ORANGE CHARANKA SOLAR POWER PROJECT IN GUJARAT, INDIA

Project Title	40 MW Orange Charanka Solar Power Project in Gujarat, India
GS ID of Project	5866
Version of the Validation Report	03
Completion date of the Validation Report	10/10/2024
Date of Design Certification	15/04/2018
Version number of the corresponding Design Certification	NA
Project Representative	Infinite Environmental Solutions limited
Project Developer	Greenko Charanka Solar Energy Private Limited
Project Participants and any communities involved	NA
Activity Requirements applied	Renewable Energy
Scale of the Project Activity	Large Scale

Methodology (ies) applied and version number	ACM0002: Grid-connected electricity generation from renewable sources - Version 21.0
Product Requirements applied	GHG Emission Reduction & Sequestration
Project Cycle	Retroactive
Other Requirements applied	NA

VKU Project ID	VKU.VAL.17.24_GS_5866
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A. OBJECTIVE

Infinite Environmental Solutions Limited (Project Representative) and Greenko Charanka Solar Energy Private Limited (Project Developer) has contracted with VKU Certification Private Limited to conduct validation and certification for renewal of crediting period (04/08/2024 to 03/08/2029) for the GS4GG project activity (GS_5866) “**40 MW Orange Charanka Solar Power Project in Gujarat, India**”.

The objective of this validation (RCP) is to have an independent third-party assessment of the GS4GG PDD and compliance with the GS requirements /5//6//7//8//9//10//11//12//13//14//15//16//17/ as described in the Gold Standard documentation and supporting documents provided by the project representative /26//27//28//29//30//31//32//33//34//35//36//37//38/. The Project Activity (GS_5866) is applying for validation certification of renewable of crediting period under GS4GG programme requirement and it is seen as necessary to provide assurance about:

- Changes in the Project as related to the GS4GG General Eligibility Criteria.
- Incorporation of any relevant updates to the GS4GG Requirements.
- Re-definition of Baseline Scenario and any impact of change on the Eligibility Principles, Criteria and Requirements.
- Any Gold Standard activity, product and methodology-specific Requirements.
- Demonstration of Ongoing Financial Need.
- The impact of new relevant national and/or sectoral policies and circumstances on the baseline.
- The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update.
- The estimation of emission reductions for the applicable crediting period.

The Project Activity is to generate electrical energy through sustainable means using solar power resources, the generated green electricity contributes to climate change mitigation efforts. This project activity is a large -scale solar project and requirements of the applied methodology “ACM0002 “Grid-connected electricity generation from renewable sources” Version 21.0 /19/. The project will replace anthropogenic emissions of greenhouse gases (GHG’s) estimated to be approximately 76,018tCO₂e per annum during over the crediting period, thereon displacing 81,286.14MWh/year amount of electricity from the generation-mix of power plants connected to the Indian electricity grid, which is mainly dominated by thermal/ fossil fuel-based power plant.

B. SCOPE AND CRITERIA OF THE VALIDATION

The validation scope is defined as the independent and objective review of the Key project information & project design document PDD /1/, monitoring plan and other relevant supporting document which is mentioned section 3.1 of this report. The information in these documents is reviewed against all applicable GS requirements including the baseline and monitoring methodology ACM0002 “Grid-connected electricity generation from renewable sources” Version 21.0/19/.

The documents /1/ /2/ /3/ /26/ /27/ /28/ /29/ /30/ /31/ /32/ /33/ /34/ /35/ /36/ /37/ /38/ has submitted to the VKU Assessment team by project representative were reviewed against the following standards, methodology, tools and guidelines:

- GS4GG Principles and Requirements; Version 1.2, dated: 23/10/2019 /6/
- Validation and verification standard; Version 1.0, dated: 06/03/2023 /10/
- CDM Validation and Verification standard for project activities; Version 3.0 /18/
- Renewable energy activity requirements; Version 1.4, dated: 16/08/2021 /14/
- GHG Emissions Reduction & Sequestration Product Requirements; Version 2.2, dated: 28/08/2023 /15/
- Safeguarding principles & requirements; Version 2.1, dated: 29/06/2023 /8/
- Stakeholder consultation and engagement requirements; Version 2.1, dated: 14/06/2022 /7/
- Design change requirements; Version 1.1, dated: 14/04/2023 /9/
- Site visit and remote audit requirements and procedures; Version 2.0, dated: 30/05/2023 /10/
- Applicability of minimum site visit requirement by VVB; Version 2.0, dated: 16/08/2021 /12/
- Validation & verification body requirements; Version 2.0, dated: 14/01/2021 /13/
- Template Guide: Key Project Information & Project Design Document (PDD) Version 1.5, dated 29/06/2023 /17/
- Gold standard eligible impact quantification methodologies; Version 2.4, dated: 22/06/2023 /16/
- ACM0002 “Grid-connected electricity generation from renewable sources” Version 21.0/19/
- Tool 1: Tool for the demonstration and assessment of additionality Version 07.0.0 /20/
- Tool 7: Tool to calculate the emission factor for an electricity system Version 07.0.0 /21/

- Tool 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period Version 3.0.1 /22/
- CDM – CO₂ Baseline Database (CO₂ Baseline Database for Indian Power Sector); Version 19.0 /23/
- VKU QMS Procedures and SOPs – Internal procedural documents of VKU Certification Pvt. Ltd. /25/

Based on the recommendations in the GS4GG Validation and Verification Standard for Project Activities, Version 1.0/10/ the validation team has employed a rule-based approach, focusing on the identification of significant risks for monitoring plan and the generation of GS-VERs.

The validation is not means to provide any consulting to the project developer and project representative/coordinating managing entity. However, stated requests for clarifications and corrective actions/forward action request may have provided input for the improvement of the project design. While carrying out the validation, VKU Certification Private Limited determines if the Project Activity complies with the requirements of GS4GG validation and verification standard v1.0/10/, GS4GG principle and requirements v1.2/6/, the applicability conditions of the selected methodology /19/, guidance issued by the Gold Standard and also assess the claims and assumptions made in the final GS4GG Key Project Information & Project Design Document (PDD) /1/ without limitation on the information provided by the project developer.

C. VALIDATION METHODOLOGY AND PROCESS

The method and process are undertaken by a competent validation team (refer Section 2.1) which involved the following steps:

1. The desk review of initial documents and evidence submitted by the project representative in context of the GS4GG criteria along with CDM rules and guidelines issued by CDM EB.
2. SOP 4 of VKU QMS Process; Version 3.0, dated: 24.11.2023
3. Conducting on-site audit, interview/interactions and documentation process with the project representatives, Project developer, site personal and other stakeholders.
4. Reporting audit findings with respect to non-conformities as CLs, CARs and FARs as well as closure of the findings, as appropriate and preparing a draft validation report based on the auditing findings and conclusions.
5. Technical review of the draft validation report along with other documents as appropriate by an independent technical reviewer and approval of the validation report

6. The resolution of outstanding issues and the issuance of the final validation report and opinion.

The report is based on the assessment of the final GS4GG Key Project Information & Project Design Document (PDD) /1/, ER Sheet/2/, onsite audit, application of standard auditing techniques as per the GS4GG general requirement for all audit instances including but not limited to document reviews and stakeholder interviews, review of the applied methodology and their underlying formulae and calculations.

This report contains the findings in term of CARs, CLs or FARs and resolutions from the validation and a validation opinion on the implemented Project Activity thus confirming the monitoring plan is sound and reasonable and meets the stated GS4GG requirements, host country criteria and correctly applied the GS approved methodology /19/ and tools /20/ /21/ /22/.

D. VALIDATION CONCLUSION

VKU Certification Pvt. Ltd. has successfully completed the validation process for the GS Project Activity, namely the **"40 MW Orange Charanka Solar Power Project in Gujarat, India "** (GS_5866), as outlined in the Project Design Document (PDD) /01/ and supporting document /2/ /3/ /26/ /27/ /28/ /29/ /30/ /31/ /32/ /33/ /34/ /35/ /36/ /37/ /38/. The validation confirms that the project adheres to all relevant GS requirements for Project Activities, also compliance with methodologies, tools, guidelines.

The monitoring methodology ACM0002 “Grid-connected electricity generation from renewable sources” Version 21.0 has been appropriately applied to the project activity for the whole crediting period (5 years) and is deemed applicable/19/.

The validation (RCP) process was conducted in accordance with ISO 14064-03:2019 and GS standards, along with host country criteria. Our approach is risk-based, drawing on an understanding of the risks associated with estimated GHG emissions data.

VVB has conducted onsite visit. Clause 3.2.1 of the "Site Visit and Remote Audit Requirements and Procedures" which stipulates that a physical site visit by VVB is not mandatory at the validation (Design Certification or Design Certification Renewal) of a project, but since last physical site visit was conducted at the time of 3rd verification in October 2021 & it was close to 3 years since last physical site visit has been made, VVB decided to conduct onsite visit and stakeholder interviews along with a comprehensive review of document of project activity. VKU has found that the Project Developer (PD) has provided sufficient evidence for draw a conclusion at the project's current stage. As a result, VKU Certification Pvt. Ltd. asserts the issuance of a positive opinion based on our thorough validation process.

- Start date of the project activity: 19/12/2016(Start date of the project activity is the date on which the first purchase order was realised)
- **1st Crediting period:** 04/08/2017 to 03/08/2024 (Including first date and last date).
- **2nd Crediting Period:** From 04/08/2024 to 03/08/2029(Including first date and last date).

Crediting Period Length: 05 Year

Validated estimated GHG emission reductions and carbon dioxide removals for the project crediting period:

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	77,554 tCO ₂ e	0 tCO ₂ e	77,554 tCO ₂ e
Year 2	76,778 tCO ₂ e	0 tCO ₂ e	76,778 tCO ₂ e
Year 3	76,011 tCO ₂ e	0 tCO ₂ e	76,011 tCO ₂ e
Year 4	75,251 tCO ₂ e	0 tCO ₂ e	75,251 tCO ₂ e
Year 5	74,498 tCO ₂ e	0 tCO ₂ e	74,498 tCO ₂ e
Total	380,092 tCO ₂ e	0 tCO ₂ e	380,092 tCO ₂ e
Annual Average over the crediting period	76,018 tCO ₂ e	0 tCO ₂ e	76,018 tCO ₂ e

Sustainable Development Goals Targeted	Most Relevant SDG Target	SDG Impact
13 Climate Action (mandatory)	Integrate climate change measures into national policies, strategies and planning Target: 76,018tCO ₂ e per annum	Emissions Reductions in tCO ₂
7 Ensure access to affordable, clean energy	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix Target: 81,286.14MWh per annum.	MWh of renewable energy generated
8 Ensure to Decent Work and Economic Growth	8.5: 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 Target: • Training: 1 no's annually along with workplace health and safety is also conducted annually. • Employment of 15 staff	1. Training 2. Employees

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1 EXECUTIVE SUMMARY

Infinite Environmental Solutions Limited (Project representative) has appointed VVB, VKU Certification Pvt. Ltd., as the independent validator to carry out validation for Renewal of Crediting Period 04/08/2024 to 03/08/2029 (Inclusive of both dates)) for the Gold Standard Project Activity titled the **"40 MW Orange Charanka Solar Power Project in Gujarat, India "** (GS 5866) at village Charanka, Taluka Santalpur, District Patan in the State of Gujarat, India (referred to as the "Project Activity"). This report summarizes the findings of validation of the project, performed on the basis of Gold Standard criteria Gold standard for global goals (GS4GG), as well as criteria are given to provide for ensuring consistent project operations, monitoring, and reporting. The report includes validation outcomes, resolutions, and a validation opinion.

The implemented Project Activity focuses on emission reduction use of solar resources for electricity generation which is connected to the Indian electricity grid, its objectives include reducing fossil fuels, promoting sustainable practices in the power sector, and contributes to overall greenhouse gas emissions reduction. This project activity is a large-scale solar project. The project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 76,018tCO₂e per annum during over the crediting period, thereon displacing 81,286.14MWh/year amount of electricity from the generation-mix of power plants connected to the Indian Electricity grid, which is mainly dominated by thermal/ fossil fuel-based power plant.

The Project Activity employs the ACM0002., version 21: Grid-connected electricity generation from renewable sources. This CDM methodology is also approved under the Gold Standard. The project activity is a 40 MW_{AC} solar power project, promoted by Greenko Charanka Solar Energy Private Limited and involves installation of 40 MW solar power project. The project is located at village Charanka, Taluka Santalpur, District Patan in the State of Gujarat, India. The electricity generated from the project activity is evacuated through transmission line at 400kv GETCO, Charanka sub-station (GSS end) located in district Charanka, Gujarat. The commissioning date of project activity for 40 MW Project is 04/08/2017.

Commissioning date with Geo-coordinate of Project Activity:

Commissioning Part	Commissioning Date	Project Investors' Name ¹	Plant capacity in AC	Plant capacity in DC	Latitude	Longitude

¹ Orange Charanka Solar Energy Private Limited was the investor of this project activity, but the name 'Orange Charanka Solar Energy Private Limited is now changed to 'Greenko Charanka Solar Energy Private Limited' 18/01/2021 as per the Certificate of Incorporation pursuant to change of name, MINISTRY OF CORPORATE AFFAIRS, GOVERNMENT OF INDIA.

40 MW	04/08/2017	Greenko Charanka Solar Energy Private Limited	40 MW	53.4 MW	23°54'26.45" N	71°12'4.79" E
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Emission reductions attributable to the Project Activity adhere to Gold Standard for global goals (GS4GG) requirements for additionality. These project emission reductions are considered additional to what would occur in the absence of the Project Activity. The project activity is the installation of a new grid-connected renewable power plant/unit and this is not a CPA that has been excluded from a registered CDM PoA as a result of erroneous inclusion of CPAs. A summary of estimated sustainable development contributions in the final Key Project Information & Project Design Document (PDD); Version 04, dated 31/07/2024 /1/ is as follows:

Sustainable Development Goals Targeted	SDG Impact	Estimated Annual Average	Unit or Products
SDG 13: Climate Action	Emission Reductions	76,018	GS-VERs
SDG 8: Decent Work and Economic Growth	Trainings	1	No. of Trainings/year
	Employee	15	No. of Jobs
SDG 7: Affordable and Clean Energy	MWh of renewable energy generated	81,286.14	MWh/Annum

Validation serves as a thorough and independent assessment of the Project Activity against Gold Standard and GS requirements, monitoring plans, and compliance with relevant criteria. It ensures that the monitoring plan is sound and reasonable and meets the stated GS4GG requirements. Validation (RCP) is a mandatory step for all Gold Standard Voluntary projects, providing assurance to stakeholders regarding the project's quality and its intended generation of voluntary emission reductions (GS-VERs).

The project has been only registered in GS4GG and same has been cross checked with other registries & confirmed by assessment team. For this, Project representative has also provided declaration for not participation and rejection in other GHG program/41/ Same information has been also checked from the CDM registry along with another registry.

2 VALIDATION TEAM, TECHNICAL REVIEWER AND APPROVER

2.1 Validation team member

S.No.	Role	Type of Resource	Last Name	First Name	Affiliation (e.g., name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk Review	Onsite Inspection	Interview	Validation Finding
1.	Team Leader cum Validator/verifier ²	IR ³ (Internal Resource)	Kumar	Barun	VKU Certification Private Limited	Y ⁴	Y	Y	Y
2.	Validator/Verifier-Trainee	IR (Internal Resource)	Chauhan	KM Nisha	VKU Certification Private Limited	Y	N	N	N
3.	Project Trainee	IR (Internal Resource)	Modi	Megha	VKU Certification Private Limited	Y	Y	N	N

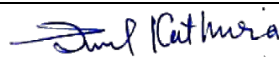
2.2 Technical Reviewer and Approver of the validation report

S.No.	Role	Type of Resource	Last Name	First Name	Affiliation (e.g., name of central or other office of DOE or outsourced entity)	Signature

² Team leader is working as Validator/Verifier for this project activity

³ ER: External resource, IR: Internal Resource

⁴ Y: yes, N: No

1.	Technical Reviewer & Technical Expert	ER (External Resource)	Kathuria	Sunil	Outsourced Entity	
2.	Approver	ER (External Resource)	Kathuria	Sunil	Outsourced Entity	

2.3 Authorized Signatory For VKU

S. No.	Role	Last Name	First Name	Affiliation (e.g., name of central or other office of DOE or outsourced entity)	Signature (Final version only)
1.	Director	Kumar Aharwal	Vikas	VKU Certification Pvt. Ltd.	

3 MEANS OF VALIDATION

3.1 Desk/Document Review

List all documents reviewed or references during the validation are mentioned below:

Sl. No.	Author	Title	Reference	Provider
1	Infinite Environmental Solutions Limited	Key Project Information & Project Design Document (PDD)	Version 01, dated 12/06/2024 Version 02, dated 12/07/2024 Version 03, dated 19/07/2024 Version 04, dated 31/07/2024 Version 05, dated 20/09/2024	Infinite Environmental Solutions Limited
2	Infinite Environmental Solutions Limited	ER Sheet	Version 01, dated 11/06/2024 Version 02, dated 12/07/2024 Version 03, dated 31/07/2024	Infinite Environmental Solutions Limited
3	Infinite Environmental	CDM Project Design Document (PDD)	Version 04, dated 19/04/2018	Available on GS website

	Solutions Limited			
4	Gold Standard for the Global Goals	Design and Performance Review under Gold Standard for the Global Goals	N/A	Infinite Environmental Solutions Limited
5	Gold Standard for the Global Goals	GS Passport	Version 04, dated 18/04/2018	Available on GS website
6	GS4GG	<u>Principles and Requirements</u>	Version 1.2, dated: 23/10/2019	Publicly Available on GS4GG Webpage
7	GS4GG	<u>Stakeholder consultation and engagement requirements</u>	Version 2.1, dated: 14/06/2022	Publicly Available on GS4GG Webpage
8	GS4GG	<u>Safeguarding principles & requirements</u>	Version 2.1, dated: 29/06/2023	Publicly Available on GS4GG Webpage
9	GS4GG	<u>Design change requirements</u>	Version 1.1, dated: 14/04/2023	Publicly Available on GS4GG Webpage
10	GS4GG	<u>Validation and verification standard</u>	Version 1.0, dated: 06/03/2023	Publicly Available on GS4GG Webpage
11	GS4GG	<u>Site visit and remote audit requirements and procedures</u>	Version 2.0, dated: 30/05/2023	Publicly Available on GS4GG Webpage
12	GS4GG	<u>Applicability of minimum site visit requirement by VVB</u>	Version 2.0, dated: 16/08/2021	Publicly Available on GS4GG Webpage

13	GS4GG	<u>Validation & verification body requirements</u>	Version 2.0, dated: 14/01/2021	Publicly Available on GS4GG Webpage
14	GS4GG	<u>Renewable energy activity requirements</u>	Version 1.4, dated: 16/08/2021	Publicly Available on GS4GG Webpage
15	GS4GG	<u>GHG Emissions Reduction & Sequestration Product Requirements</u>	Version 2.2, dated: 28/08/2023	Publicly Available on GS4GG Webpage
16	GS4GG	<u>Gold standard eligible impact quantification methodologies</u>	Version 2.4, dated: 22/06/2023	Publicly Available on GS4GG Webpage
17	GS4GG	<u>Template Guide: Key Project Information & Project Design Document (PDD)</u>	Version 1.5, dated 29/06/2023	Publicly Available on GS4GG Webpage
18	CDM	<u>CDM Validation and Verification standard for project activities</u>	Version 3.0	Publicly Available on CDM Webpage
19	CDM	<u>ACM0002:Grid-connected electricity generation from renewable sources</u>	Version 21.0	Publicly Available on CDM Webpage
20	CDM	<u>Tool 1: Tool for the demonstration and assessment of additionality</u>	Version 07.0.0	Publicly Available on CDM Webpage
21	CDM	<u>Tool 7: Tool to calculate the emission factor for an electricity system</u>	Version 07.0.0	Publicly Available on CDM Webpage
22	CDM	<u>Tool 11: Assessment of the validity of the</u>	Version 3.0.1	Publicly Available on

		<u>original/current baseline and update of the baseline at the renewal of the crediting period</u>		CDM Webpage
23	Central Electricity Authority, Ministry of Power	<u>CDM – CO₂ Baseline Database (CO₂ Baseline Database for Indian Power Sector)</u>	Version 19.0	Publicly Available
24	ISO	Standards: <u>ISO 14064-2:2019 & ISO 14064-3:2019</u>	31/05/2019	-
25	VKU Certification Pvt. Ltd.	QMS Procedures and SOPs	N/A	VKU Certification Pvt. Ltd.
26	AEPL	Certificate of calibration; Issued by Akron Energy	-	Infinite Environmental Solutions Limited
27	Gujarat Energy Development Agency	Commissioning Certificate for 40 MW	Date: 23/08/2017	Infinite Environmental Solutions Limited
28	Greenko Charanka Solar Energy Private Limited	Employment Records 1. Employment Generation Details 2. Attendance Register 3. Salary Slips	N/A (AT has cross checked the employment records of the 1 st crediting period to confirm the reasonableness of the assumptions made by the PD during the current 2 nd Crediting period)	Infinite Environmental Solutions Limited
29	Greenko Charanka Solar Energy Private Limited	Training Record: 1. Training 2. Attendance	N/A (AT has cross checked the training records of the 1 st crediting period to confirm the reasonableness of the assumptions made by the PD during the current 2 nd Crediting period)	Infinite Environmental Solutions Limited
30	Greenko Charanka	Declaration of O&M	Dated: 10/02/2017	Infinite Environmental

	Solar Energy Private Limited and Gujarat Power Corporation limited			Solutions Limited
31	Greenko Charanka Solar Energy Private Limited	Declaration- ODA (Official Development Association) For this whole crediting period	22/07/2024	Infinite Environmental Solutions Limited
32	GETCL (Gujarat Energy Transmission Corporation Limited)	JMR	N/A (AT has cross checked the invoice of the 1 st crediting period to confirm the reasonableness of the assumptions made by the PD during the current 2 nd Crediting period)	Infinite Environmental Solutions Limited
33	Greenko Charanka Solar Energy Private Limited	Invoices	- N/A (AT has cross checked the JMR of the 1 st crediting period to confirm the reasonableness of the assumptions made by the PD during the current 2 nd Crediting period)	Infinite Environmental Solutions Limited
34	Government of National Capital Territory of Delhi	Power Purchase Agreement (PPA) between Orange Charanka Solar Energy Private Limited and Solar Energy Corporation of India limited	Dated: 04/08/2016	Infinite Environmental Solutions Limited
35	Sustain-cert Portal	Screen Short of first submission of document	Dated: 09/05/2019	Infinite Environmental Solutions Limited
36	GS4GG	Cover Letter	Dated: 03/07/2024	Infinite Environmental

				Solutions Limited
37	JA Solar	Technical Details of Solar Panel	N/A (AT has cross checked the previous registered PDD of the 1 st crediting period to confirm the technical details of the implemented project made by the PD during the current 2 nd Crediting period	Infinite Environmental Solutions Limited
38	Greenko Charanka Solar Energy Private Limited	Grievance Register	N/A AT has cross checked the grievance records of the 1 st crediting period to confirm the implementation of ongoing communication with local stakeholder.	Infinite Environmental Solutions Limited
39	Greenko Charanka Solar Energy Private Limited	Hazardous Waste Sheet	N/A (AT has cross checked the Hazardous Waste Register of the 1 st crediting period to confirm the reasonableness of the assumptions made by the PD during the current 2 nd Crediting period	Infinite Environmental Solutions Limited
40	Ministry of Corporate Affairs, Government of India	Certificate of Incorporation for change of name	Dated: 18/01/2021	Infinite Environmental Solutions Limited
41	Greenko Charanka Solar Energy Private Limited	Declaration for no double counting	12/07/2024	Infinite Environmental Solutions Limited
42	Greenko Charanka Solar Energy Private Limited	No Discrimination Policy	Dated: 16/07/2017	Infinite Environmental Solutions Limited
43	Google Inc.	<u>Google Earth Pro</u>	N/A	Publicly Available
44	-	<u>GPS Map Camera</u>	N/A	Publicly Available

45	VKU Certification	VKU.24W.Audit and Sampling Plan	VKU.F24W. Audit and Sampling Plan_VKU.VAL.17.24.GS_5866	VKU Certification
46	VKU Certification	VKU.F46W. Attendance Sheet for Audit	VKU.F46W. Attendance Sheet for Audit_VKU.VAL.17.24.GS_5866	VKU Certification
47	VKU Certification	Photos taken during onsite audit	Dated: 22/06/2024	VKU Certification
48	-	Ongoing Finance Need	Calculation sheet to demonstrate Ongoing Finance needs and its supporting evidences containing Previous MRs & Company Balance sheets.	Infinite Environmental Solutions Limited

3.2 On-Site Inspection

VKU Certification Pvt. Ltd. has conducted onsite audit on 22/06/2024 for validation (RCP) of this project activity **“40 MW Orange Charanka Solar Power Project in Gujarat, India”** following the GS4GG Site visit and remote audit requirements and procedures /10/ and Applicability of minimum site visit requirement by VVB /12/. The risk of onsite audit assessed by the assessment team is mentioned below:

Sl. No.	Scope of Assessment	Risks Identified	Conclusion
1.	Location of project	Low Risk	Assessment team concludes that there is low risk in location of this project as it was confirmed during the onsite audit by interviewing PD representatives and local stakeholders along with Google earth pro/43/, the same is assessed in section 4.1.4 of the final FVR; version 3.0 dated 09/10/2024
2.	Technologies and/or measures	Low Risk	Assessment team concludes that there is low risk in technologies and/or measures applied in this project activity as this project activity is already registered under GS4GG. All the technologies and/or measures applied is confirmed during the onsite audit through onsite inspection, the same is assessed in section 4.1.5 of the final FVR; version 3.0 dated 09/10/2024
3.	Data and parameters fixed ex ante	Low Risk	Assessment team concludes that there is low risk in fixed ex ante parameters mentioned in Section B.6.2 of Key Project Information & Project Design

			Document (PDD); Version 05, dated 20/09/2024 as these parameters are based on the applied latest CDM methodology and sourced from <u>CEA database</u> .
4.	Data and parameters to be monitored	Low Risk	Assessment team concludes that there is low risk in Data and parameters to be monitored mentioned in Section B.7.1 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 as these parameters are based on the applied latest CDM methodology and other elements of monitoring plan mentioned in section B.7.3 of the PDD
5.	Other elements of monitoring plan	Low Risk	Assessment team concludes that there is low risk in other elements of monitoring plan mentioned in section B.7.3 of the PDD
6.	Assessment that project complies with GS4GG Gender Sensitive requirements	Low Risk	Assessment team concludes that there is low risk in compliance with GS4GG Gender Sensitive Requirements mentioned in section D.2 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 as it complies with GS4GG Gender Equality Requirements & Guidelines.
7.	Stakeholder mitigation measures	Low Risk	Assessment team concludes that there is low risk in Stakeholder mitigation measures as it was confirmed by interviewing PD representatives and local stakeholders during onsite audit and the same is assessed in section 4.7 and 4.8 of the final FVR; Version 3.0 dated 09/10/2024

The details of activities performed during onsite audit, site location, date and involved team members are mentioned below:

Date of Onsite Audit: 22/06/2024				
No.	Activity Performed on onsite audit	Site Location	Date	Team Member
	Introduction, scope and objective of work, roles and responsibilities of audit team, resources required, and timetable of the onsite audit including time for closing meeting and any concerns from PP.	Village Charanka, Taluka Santalpur, District Patan in the State of Gujarat, India	Date: 22/06/2024	Barun Kumar (Team Leader) and Megha Modi (Project Trainee)

1.	Discussion over- - Project Activity (Technology, Location and Implementation) - Parameter fixed Ex-ante and Baseline emissions, Project emissions and Leakage calculation - Choice and applicability of baseline methodology(ies) - Project boundary and emission sources included in the project boundary - applicability of baseline methodology(ies) - Monitoring plan (feasibility of monitoring plan described in PDD, QA/QC procedures, responsibility of implementation of monitoring plan, data recording & storage procedures) - Emergency Procedure - Operational lifetime of the project activity, Start date of the project activity, Crediting period - Environmental impacts and need of EIA - Grievance Redressal Mechanism (ongoing communication procedure with relevant local stakeholder) - Interview of relevant Local Stakeholders Compilation of the findings by Auditor/s (CARs/CLs) Discussion of the audit findings to the client and agreement on the	Village Charanka, Taluka Santalpur, District Patan in the State of Gujarat, India	Date: 22/06/2024	Barun Kumar (Team Leader) and Megha Modi (Project Trainee)
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	issues raised and agreement on timelines.			
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3.3 Interview

Following clause 7.16.6e of GS4GG Validation and Verification Standard; Version 1.0 dated 06/03/2023, VKU assessment team has taken consent from all the interviewees present during onsite audit conducted on 22/06/2024 to disclose their names and designation/affiliation in the final validation report of this project activity “**40 MW Orange Charanka Solar Power Project in Gujarat, India**” (GS 5866) and none of them have any objection over this hence, there is no perceived or potential conflict of interest. All the interviews conducted during onsite audit for validation of this project activity as recorded in VKU.F46W. Attendance Sheet for Audit_VKU.VAL.17.24.GS_5866 /44/ is listed below:

No.	Interviewee			Date	Subject	Team Member
	Last Name (Gender)	First Name	Affiliation			
1.	Shrivastav (Male)	Shranglesh	Greenko Suvaan Energy Private Limited	22/06/2024	Working of the project	Barun Kumar (Team Leader)
2.	Kumar (Male)	Manish			Baseline scenario	
3.	Bhawsar (Male)	Sonu			Implementation status of the project	
4.	Thakur (Male)	Shailesh				
5.	-- (Male)	Deepak			Power Purchase agreement	
					Benefits of the project	
					Location of implemented meters	
					Trainings mechanism	
					QA/QC procedure	

					Emergency Procedure	
					Grievance mechanism	
					Roles and responsibility of Job	

No.	Interviewee			Date	Subject	Team Member
	Last Name (Gender)	First Name	Affiliation			
1.	Ramesh (Male)	Rabari	Local Stakeholder	22/06/2024	Baseline scenario	Barun Kumar (Team Leader)
2.	Bharwad (Male)	Somabhai			Roles and responsibility of Job	
3.	Thakur (Male)	Jayanti			Grievance mechanism	
					Benefits of the project	

3.4 Sampling Approach

Not Applicable, this project is renewable solar project so there was no sampling involved. 100% data and record were checked.

3.5 Eligibility of the project under Gold Standard

The General Eligibility Criteria under 3.1.1 of GS4GG Principles & Requirements are as follows:

Eligibility Criteria	Description	Justification by PD	VKU Assessment
Types of Projects	The project type is a Solar Power Plant which generates power using solar Energy. The project activity belongs to the type of Renewable energy that generate and deliver power to the Indian grid. The project applies methodology ACM0002 Version 21.0. which is an approved methodology under Gold Standard.	The Solar Power Plant Project is conceived as a grid connected solar power plant within the category of renewable energy supply. See section A.1 of the PDD/1/.	Assessment team confirms that it is a solar power project which harness renewable energy and supply electricity to the Indian grid as per the Commissioning Certificate /27/ and The Power purchase agreement between Project Developer and Solar Energy Corporation of India Limited /34/
Location of Project:	The Project activity is located in Dist. Patan, Gujarat state in India. Further details have been provided in section A.2 of the PDD/1/.	The Power purchase agreement between Project Developer and Solar Energy Corporation of India Limited.	Assessment team confirms that this project activity is located in village Charanka, Taluka Santalpur, District Patan in the State of Gujarat, India on the basis of location mentioned in Commissioning Certificate /27/, The Power purchase agreement between Project Developer and Solar Energy Corporation of India Limited /34/ and Onsite audit.
Project Area, Project Boundary and Scale:	Project Area and Boundary are defined in line with the applicable Methodology ACM0002 Version 21. The project activity includes 40 MW installed capacity	Please refer section A.2 of PDD for the Geographical coordinates. The project has an install capacity of 40 MW which	The project area and project boundary include the project power plant and all other power plants that are connected physically to the

	and is Large Solar power plants with an installed capacity above 15 MW to be qualified as a large-scale solar plant (in accordance with UNFCCC rules).	is more than 15 MW, therefore applies as a Large-Scale project. See section A.4 of the PDD/1/.	electricity system that the project power plant is connected to. This includes the solar panel installation, pooling and sub-stations. The project activity evacuates the power to the INDIAN grid. Therefore, all the power plants contributing electricity to the Indian grid have been considered in the project boundary. Assessment team confirms that project area and project boundary is in line with the applied Methodology ACM0002; Version 21. Assessment team confirms that it is a large-scale project activity as per the GHG Emissions Reduction & Sequestration Product Requirements /15/
Host Country Requirements:	The project activity follows the social wellbeing, Environmental wellbeing, Economic wellbeing and Technological wellbeing.	Projects is in compliance with India's legal, environmental, ecological and social regulations.	Assessment team confirms that this project activity complies with India's legal, environmental, ecological and social regulations as per the interview conducted during onsite audit.
Contact Details:	Project Participant: Greenko Charanka Solar Energy Private Limited	GS4GG-Cover Letter	Assessment team confirms that the contact

	Name of the contact person: Mr. Murali Krishnam Raju M Email: muraliraju.m@greenkogroup.com		details are correct as per the GS4GG cover letter /36/ and onsite audit.
Legal Ownership and Other Rights:	The project activity is developed by the PD.	The commissioning certificates and the Power Purchase Agreement (PPA) is in the name of the project Developer.	Assessment team confirms that the legal owner Greenko Charanka Solar Energy Private Limited of this project activity as per GS4GG Cover Letter /36/, Commissioning Certificate /27/ The Power purchase agreement between Project Developer and Solar Energy Corporation of India Limited/34/. Hence, Greenko Charanka Solar Energy Private Limited is the legal owner of this project activity.
Official Development Assistance (ODA) Declaration:	The project had private funding and funding from bank. The PD hereby confirms that there is no public funding from Annex 1 countries and no diversion of Official Development Assistance (ODA) involved in the project activity.	The Project Owner declares that the project has not directly or indirectly received or benefited from official development assistance. An Official Development Assistance (ODA) declaration i.e., GS Annex D) has been submitted to VVB.	Assessment team confirms that this project activity has not received funding from Annex 1 countries as per the interview conducted during onsite audit and ODA declaration /31/ given by PD.

The eligibility criteria as per section 4 Eligible Principles & Requirements of GS4GG are described as follows:

Eligibility Criteria	Justification by PD	VKU Assessment
1. Demonstrate if project is pre	The Project activity is already registered in GS4GG, and it	Assessment team confirms that this project activity is already registered in GS4GG and it

identified as eligible by being referenced in Gold Standard Activity Requirements, Impact Quantification Methodologies or Product Requirements	meets all eligibility criteria as mentioned below.	complies with all GS4GG requirements and guidelines. /4/ /6/ /7/ /8/ /9/ /10/ /11/ /12/ /13/ /14/ /15/16//17/
2. If not pre identified as eligible, provide evidence of Gold Standard approval	Not applicable	Assessment team confirms that this project activity is eligible under GS4GG as it meets all of the GS4GG. It can be referred from above table.
3. Demonstrate how the project meets the General Eligibility criteria of the applicable Activity Requirements	General Eligibility criteria has been justified in the above table.	Assessment team confirms that this project activity meets the General Eligibility criteria of the applicable Renewable Energy Activity Requirements It can be referred from the table below.
4. Confirm that the project is not registered with any other voluntary or compliance schemes.	The project activity is not registered with any other voluntary or compliance schemes. declaration for no double counting has been provided by the PD.	Assessment team confirms that this project activity is not registered under any other voluntary or compliance schemes. The details of the registries checked are as follows: 1) http://cdm.unfccc.int/ 2) https://www.recregistryindia.nic.in/ 3) https://verra.org/verra-standards-and-programs/ 5) https://evident.app/IREC/device-register/table 6) https://cri.nccf.in/

		7) <u>International Carbon Registry</u> 8) <u>GCC Projects Portal</u> PD has also submitted a declaration which states that this project activity has neither applied or registered to claim REC benefits under any other GHG Mechanism nor it is rejected by any other GHG program. /41/
5. Demonstrate the activity is NOT located in a host country, region, locality or state that has an emission reduction cap enforced OR has the possibility to trade emissions that include the scope of the proposed project	The host country for project activity is India which is a non-annex I Country. Hence, no emission reduction cap enforced as well as no emission trading system implemented in the host country.	Assessment team confirms that this project activity is implemented in Patan, Gujarat in India which is a non-annex I Country and hence, no emission reduction cap is enforced as well as no emission trading system has been yet implemented in the host country. The location of this project activity is confirmed on the basis of location mentioned in Commissioning Certificate /27/, The Power purchase agreement between Project Developer and Solar Energy Corporation of India Limited /34/ and the onsite audit.
6. Demonstrate that no potential for double counting of impacts if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature.	The Project is not registered in any other mechanism. Also, self-declaration for no double counting has been provided by the PD.	Assessment team has cross-checked the following registries: 1) http://cdm.unfccc.int/ 2) https://www.recregistryindia.nic.in/ 3) https://verra.org/verra-standards-and-programs/ 5) https://www.irecstandard.org/ 6) https://cri.nccf.in/ 7) <u>International Carbon Registry</u> 8) <u>GCC Projects Portal</u>

		This project activity is not registered in any of the above registries, hence, the potential for double counting of impacts is zero. PD has also submitted a declaration /41/ which states that this project activity has neither applied or registered to claim REC benefits under <u>“Renewable Energy Certificate Registry of India”</u> nor it is rejected by any other GHG program and confirms that there would not be any double counting of the SDG Impacts. The validation team concluded that the electricity generated from the given project activity is not claimed by the DISCOM as an RPO commitment as per the PPA/34/, this is also cross verified by interviewing the project representative during the onsite audit. Validation team independently cross verify the publicly available weblink https://evident.app/IREC/device-register/table and found that this project activity is not registered under I-REC. Furthermore, validation team also independently cross verify the https://climateactiontracker.org/countries/india/ and https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1847812#:~:text=As%20per%20the%20updated%20NDC,based%20energy%20resources%20by%202030. and found that the given project activity is also not consider under the India NDC target. The Validation team confirms that the project has been executed under JNNSM Phase-II, Batch-IV, through the Viability Gap Funding (VGF) scheme. While the VGF funding provides financial support to the project, the project remains voluntary and is not part of the
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		country's compliance with the renewable energy targets under the NDC.
7. Demonstrate that the project is in compliance with applicable Host Country's legal, environmental, ecological and social regulation.	The project activity has obtained all the authorities' approvals to comply with legal, environmental, ecological and social regulations before begin the implementation.	Assessment team confirms that this project activity complies with India's legal, environmental, ecological and social regulations as per the interview conducted during onsite audit.

The general eligibility criteria under Renewable Energy Activity Requirements are mentioned below:

Eligibility Criteria	Justification by PD	VKU Assessment
Project Type	As discussed above, the project type is eligible.	Assessment team confirms that it is a solar power project which harness renewable energy and supply electricity to the Indian grid as per the Commissioning Certificate /27/ and Power Purchase Agreement (PPA) between Project Developer and Solar Energy Corporation of India Limited/34/.
Project Location:	The project is located in district Patan state Gujarat of India.	Assessment team confirms that this project activity is located in in village Charanka, Taluka Santalpur, District Patan in the State of Gujarat, India on the basis of location mentioned in Commissioning Certificate /27/, and Power Purchase Agreement (PPA) between Project Developer and Solar Energy Corporation of India Limited/34/ and onsite audit.

Project Scale	The project activity includes 40 MW installed capacity and is Large Solar power plants with an installed capacity above 15 MW to be qualified as a large-scale solar plant (in accordance with UNFCCC rules).	As per GS4GG GHG Emissions Reduction & Sequestration Product Requirements /15/ - “All Projects exceeding the small-scale thresholds are defined as large scale. Small scale projects are defined following CDM project standard for project activities, as below; a) Type 1: Renewable energy Projects: maximum output capacity of 15 MW(e) or 45MW (th).” As per renewable energy activity requirement /14/ any renewable energy Project with a maximum output capacity of 15 MW (or an appropriate equivalent) is defined as small scale project. Since this project activity has capacity of 40 MW that is more than 15 MW hence, it comes under large scale project activity.
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4 VALIDATION FINDINGS

Sustainable Development Goals Targeted	SDG Impact	Estimated Annual Average	Unit or Products
SDG 7: Affordable and Clean Energy	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix	81,286.14MWh per annum.	MWh of renewable energy generated
SDG 8:	8.5: By 2030, achieve full and productive	1. Training: 1 no's annually along	1. No. of trainings

Decent Work and Economic Growth	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.	with workplace health and safety is also conducted annually. 2. Employment of 15 staff.	provided to the employees/year 2. Employment generated due to project activity.
SDG 13: Climate Action	13.2: Integrate climate change measures into national policies, strategies and planning.	76,018tCO ₂ e per annum	Emission reductions in tCO ₂ e

This report contains the findings in the term of CL, CAR and FAR where:

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

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emissions reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation and verification to be verified during verification have not been resolved by the project developer.

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

A forward action request (FAR) is also raised in cases where any required deviation/information is not fulfilled in current validation/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.

A total of **11** findings were raised, which includes: **03 Corrective Action Requests (CARs)**; **07 Clarification Requests (CLs)** and **01 Forward Action Request (FAR)**. All the findings were successfully resolved by the PD except FAR#01. FAR#01 is related with the VVB who will perform 1st verification of this project activity after renewal of crediting period. The same is discussed in detail in Appendix 3 of this validation report.

4.1 Purpose and General description of Project

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, ER Sheet; Version 03, dated: 31/07/2024 /2/, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018 /3/ and onsite audit.
Findings	CL#03, CL#04 and CAR #01 has been raised and closed successfully. For more details, please refer Appendix 3
Conclusion	Assessment Team confirms that purpose and general description of project mentioned in Section A.1 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct and it complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/, previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018 /3/ and fulfils the requirements of Gold Standard for Global Goals.

4.1.1 Identification of project type

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No any finding has been raised for the identification of project type.
Conclusion	Assessment Team confirms that it is a renewable energy project as mentioned in Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ and it is correct as per previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/, Commissioning Certificate issued by Gujarat Energy Development Agency/27/, Power

	Purchase Agreement (PPA) between Orange Charanka Solar Energy Private Limited and Solar Energy Corporation of India Limited /34/. And Technical Details of the Solar panel /37/.
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4.1.2 Eligibility of the project under Gold Standard

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, Final ER Sheet; Version 03, dated: 31/07/2024 /2/, supporting documents (Section 3.1 of this report) and onsite audit.
Findings	CL#03 has been raised and closed successfully. For more details, please refer Appendix 3.
Conclusion	Assessment Team confirms that this project is eligible under Gold Standard as mentioned in Section A.1.1: Eligibility of the project under Gold Standard, of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ and it complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/, GS4GG Principles and Requirements; Version 1.2, dated: 23/10/2019 /6/, GS4GG Renewable energy activity requirements; Version 1.4, dated: 16/08/2021 /14/ and Gold standard eligible impact quantification methodologies Version 05, dated 30/12/2019 /16/.

4.1.3 Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD; Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No any finding has been raised for legal ownership of the product.
Conclusion	Assessment Team confirms that legal ownership of products generated by the project and legal rights to alter use of resources

	required to service the project mentioned in Section A.1.2 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct and Orange Charanka Solar Energy Private Limited is the legal owner of the project, but the name of the company is now changed to Greenko Charanka Solar Energy Private Limited therefore, Greenko Charanka Solar Energy Private Limited/40/ is owner of the project and of products generated by the project, previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ Commissioning certificate/27/ PPA /34/ and GS4GG cover letter /36/. It complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.
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4.1.4 Location of Project

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1 of this report) and previously registered Key Project Information & Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	CAR#01 has been raised and closed successfully. For more details, please refer Appendix 3.
Conclusion	Assessment Team confirms that location of project mentioned in Section A.2 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct as per Commissioning Certificate issued by Gujarat Energy Development Agency /27/, Power Purchase Agreement (PPA) between Orange Charanka Solar Energy Private Limited and Solar Energy Corporation of India Limited /34/ and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/. It complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.

4.1.5 Technologies and /or measures

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	CL#03 and CL#06 has been raised and closed successfully. For more details, please refer Appendix 3.
Conclusion	Assessment Team confirms that technology and/or measures mentioned in Section A.3 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct as per Commissioning Certificate of Gujarat Energy Development Agency/27/ and Technical Specification of Solar panel /37/ and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/. It complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.

4.1.6 Scale of Project

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/and onsite audit.
Findings	No finding has been raised for scale of the project.
Conclusion	Assessment Team confirms that the project has an installed capacity of 40 MW which is more than 15 MW, therefore applies as a Large -Scale project and also mentioned in Section A.4 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/and it is correct as per Commissioning Certificate issued by Gujarat Energy Development Agency /27/, Power Purchase Agreement (PPA) between Orange Charanka

	Solar Energy Private Limited and Solar Energy Corporation of India Limited /34/ and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/. It complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/ and GS4GG GHG Emissions Reduction & Sequestration Product Requirements; Version 2.2, dated: 28/08/2023 /15/.
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4.1.7 Funding sources of project

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1) and previously registered Key Project Information & Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No finding has been raised for funding sources of project.
Conclusion	Assessment Team confirms that no public funding from Annex 1 countries and no diversion of Official Development Assistance (ODA) /31/ is involved in this project activity as mentioned in Section A.5 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/. It is correct as per declaration given by the project developer and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/. It also complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.

4.2 Application and selection of methodologies and standardized baselines

4.2.1 Reference of approved methodology(ies)

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, Final
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	ER Sheet; Version 03, dated: 31/07/2024 /2/, supporting documents (Section 3.1) and onsite audit.
Findings	No finding has been raised for reference of approved methodology.
Conclusion	Assessment Team confirms that methodology /19/ and tools /20/ /21/ /22/ mentioned in Section B.1 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is the latest one and these are as follows: Methodology: 1. ACM0002: Grid-connected electricity generation from renewable sources - Version 21.0/19/ 2. Tool 1: Tool for the demonstration and assessment of additionality; Version 07.0.0 (EB 70, Annex 08) /20/ 3. Tool 7: Tool to calculate the emission factor for an electricity system; Version 07.0.0 (EB 100, Annex 4) /21/ 4. Tool 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period; Version 3.0.1 (EB 66, Annex 47) /22/ It is correct as per the GS4GG Validation and verification standard Version 1.0, dated: 06/03/2023 /10/, Gold standard eligible impact quantification methodologies; Version 2.4, dated: 22/06/2023 /16/, GHG Emissions Reduction & Sequestration Product Requirements, Version 2.2, dated: 28/08/2023 /15/ and also cross verify with CDM website, CEA database. It complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.

4.2.2 Applicability of methodology (ies) and standardized baselines

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, Final ER Sheet; Version 03, dated: 31/07/2024, supporting documents
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	(Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	CAR#02 has been raised and closed successfully. For more details, please refer Appendix 3.
Conclusion	Assessment Team confirms that the applicability criterion of methodology /19/ and tools /20/ /21/ /22/ as mentioned in Section B.1 the Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct and this project activity fulfils all the requirements of GS4GG Validation and verification standard; Version 1.0, dated: 06/03/2023 /10/ Gold standard eligible impact quantification methodologies; Version 2.4, dated: 22/06/2023 /16/, GHG Emissions Reduction & Sequestration Product Requirements; Version 2.2, dated: 28/08/2023 /15/. It also complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.

4.2.3 Deviation from methodology and/or methodology tool

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, Final ER Sheet; Version 03, dated: 31/07/2024, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No finding has been raised for Deviation from methodology and/or methodology tool.
Conclusion	Assessment Team confirms that methodology and tools mentioned in Section B.1 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is the latest one and these are as follows: Methodology: ACM0002: Grid-connected electricity generation from renewable sources - Version 21.0/19/ 1. Tool 1: Tool for the demonstration and assessment of additionality; Version 07.0.0 (EB 70, Annex 08) /20/

	2. Tool 7: Tool to calculate the emission factor for an electricity system; Version 07.0.0 (EB 100, Annex 4) /21/ 3. Tool 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period; Version 3.0.1 (EB 66, Annex 47) /22/ It is correct as per the GS4GG Validation and verification standard Version 1.0, dated: 06/03/2023 /10/, Gold standard eligible impact quantification methodologies; Version 2.4, dated: 22/06/2023 /16/, GHG Emissions Reduction & Sequestration Product Requirements, Version 2.2, dated: 28/08/2023 /15/. It also complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/. No any deviation is found either in methodology /19/ or tools /20/ /21/ /22/ used in the Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/.
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4.2.4 Project Boundary, sources and GHGs

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No finding has been raised for Project Boundary.
Conclusion	Assessment Team confirms that the project boundary and sources of GHGs mentioned in Section B.3 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct as per the applied methodology ACM0002: Grid-connected electricity generation from renewable sources - Version 21.0/19/, GS4GG Validation and verification standard; Version 1.0, dated: 06/03/2023 /10/ and also complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.

4.2.5 Establishment and description of baseline scenario

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, Final ER Sheet; Version 03, dated: 31/07/2024, supporting documents (Section 3.1 of this report) and previously registered Key Project Information & Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.										
Findings	CL#07 has been raised and closed successfully. For more details, please refer Appendix 3.										
Conclusion	Assessment Team confirms that the baseline scenario established in Section B.4 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct as per Tool 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period; Version 3.0.1 /22/, para 24 of the applied methodology ACM0002: Grid-connected electricity generation from renewable sources - Version 21.0 /19/ and GS4GG Validation and verification standard; Version 1.0, dated: 06/03/2023 /10/. The baseline emission factor is calculated as per the latest CDM – CO₂ Baseline Database; Version 19.0 /23/ released by Central Electricity Authority, Ministry of Power, GoI, available at the time of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ submission for renewal. The OM, BM & CM of the INDIAN grid used for the project activity is as follows: <table border="1"> <thead> <tr> <th>Parameter</th><th>Value</th><th>Nomenclature</th><th>Source</th></tr> </thead> <tbody> <tr> <td>EF_{grid,OM,y}</td><td>0.9580 tCO₂/MWh</td><td>Operating margin CO₂ emission factor for the project electricity system in year y</td><td>Calculated as the last 3-year (2020-21, 2021-22 and 2022-23) generation-weighted average, sourced from Baseline CO₂ Emission Database; Version</td></tr> </tbody> </table>			Parameter	Value	Nomenclature	Source	EF _{grid,OM,y}	0.9580 tCO ₂ /MWh	Operating margin CO ₂ emission factor for the project electricity system in year y	Calculated as the last 3-year (2020-21, 2021-22 and 2022-23) generation-weighted average, sourced from Baseline CO ₂ Emission Database; Version
Parameter	Value	Nomenclature	Source								
EF _{grid,OM,y}	0.9580 tCO ₂ /MWh	Operating margin CO ₂ emission factor for the project electricity system in year y	Calculated as the last 3-year (2020-21, 2021-22 and 2022-23) generation-weighted average, sourced from Baseline CO ₂ Emission Database; Version								

				19.0 /23/, December 2023 published by Central Electricity Authority (CEA), Government of India
	EF _{grid,BM,y}	0.8670 tCO ₂ /MWh	Build margin CO ₂ emission factor for the project electricity system in year y	Baseline CO ₂ Emission Database; Version 19.0 /23/, December 2023 published by Central Electricity Authority (CEA), Government of India
	EF _{grid,CM,y}	0.9352 tCO ₂ /MWh	Combined margin CO ₂ emission factor for the project electricity system in year y	Calculated as the weighted average of the operating margin (0.75) & build margin (0.25) values, sourced from Baseline CO ₂ Emission Database; Version 19.0 /23/, December 2023 published by Central Electricity Authority (CEA), Government of India
It also complies with the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/. Assessment team has confirmed that the baseline submitted at the time of design				

	certification continues to remain the same with the acceptance of changing baseline emission factor which has been updated with the CEA data base and methodological tool 11 version 3. .0.1 Step 1.1. AT has cross check this with the existing Indian electricity act 2003. The project is also found to be in line with “India’s Renewable Electricity Roadmap 2030” ⁵ .
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4.2.6 Demonstration of additionality

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/and onsite audit.
Findings	CAR#02 has been raised and closed successfully. For more details, please refer Appendix 3.
Conclusion	It is a retroactive project and already registered under gold standard. Assessment Team confirms that this project is additional as per Tool 1: Tool for the demonstration and assessment of additionality; Version 07.0.0 (EB 70, Annex 08) /20/. It also complies with GS4GG Validation and verification standard Version 1.0, dated: 06/03/2023 /10/ and the guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/. AT has cross checked the calculation sheet of Ongoing Financial Needs submitted by PP along with supporting evidences (Consisting of Company’s Balance sheet & previous MRs/48/. On reviewing these documents AT could confirm that Project activity is still posting Net losses of 23.5M & 60.61M for the years ending 31st march 2023 & 31st march, 2022 respectively /48/. Project earns carbon revenue through sale of GSVERs 3.85% of revenue earned from plant operations. AT has also cross verified and could confirm that 14.38% of Carbon revenue is spent toward the fees paid to consultant, VVB & GS for generating this revenue.

⁵ [Report-onIndiaRenewableElectricityRoadmap2030.pdf \(niti.gov.in\)](https://report-on-india-renewable-electricity-roadmap-2030.pdf)

	As per the registered PDD, annual estimated generation is 88,973 MWh. Estimated generation for 1,976 days is 481,673 MWh and actual generation is 457,504 MWh which is 5.02% lower than the estimated. AT has also crosschecked through Balance sheet/48/ that actual project cost was higher by than cost assumed in registered PDD Hence AT could confirm that Project activity is continuing to make Net losses and thus meets the requirement of Ongoing finance need,
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4.2.7 Prior Consideration

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No finding has been raised for prior consideration.
Conclusion	The project is undergoing renewal of crediting period. Hence prior consideration not required.

4.3 Estimation of emission reductions (SDG 13) or net anthropogenic removals and other Sustainable Development Goals

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, Final ER Sheet; Version 03, dated: 31/07/2024, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No finding has been raised for 4.3 Estimation of emission reductions (SDG 13) or net anthropogenic removals and other Sustainable Development Goals

Conclusion	PD has considered 3 SDGs under this project activity. The Sustainable Development Goals targeted, their most relevant SDG targets and SDG impacts are mentioned below:		
	Sustainable Development Goals Targeted	Most Relevant SDG Target	SDG Impact
	SDG 13: Climate Action	Integrate climate change measures into national policies, strategies and planning	Emissions Reductions in tCO ₂
	SDG 8: Decent Work and Economic Growth	8.5: 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	1.Training 2. Employees
	SDG 7: Affordable and Clean Energy	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix	MWh of renewable energy generated.
	Summary of ex ante estimates of each SDG Impacts are as follows:		
	SDG 7: Affordable and Clean Energy		
	YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE
	Year 1	0	82,928.20 MWh
	Year 2	0	82,098.92 MWh
	Year 3	0	81,277.93 MWh
	Year 4	0	80,465.15 MWh
	Year 5	0	79,660.50 MWh
	SDG 8: Decent Work and Economic Growth		

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	0 Training, 0 Jobs	1 Training, 15 Jobs	1 Training, 15 Jobs
Year 2	0 Training, 0 Jobs	1 Training, 15 Jobs	1 Training, 15 Jobs
Year 3	0 Training, 0 Jobs	1 Training, 15 Jobs	1 Training, 15 Jobs
Year 4	0 Training, 0 Jobs	1 Training, 15 Jobs	1 Training, 15 Jobs
Year 5	0 Training, 0 Jobs	1 Training, 15 Jobs	1 Training, 15 Jobs

SDG 13: Climate Action

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	77,554 tCO ₂ e	0 tCO ₂ e	77,554 tCO ₂ e
Year 2	76,778 tCO ₂ e	0 tCO ₂ e	76,778 tCO ₂ e
Year 3	76,011 tCO ₂ e	0 tCO ₂ e	76,011 tCO ₂ e
Year 4	75,251 tCO ₂ e	0 tCO ₂ e	75,251 tCO ₂ e
Year 5	74,498 tCO ₂ e	0 tCO ₂ e	74,498 tCO ₂ e

Assessment Team confirms that the estimation of emission reductions (SDG 13) or net anthropogenic removals and other Sustainable Development Goals (SDG 7 and SDG 8) mentioned in Section B.6.4 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct as per the applied methodology ACM0002: Grid-connected electricity generation from renewable sources - Version 21.0/19/ and it complies with the GS4GG Validation and verification standard Version 1.0, dated: 06/03/2023 /10/ and guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.

Assessment Team conclude that parameters and values mentioned under SDGs 7, 8 and 13 of SDG Impact Tool submitted by PD are consistent and correct with the Key Project Information & Project

	Design Document (PDD); Version 04, dated 31/07/2024 which are validated above.
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4.4 Monitoring Plan

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, Final ER Sheet; Version 03, dated: 31/07/2024, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.										
Findings	CL#03, CAR#01, and CAR#02 has been raised and closed successfully. For more details, please refer Appendix 3.										
Conclusion	As part of monitoring plan, these are the following data/parameters which will be monitored under 3 SDGs (SDG 7, SDG 8 & SDG 13): SDG 7: Affordable and Clean Energy <table border="1"> <tr> <td>Data / Parameter</td><td>EG_{facility,y}</td></tr> <tr> <td>Unit</td><td>MWh/Year</td></tr> <tr> <td>Description</td><td>Quantity of net electricity supplied to the grid during the year y.</td></tr> <tr> <td>Source of data</td><td>Monthly energy generation statement issued by State Electricity Board. These are called JMR (Joint Meter Reading)</td></tr> <tr> <td>Measurement methods and procedures</td><td> Data Type: Measured Monitoring equipment: Energy Meters of accuracy class 0.2s Calibration frequency of meter: Once in 5 years as per CEA guidelines. The Net electricity supplied to the grid by the project activity is calculated as a difference of electricity exported to the grid, electricity imported from the grid obtained from Monthly </td></tr> </table>	Data / Parameter	EG _{facility,y}	Unit	MWh/Year	Description	Quantity of net electricity supplied to the grid during the year y.	Source of data	Monthly energy generation statement issued by State Electricity Board. These are called JMR (Joint Meter Reading)	Measurement methods and procedures	Data Type: Measured Monitoring equipment: Energy Meters of accuracy class 0.2s Calibration frequency of meter: Once in 5 years as per CEA guidelines. The Net electricity supplied to the grid by the project activity is calculated as a difference of electricity exported to the grid, electricity imported from the grid obtained from Monthly
Data / Parameter	EG _{facility,y}										
Unit	MWh/Year										
Description	Quantity of net electricity supplied to the grid during the year y.										
Source of data	Monthly energy generation statement issued by State Electricity Board. These are called JMR (Joint Meter Reading)										
Measurement methods and procedures	Data Type: Measured Monitoring equipment: Energy Meters of accuracy class 0.2s Calibration frequency of meter: Once in 5 years as per CEA guidelines. The Net electricity supplied to the grid by the project activity is calculated as a difference of electricity exported to the grid, electricity imported from the grid obtained from Monthly										

		Meter reading reports provided by SEB as per below equation: $(EG_{\text{facility},y} = EG_{\text{Export}} - EG_{\text{Import}})$ The export and import of electricity reading are sourced from the monthly generation statement/JMR. The electricity is evacuated to the GSS and has a dedicated set of main and check meter. Cross Checking: Quantity of net electricity supplied to the grid will be cross checked from the Invoices/33/ Monthly Bill raised by the Project Developer to the Solar Energy Corporation of India Limited.
	Monitoring frequency	Measurement: Continuous Recording: Monthly Monitoring Method: recording in JMR (Join Meter Reading) The JMR includes monthly recording of electricity export & import. Energy meters of accuracy class 0.2s.
	QA/QC procedures	Quantity of net electricity supplied to the grid is cross checked from the Invoices/ Monthly Bill raised by the Project Participant to SECI. Calibration of all the meters will be undertaken at required intervals and faulty meters will be duly replaced immediately. The meters will be of accuracy class 0.2s
SDG 8: Decent Work and Economic Growth		
	Data / Parameter	Quantitative employment Quality of employment
	Unit	Number (employees) Number (Trainings)
	Description	• Number of project employees. • Number of Trainings provided to employees & O&M staff

	Source of data	• Employee Records • Training Records (HSE & HR)
	Measurement methods and procedures	Employee Records Training Records
	Monitoring frequency	Annually
	QA/QC procedures	The number of persons employed is mentioned in the plant register, which can be crossed checked with daily attendance register.
SDG 13: Climate Action		
	Data Parameter /	Emissions Reduction
	Unit	tCO ₂ e
	Description	CO ₂ emission reduction due to implementation of project activity
	Source of data	Calculated as per Tool 7: Tool to calculate the emission factor for an electricity system. The data for emission factor are obtained from “CO ₂ Baseline Database for Indian Power Sector” version 19.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
	Measurement methods and procedures	Calculated from CEA database version 19.0 and Energy Generation
	Monitoring frequency	The energy meters are calibrated once in every 5 years by an independent testing laboratory. The calibration of the meters will be done once in 5 years as per CEA guidelines. The accuracy class of meters, feeder arrangements, metering and determination of net electricity supplied to grid and calibration interval are under purview of state electricity board and PP do not have any control on it.

	QA/QC procedures	A check meter is also installed near the main meter to cross check the electricity exported to the grid. The check meter reading is used in case of failure of main meter.
	Assessment Team confirms that the monitoring plan mentioned in Section B.7 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct as there is no change from the previous monitoring plan /3/ mentioned in the previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and it also complies with the GS4GG Validation and verification standard Version 1.0, dated: 06/03/2023 /10/ and guidelines mentioned in the template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.	

4.5 Project Start date, crediting period type and duration

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No finding has been raised for Project Start date, crediting period type and duration
Conclusion	Assessment Team confirms that start date of this project activity is 19/12/2016 and it is correct as per the supporting document i.e., first purchase order for power plant and GS Passport /5/ and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/. In order to check the continuity and correctness of crediting period AT has reviewed the registered Project Design Document (PDD) dated 19/04/2018, GS Passport (18 /04/2018) & its corresponding validation report available on the SUSTAINCERT platform. These

	documents confirm that project is registered with a seven-year crediting period without specifying the start date of crediting period. However, the Monitoring Report and its corresponding Final Verification Report (FVR) for the first performance evaluation confirm start date of crediting period as 04/08/2017 (also Commissioning date of project), & seven-year crediting period (04/08/2017 to 03/08/2024). Hence the start date of the second crediting period (of 5years) starts on 04/08/2024. AT has also cross checked this information with MRs and their corresponding FVRs for 2nd/3rd/4th Performance reviews available at SUSTAINCERT platform. Hence AT confirms that the project continued to maintain the status of Gold Standard certified project beyond the five-year period and until the end of the First crediting period, as per the requirements of Section 5.1.45 of the Principles & Requirements V1.2, by undergoing Design Certification Renewal. The 2nd crediting period for this project activity as mentioned in section C.2 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 is from 04/08/2024 to 03/08/2029(Inclusive of both dates). It is renewable and length of this crediting period is 5 years. It is correct as per the GS4GG Validation and verification standard Version 1.0, dated: 06/03/2023 /10/.
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4.6 Environmental Impacts

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.
Findings	No findings were raised.
Conclusion	Assessment Team confirms that this project activity does not harm environment as mentioned in Appendix-1: Safeguarding Principles Assessment of Final Key Project Information & Project Design

	Document (PDD); Version 05, dated 20/09/2024 /1/. It is correct as per the Environment and Social Impact Assessment.
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4.7 Local Stakeholder Consultation

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018 /3/ and onsite audit.
Findings	No finding has been raised for Local Stakeholder Consultation
Conclusion	As per clause 5.1.47 of GS4GG Principles & Requirements; Version 1.2, the scope of Design certification renewal is limited to: a) Changes in the Project as related to the General Eligibility Criteria. b) Incorporation of any relevant updates to the Gold Standard Requirements. c) Re-definition of Baseline Scenario and any impact of change on the Eligibility Principles, Criteria and Requirements. d) Any Gold Standard activity, product and methodology-specific Requirements. e) Demonstration of Ongoing Financial Need, where relevant This project activity is already registered in GS4GG and PD had conducted the Stakeholder consultation physical meeting on 26/07/2016 retroactively and no any complementary stakeholder meeting is conducted during this RCP (Renewal of crediting period). For continuous input or to record ongoing communication with local stakeholders a grievance register /38/ is available at the project site office of 40 MW Orange Charanka Solar Power Project in Gujarat, India at village Charanka, Taluka Santalpur, District Patan in the State of Gujarat, India. It is permanently available to local stakeholders. It is correct as per the actual site scenario and complies with GS4GG Principles and Requirements; Version 1.2, dated: 23/10/2019 /6/, Validation and verification standard; Version 1.0, dated: 06/03/2023 /10/, guidelines of template guide

	of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.
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4.8 Global Stakeholder Consultation

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 Dated: 12/07/2024, Version 03, dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/and onsite audit.
Findings	No findings were raised.
Conclusion	The project activity is registered in GS4GG. PD had conducted the Stakeholder consultation physical meeting in line with the GS4GG requirements and guidelines. The local stakeholder consultation meeting was applicable as the project is retroactive registration project. The table 2.8 of the GS toolkit was used to identify the stakeholders. The identified stakeholders were the ones local people impacted by the project and then were local NGOs, International NGOs, GS representatives and local govt etc. Also, PD had conducted a physical Stakeholder consultation meeting on 26/07/2016 at village Charanka, Taluka Santalpur, District Patan in the State of Gujarat, India. All the stakeholders were invited through public notice which were displayed/placed to the nearby areas. Further, stakeholders were invited individually to attend the stakeholders meeting. Assessment team confirms that the stakeholder consultation mentioned in section E of Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ is correct as per the previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and fulfils the GS4GG principles and requirements /6/ and also complies with the guidelines of template guide of Key Project Information & Project Design Document (PDD); Version 1.5, dated 29/06/2023 /17/.

4.9 Safeguarding Principle and Gender Sensitive Assessment

Means of Validation	Desk Review of Key Project Information & Project Design Document (PDD); Version 01, dated: 12/06/2024, Version 02 dated 12/07/2024, version 03 dated 19/07/2024, Version 04, dated 31/07/2024 and Final Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/, supporting documents (Section 3.1 of this report) and previously registered CDM Project Design Document (PDD); Version 04, dated 19/04/2018/3/ and onsite audit.		
Findings	No findings were raised.		
Conclusion	PD has assessed Safeguarding principles in Appendix-1 of Key Project Information & Project Design Document (PDD); Version 05, dated 20/09/2024 /1/ and the summary of safeguarding principles that be monitored is summaries as follows:		
	S. No.	Principles	Mitigation measures added to the monitoring plan
	1.	Principle 6.1: Labor Rights	The Project Developer ensures the training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures.
	2.	Principle 9.5 Hazardous and Non-hazardous Waste	The waste is disposed to the waste handlers and the firm complies with all the local laws for monitoring and disposal/39/.

5 INTERNAL QUALITY CONTROL

The final validation report with final conclusion has undergone a technical review and quality review before being submitted to the project developer(s)/coordinating managing entity and GS4GG registry. Technical reviewer is qualified in accordance with VKU Certification Private Limited., qualification scheme for GS4GG validation and verification performed the technical review.

6 VALIDATION OPINION

VKU Certification Pvt. Ltd. is contracted by Greenko Charanka Solar Energy Private Limited (Project Developer) and Infinite Environmental Solutions limited (Project Representative) for validation (RCP) of the project activity **“40 MW Orange Charanka Solar Power Project in Gujarat, India” (GS 5866)** for 2nd crediting period from 04/08/2024 to 03/08/2029(Inclusive of both dates).

The validation was performed following requirements and guidelines defined by Gold Standard for the Global Goals and UNFCCC criteria, Clean Development Mechanism (CDM), latest version of Validation and Verification Standard and related Standards/Guidance and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The project will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change, as stated in the final Key Project Information and Project Design document (PDD)/1/. In the opinion of the validation team, the project meets all relevant GS4GG, UNFCCC, CDM criteria and all relevant host country.

The review of the final Key Project Information and Project Design document (PDD)/1/ and the subsequent follow-up interviews have provided validation team with sufficient evidence to determine the validity of the original baseline. The key project information & project design document (PDD)/1/ and ER Sheet/2/ correctly applies the valid version of the methodology ACM0002: Grid-connected electricity generation from renewable sources - Version 21.0 /19/ and meets all relevant criteria therein. The monitoring arrangements described in the monitoring plan are feasible within the project, and it is validation team’s opinion that the project developer is able to implement the monitoring plan and it is deemed likely that the forecasted emission reductions of 76,018tCO₂e per year from the project during the second crediting period will be achieved, given that the underlying assumptions do not change.

During the course of validation total of 11 findings were raised, which includes: 03 CARs, 07 CLs and 01 FAR were identified in the Key Project Information and Project Design document (PDD) /1/, ER Sheet/2/. All the CAR and CL have been successfully resolved by project developer except FAR#01. FAR#01 is related with the VVB who will perform 1st verification of this project activity.

In summary, it is validation team’s opinion that the project activity **“40 MW Orange Charanka Solar Power Project in Gujarat, India” (GS 5866)** meets all relevant GS4GG and UNFCCC requirements for the renewal of the crediting period. Hence, VKU Certification Pvt. Ltd. recommends the renewal of the second crediting period from 04/08/2024 to 03/08/2029 (Inclusive of both dates).

7 MATERIALITY AND LEVEL OF ASSUMPTION APPLIED

7.1 Materiality

As per the ISO 14063-3:2019 /24/, VKU validation team has applied materiality thresholds for the purpose to reach at the conclusion on the GHG statement about the estimated SDG Impacts due to the project activity “40 MW Orange Charanka Solar Power Project in Gujarat, India” (GS 5866). Hence, to assess the baseline scenario and estimation, validation team has applied the qualitative materiality over the assumptions and information presented in the final Key Project Information and Project Design document (PDD)/1/.

7.2 Level of Assumption

All the revisions in the validation report before being submitted to the project representative were subject to an independent internal technical review to confirm that all validation activities had been completed according to the pertinent VKU’s internal procedure and with a **“Reasonable Level of Assumption”** as per the ISO Standard 14064-2 and ISO 14064-3 /24/.

APPENDIX 1: Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO₂	Carbon Dioxide
CO_{2e}	Carbon Dioxide equivalent
CME	Co-ordinating/ Managing Entity
EB	Executive Body
EF	Emission Factor
FAR	Forward Action Request
FVR	Final Validation Report
GS	Gold Standard
GS4GG	Gold Standard for Global Goals
GHG	Greenhouse Gas
PD	Project Developer
QC/QA	Quality Control/Quality Assurance
SDG	Sustainable Development Goal
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reductions
VVB	Validation and Verification Body
VVS	Validation and Verification Standard
AT	Assessment team
N/A	Not Applicable
RCP	Renewal of crediting Period
PDD	Project Design Document
COD	Date of commissioning
ER	Emission Reduction
CEA	Central Electricity Authority
PPA	Power Purchase Agreement
ODA	Official Development Assistance
MOU	Memorandum of Understanding
NOC	No Objection Certificate
OCSEPL	Orange Charanka Solar Energy Private Limited
GCSEPL	Greenko Charanka Solar Energy Private Limited
GEDA	Gujarat Energy Development Agency

APPENDIX 2: COMPETENCY STATEMENT

Team Leader-

COMPETENCE STATEMENT

Name	Barun Kumar
Nationality	Indian
Countries of Experience	India, South Africa, Kenya, Uganda, DR Congo, Zambia, Madagascar, Fiji
Education Qualification	B.Sc. (Environmental Science and Water Management) M.Sc. (Ecology & Environmental Sciences)
Year of Experience	12 Years +
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	TA 1.2 - Renewables TA 3.1 – Energy Demand TA 6.1 – Construction TA 7.1 – Transport TA 13.1 – Solid waste and wastewater TA 14.1 – Forestry

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 (1.2, 3.1, 6.1, 7.1, 13.1, 14.1)	YES
Financial Expert	NO

Reviewed by	Apoorva Gupta (Quality Manager)	Date	08/10/2023
Approved by	Dr. Vikas Kumar Aharwal (Founder & Director)	Date	08/10/2023

Validator/Verifier – Trainee-

COMPETENCE STATEMENT

Name	Km Nisha Chauhan
Nationality	Indian
Countries of Experience	India
Education Qualification	B.Sc. (PCM) M.Sc. (Environmental Science)
Year of Experience	1 year in VKU
Area of Expertise	Climate Change & Environment
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	Vandana Gupta (Quality Manager)	Date	08.09.2023
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	08.09.2023

Project Trainee-

COMPETENCE STATEMENT

Name	Megha Modi
Nationality	Indian
Countries of Experience	India
Education Qualification	B.Sc. Biotechnology (Hons) M.Sc. Biotechnology
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	02/09/2023
Approved by	Vivek Kumar Ahirwar (Technical Manager)	Date	02/09/2023

Technical Reviewer-

COMPETENCE STATEMENT

Name	Sunil Kathuria
Nationality	Indian
Countries of Experience	Malaysia, Uganda, Kenya, South Africa, Nigeria Bangladesh, China, Vietnam, Thailand, Philippines, United Kingdom, Germany, USA
Education Qualification	B.E. (Electrical Power)
Year of Experience	40 Years
Area of Expertise	Climate Change & Environment Energy Generation / Distribution GHG Footprints Manufacturing Sector
Eligible Sectoral Scope	TA 1.1 – Thermal energy generation TA 1.2 – Renewables TA 2.1 - Energy distribution TA 3.1 - Energy Demand TA 4.1 – Cement and lime production (Manufacturing Industries) TA 13.1 Solid Waste & Wastewater

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, 2.1, 3.1, 4.1, 13.1)	YES
Financial Expert	NO

Reviewed by	Apoorva Gupta (Quality Manager)	Date	16/10/2023
Approved by	Barun Kumar (Technical Manager)	Date	16/10/2023

APPENDIX 3: RESOLUTION OF FINDINGS

Finding No. 01	Date: 26-June-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	
Template Guide- Project Design Document: Version 1.5	
Non-Conformity	
1) PD has not mentioned the host country in the description of project 2) PD has not included information on the key activities/details of the project milestone achieved in chronological order. 3) The geo-coordinates provided in PDD are not showing project location and solar panels on Google Earth software. 4) PD has mentioned Gamesa as the O&M representative. However, it was confirmed during onsite interviews that the O&M is done internally and no such third party is involved.	
Evidence	
Updated PDD; Version 01, dated 12-June-2024, Section A.1 Updated PDD; Version 01, dated 12-June-2024, Section A.1 Updated PDD; Version 01, dated 12-June-2024, Section A.2 Updated PDD; Version 01, dated 12-June-2024, Section B.7.3	
1st Response from PD	Date: 12-July-2024
1) The host country name is incorporated in Section A.1 of the PDD. 2) The Key milestones are incorporated in the section in the tabular format. Section A.1 of the PDD. 3) The location of geo-coordinates is correct I am also sharing the screenshot of location for reference.	



- 4) There is no involvement of 3rd party the O&M work is handled by internal team only.

Documents provided by PD for review

1. PDD version 2.0

1st Review by Assessment Team

Date: 18-July-2024

- 1) Host country has been mentioned in the updated PDD; Version 02, dated 12-July-2024. It is found to be consistent with GS project webpage. Hence, accepted and closed.
- 2) Details of project milestone achieved has been included in section A.1 of updated PDD; Version 02, dated 12-July-2024. The details have been verified with the help of supporting evidences. However, the date of project design certification is not consistent with the evidence provided by PD. (Open)
- 3) The mentioned geo-coordinates and the screenshot provided by PD are found to be correct for the project location. Hence, it is accepted by assessment team and comment is closed.
- 4) PD has still not updated the organizational flow chart and Gamesa is mentioned as the O&M entity. (Open)

2nd Response from PD

Date: 19-July-2024

- 2) The date is revised as per the design certificate date mentioned on the sustain cert webpage.
- 4) This is typo error now the flow charge is updated.

Documents provided by PD for review

PDD version 3.0

2nd Review by Assessment Team

Date: 22-July-2024

2) Assessment team found that PD has revised the date of design certification in section A.1 of updated PDD; version 03 dated 19-July-2024 and it is found to be consistent with supporting evidence provided by PD.

4) It is confirmed by assessment team that PD has updated the organizational flow chart in the revised PDD; version 03 dated 19-July-2024, as per the actual scenario of project site and it is found to be correct by assessment team as verified during the onsite interviews with site in-charge.

Hence, it is accepted by assessment team and the Finding No. 01 is closed.

Finding No. 02	Date: 26-June-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	
Template Guide- Project Design Document : Version 1.5	
Non-Conformity	
1) PD has not correctly mentioned the capacity of project. 2) PD has not provided the correct reference link for registered PDD of project GS 5866. 3) Project location is not correctly mentioned. PD needs to check this throughout the MR. 4) PD has not filled the column 'Registration number with relevant authority' in Appendix 2 of Updated PDD; Version 01, dated 12-June-2024.	
Evidence	
1) Updated PDD; Version 01, dated 12-June-2024, Section B.2 2) Updated PDD; Version 01, dated 12-June-2024, Section B.5 3) Updated PDD; Version 01, dated 12-June-2024, Section B.7.3 4) Updated PDD; Version 01, dated 12-June-2024, Appendix 2	

1st Response from PD	Date: 12-July-2024
1) The capacity of the project is updated in Section B.2 of the PDD. 2) The reference link is updated for project GS 5866 in Section B.5 of the PDD. 3) The location of the project is updated throughout the PDD. 4) Registration number with relevant authority is updated in the Appendix 2 of Updated PDD	
Documents provided by PD for review	
1. PDD version 2.0 2. COI	
1st Review by Assessment Team	Date: 18-July-2024
1) PD has corrected the project capacity in section B.2 of updated PDD; Version 02, dated 12-July-2024. It is found to be consistent with registered project PDD for first crediting period and GS project webpage. Hence, it is accepted and closed. 2) PD has updated the reference link for project GS 5866 in updated PDD; Version 02, dated 12-July-2024. Hence, it is accepted and closed. 3) PD has corrected the project location in the updated PDD; Version 02, dated 12-July-2024. It is found to be correct and acceptable by assessment team and hence finding is closed. 4) The column 'Registration number with relevant authority' in Appendix 2 is filled by PD in the updated PDD; Version 02, dated 12-July-2024. It has been cross verified from supporting evidences such as Certificate of Incorporation provided by PD and found to be correct. Hence, it is accepted by assessment team. Hence, all the CARs in 'Finding No. 02' have been closed by assessment team.	

Finding No. 03	Date: 26-June-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	
Template Guide- Project Design Document : Version 1.5	
Para 5.1.47GS-Principle and Requirements: Version 1.2	

Non-Conformity	
PD has not provided enough supporting documents to support the information and data presented in the Updated PDD; Version 01, dated 12-June-2024.	
Evidence	
PD has not provided supporting documents to verify – • Start date of first submission • Project design certification • Technical specification of project equipment • Employment records and equal work opportunities for both males and females • GS cover letter • Training provided to project staff • As of now there is no requirement of Hazardous Waste handlers because till now there is no generation Hazardous Waste but now, we are in process of doing the contract so mail communications with the 3rd party is submitted with the responses. And non-Hazardous Waste is handled inhouse with the help of local ULB. • Single Line Diagram of project activity • Sample records of daily monitored data • Financial Analysis Calculation sheet for Ongoing Financial Needs	
1st Response from PD	Date: 12-July-2024
PD is submitting the following: • The screenshot of webpage is submitted with the responses to demonstrate the First Submission Date. • The screenshot of webpage is submitted with the responses to demonstrate the Date of Design Certification and you can also confirm the same with publicly available monitoring reports. • Technical specification is submitted with the responses. • Employment record and sample salary slips are submitted with the responses. • GS cover letter is submitted with the responses. • Training records are submitted with the responses. • Mail communications with the 3rd party for Hazardous Waste handling. • Single Line Diagram is submitted with the responses. • Sample daily generation records are submitted with the responses. • Financial Analysis Calculation sheet for Ongoing Financial Needs is submitted with the responses along with all the relevant supporting documents.	
Documents provided by PD for review	
1. The screenshot of webpage for First Submission Date. 2. The screenshot of webpage for Date of Design Certification. 3. Technical specifications. 4. Employment record. 5. Sample salary slips.	

6. Training records. 7. GS cover letter. 8. Agreement with waste handler. 9. Single Line Diagram. 10. Sample daily generation records. 11. Financial Analysis Calculation sheet. 12. Audited balance sheet. 13. CSR activity information and expenses. 14. Sample JMR and invoices. 15. PPA.	
1st Review by Assessment Team	Date: 18-July-2024
Assessment team found that PD has submitted the following responses the following evidences to assessment team: • Evidence for first submission date • Evidence to demonstrate the Date of Design Certification • Evidence to cross verify the technical specifications of the project equipment. • Evidence of GS Cover letter • Evidence of Trainings provided to project staff • Evidence regarding the disposal of hazardous and non-hazardous waste • Sample evidences for daily generation records • Evidence for Ongoing Financial Needs However, there are few inconsistencies found: 1) Date of design certification mentioned in the updated PDD is not consistent with evidence provided by PD. 2) SLD provided by PD does not demonstrate sufficient information with regard to Invertors, ICS/blocks, switchyard, power evacuated at Indian grid etc. (Open)	
2nd Response from PD	Date: 19-July-2024
1) Date of design certification has been updated in PDD version 03 and the evidence has been provided. 2) The SLD is updated and the information regard to Invertors, ICS/blocks, switchyard, power evacuated at Indian grid etc is incorporated.	
Documents provided by PD for review	
PDD version 3.0	
2nd Review by Assessment Team	Date: 22-July-2024
1) It is confirmed by assessment team that PD has corrected the date of design certification in the revised PDD which is found to be consistent with the supporting evidence provided by PD. 2) It is confirmed by assessment team PD has updated the Single Line Diagram in section B.7.3 of revised PDD; version 03 dated 19-July-2024 has incorporated the details regarding	

inverters, ICS/blocks, switchyard, power evacuated at Indian grid. PP has also provided supporting evidence of Single Line Diagram of the project site, which was also verified during onsite assessment of the project.

Hence, all the CLs in Finding No. 03 has been closed.

Finding No. 04	Date: 26-June-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	
Template Guide- Project Design Document : Version 1.5	
Non-Conformity	
1) PD has not clarified whether the project activity still falls under ‘Jawaharlal Nehru National Solar Mission scheme’ and whether any funding being provided to project under any such scheme. 2) PD has not clarified if the project provides equal work opportunities for both males and females.	
Evidence	
Updated PDD; Version 01, dated 12-June-2024, Section A.1	
1st Response from PD	Date: 12-July-2024
1) This is a Viability Gap Funding Scheme aims at supporting infrastructure of the project. So right now, project is not getting any financial support under any Scheme. 2) Right now, there is no female employee is working at the project activity because the project is located in remote area and female employee are not preferring to work in remote areas but PD has No discrimination Policy and strictly following the same. The No discrimination Policy is submitted with the responses.	

Documents provided by PD for review	
1) PDD version 2.0. 2) No discrimination Policy	
1st Review by Assessment Team	Date: 18-July-2024
1. PD has clarified that ‘Jawaharlal Nehru National Solar Mission scheme’ mentioned in the PDD is a Viability Gap Funding scheme which is aimed at supporting infrastructure of the project. And right now, the project activity is not funded under any scheme. The same was also confirmed by VVB during onsite interviews with concerned personnel at project site. 2. PD has clarified that currently project activity has no female employee as the project is located in remote area. However, PP has shared a No discrimination policy of the project to demonstrate project provides equal work opportunities and work environment for both males and females.	
Hence, it is accepted by assessment team and the finding is closed.	

Finding No. 05	Date: 26-June-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	
Template Guide- Project Design Document : Version 1.5 Para 4.1.51 to 4.1.53 of GS Principle & Requirements; Version 1.2 Para 5.1.47GS-Principle and Requirements: Version 1.2	
Non-Conformity	
PD has not demonstrated the Ongoing Financial needs to meet the requirements of 4.1.51 to 4.1.53 of GS principal & requirement.	
Evidence	

Updated PDD; Version 01, dated 12-June-2024, Section B.5.2	
1st Response from PD	Date: 12-July-2024
Financial Analysis Calculation sheet for Ongoing Financial Needs is submitted with the responses along with all the relevant supporting documents.	
Documents provided by PD for review	
1. OFN sheet. 2. PPA. 3. Audited balance sheet. 4. Sample JMR invoice. 5. O&M agreement. 6. CSR activity information and expenses.	
1st Review by Assessment Team	Date: 18-July-2024
PD has provided supporting evidences to demonstrate the Ongoing Financial Needs which include the Financial Analysis Calculation sheet along with other supporting documents.	
Hence, the finding is accepted and closed.	

Finding No. 06	Date: 26-June-2024
Finding Type- CAR ☐ CL ☒ FAR ☐	
Stage of finding raised:	
Desk Review	☐
On-site assessment	☒
Technical Review	☐
Project Review Report by Registry	☐
Requirement	
Template Guide- Project Design Document : Version 1.5	
Non-Conformity	

1) During onsite assessment and interviews conducted on 22/06/2024, it was found that power is evacuated at 66 kV at GSS end. However, as per PDD, power is evacuated at 400kV. PD needs to clarify and check this throughout the MR. 2) Based on onsite interviews with the PD plant in-charge, it was found that there is currently no contract with waste handlers. However, it is mentioned in PDD that waste is disposed to waste handlers.	
Evidence	
Updated PDD; Version 01, dated 12-June-2024, Section A.3 Updated PDD; Version 01, dated 12-June-2024, Section B.7.1	
1st Response from PD	Date: 12-July-2024
1) is evacuated through transmission line at 400kv GETCO, Charanka sub-station (GSS end) located in district Charanka, Gujarat. The supporting document of the same is submitted with the responses. 2) As of now there is no requirement of Hazardous Waste handlers because till now there is no generation Hazardous Waste but now, we are in process of doing the contract so mail communications with the 3rd party is submitted with the responses. And non-Hazardous Waste is handled inhouse with the help of local ULB.	
Documents provided by PD for review	
PDD Version 2.0	
1st Review by Assessment Team	Date: 18-July-2024
1) It is clarified by PD that power is evacuated to grid through transmission line at 400kv GETCO, Charanka sub-station (GSS end) located in district Charanka, Gujarat. Assessment team has verified this with the help of supporting evidence provided by PP for 400 KV substation. The same has also been cross checked with the help of PPA. 2) PD has clarified that there is no contract currently for the disposal of hazardous waste with a 3rd party. Project developer is in process of doing a contract. It is also clarified that non-hazardous waste is being handled inhouse. The same was also verified during onsite interview with site-in charge of project activity. Hence, this is accepted by assessment team and the finding is closed.	

Finding No. 07	Date: 26-June-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	
Template Guide- Project Design Document : Version 1.5	
Non-Conformity	
1) PD has not demonstrated how project complies with relevant mandatory national/or sectoral policies. 2) Section B.4 of PDD does not describe how the project complies with the relevant National policies/laws. While doing so, PD shall present data to demonstrate how assessment of the present policies of the Government of India and project compliance with the same e.g. RE target of the country under NDC. 3) Grievance Mitigation Mechanism is not stated in this section E.2 of PDD	
Evidence	
Updated PDD; Version 01, dated 12-June-2024, Section B.4	
Updated PDD; Version 01, dated 12-June-2024, Section E.2	
1st Response from PD	Date: 12-July-2024
1) There are no new relevant national and/or sectoral policies and/or circumstances in the electricity sector applicable to the Project Activity. 2) There are no new relevant national and/or sectoral policies and/or circumstances in the electricity sector applicable to the Project Activity, in comparison to the time of the submission of the project activity for validation, which could impact the validity of the current baseline for the next crediting period. Therefore, the current baseline scenario does not need to be updated for this crediting period. Thus, the baseline scenario remains unchanged and also is in compliance with all the relevant mandatory national and/or sectoral policies. Also, the project is voluntary and the project is not a part of compliance with the RE target of the country under NDC. 3) The Grievance Mitigation Mechanism is incorporated in Section E.2 of PDD.	

Documents provided by PD for review	
1. PDD version 2.0	
1st Review by Assessment Team	Date: 18-July-2024
1) In the updated PDD; version 02 dated 12-July-2024, PD has clarified that there are no new relevant national and/or sectoral policies and/or circumstances in the electricity sector applicable to the Project Activity. 2) PD has clarified in the updated PDD; version 02 dated 12-July-2024 that there are no new relevant national and/or sectoral policies and/or circumstances in the electricity sector applicable to the Project Activity. Hence, assessment team confirms that current baseline scenario does not need to be updated for this CP. PD has also clarified in the updated PDD that the project is not a part of compliance with the RE target of the country under NDC. Hence, this is accepted by assessment team and the finding is closed.	

Finding No. 08 (TR Comments)	Date: 30-July-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	
Template Guide- Project Design Document : Version 1.5	
Non-Conformity	
In PDD version 03 dated 19-July-2024: 1. The tool number is missing for “tool to calculate the emission factor for an electricity system”, in section A.1. It is not clear why most current version of Tool is not being used.	

2. PD has not provided the distance from the power plant and the length of transmission line used in Section A.3	
Evidence	
PDD; version 03 dated 19-July-2024	
1st Response from PD	Date: 31/07/2024
1. Tool number is incorporated for tool “tool to calculate the emission factor for an electricity system”. 2. The distance from the power plant and the length of transmission line is incorporated in the section A.3 of the PDD.	
Documents provided by PD for review	
PDD version 3.0	
1st Review by Assessment Team	Date: 01/08/2024
1. Assessment team confirms that PD had incorporated tool number for the tool “tool to calculate the emission factor for an electricity system” in the revised PDD; version 04 dated 31-July-2024. 2. PD has incorporated the distance from the power plant and length of transmission line which is less than 0.5KM from the project activity in the revised PDD; version 04 dated 31-July-2024.	
Hence, all the CLs in Finding No. 08 have been resolved and closed.	

Finding No. 09 (TR Comments)	Date: 30-July-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	
Template Guide- Project Design Document : Version 1.5	
Non-Conformity	
In PDD version 03 dated 19-July-2024: 1. PD has not provided any reference or data to support the claim that “The project is voluntary and the project is not a part of compliance with the RE target of the country under NDC” in section B.3. 2. PD has not provided any clarification regarding new RE policy and road maps in the electricity sector in section B.3. 3. In section B.5.2, Ongoing financial Needs have not been demonstrated as per the requirement of GS Principles & Requirement Version 1.2 sections 4.1.52 and 4.1.53. No OFN sheet has been submitted to cross check these values 4. In section B.5.2, PD has not demonstrated justification of ongoing financial needs by showing a detailed Profit loss accounting and statements need to be supported by audited balance sheets. The values of PLF are inconsistent with ER sheet. 5. In section B.5.2, PD has not clarified how OFN is justified in view of higher earnings from sale of electricity and higher PLF. 6. PD has not clarified how the value of 0 is chosen for the parameter “hazardous waste” in section B.7.1. 7. It is not clear how the crediting period of project for GS is beyond 5 years. (Section C.2.1) 8. PP has not clarified regarding the remaining crediting period length (RCP 02) in section C.2.2.	
Evidence	
PDD; version 03 dated 19-July-2024	
1st Response from PD	Date: 31/07/2024
1. The project is voluntary and the project is not a part of compliance with the RE target of the country under NDC and self-declaration is submitted with the response. 2. hence new RE policies are not relevant to this project activity. Road map are futuristic plannings and the project is already commissioned so future targets are not relevant to this project activity.	

3. Section B.5.2 is revised and OFN sheet is submitted with the responses along with supporting documents. 4. Section B.5.2 is revised and audited balance sheet is submitted with the responses. 5. There is a fall of 5.02% in generation as compared to the estimated generation, which means the project needs carbon revenue to sustain. 6. The estimated value for hazardous waste is incorporated. 7. Earlier GS is allowing 7 years of crediting period so the CP1 is 7 years for this project and the mentioned crediting period is as per registered PDD. 8. The information of remaining crediting period is incorporated in section C.2.2 of the PDD.	
Documents provided by PD for review	
PDD version 3.0 Self-declaration OFN sheet. Audited balance sheet.	
1st Review by Assessment Team	Date: 01/08/2024
1. PD has clarified that the project is voluntary and is not part of compliance with the RE target of the country. PD has provided a declaration to support the claim that project activity does fall under the RE target of the country under NDC. Hence, this is accepted by assessment team. 2. PD has clarified that project activity does not fall under new RE policies of the country. The project is already commissioned and under operation, so the new road maps are not relevant to this project. Hence, this is accepted by assessment team. 3. PD has revised section B.5.2 of the updated PDD and also submitted the OFN sheet along with responses. The section is now found to be appropriate. Hence, this is accepted by assessment team. 4. PD has now demonstrated and justified the ongoing financial needs. PD has also submitted the audited balance sheet to the assessment team. Hence, it is accepted by assessment team. 5. PD has clarified that there is decrease/fall in the power generation by 5.02%. The OFN sheet is also verified by assessment team. Hence, this is accepted by assessment team. 6. PD has incorporated the estimated value of 5KG of hazardous waste for the parameter “hazardous waste” in section B.7.1 of revised PDD; version 04 dated 31-July-2024. 7. PD has clarified the issue regarding crediting period length that Earlier GS is allowing 7 years of crediting period so the CP1 is 7 years for this project. Hence, this is accepted by assessment team. 8. PD has clarified that the details regarding Renewable Crediting Period i.e., it will be renewed twice maximum up to 15 years i.e., 7yrs+5yrs+3yr in revised PDD; version 04 dated 31-July-2024. Hence, this is accepted by assessment team.	
Hence, all the CLs in Finding No. 09 have been resolved and closed.	

Finding No. 10 (TR Comments)	Date: 30-July-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	
Template Guide- Project Design Document : Version 1.5	
Non-Conformity	
In PDD version 03 dated 19-July-2024: 1. No breakups and comparison in OFN sheet have been provided. Project cost is inconsistent with OFN sheet in section B.5.2. 2. The O&M cost provided in section B.5.2 is inconsistent with ER sheet. 3. The percent escalation provided for O&M costs in section B.5.2 is inconsistent with OFN sheet provided by PD. 4. It is not a correct accounting practice to put project cost as expenses and arrive at loss on the OFN sheet provided by PD.	
Evidence	
PDD; version 03 dated 19-July-2024 OFN sheet Emission reduction spreadsheet; version 02	
1st Response from PD	Date: 31/07/2024
1. OFN sheet is revised and submitted with the responses also project cost is updated in section B.5.2 of the PDD. 2. The O&M cost is updated in section B.5.2 of the PDD.	

3. Section B.5.2 and OFN sheet is updated. 4. The OFN sheet is updated as per appropriate accounting practices.	
Documents provided by PD for review	
1. PDD Version 3.0 2. OFN sheet. 3. O&M agreement.	
1st Review by Assessment Team	Date: 01/08/2024
1. Assessment team confirmed that PD has revised the OFN sheet and updated the project cost in section B.5.2 of revised PDD; version 04 dated 31-July-2024. 2. The O&M has been updated in revised PDD; version 04 dated 31-July-2024 and it is now found to be consistent with ER sheet. 3. Assessment team found that the Section B.5.2 of the PDD has been Updated and found to be correct. PD has also updated the OFN sheet. Hence, this is accepted by assessment team. 4. PD has updated the OFN sheet and it is now consistent as per the appropriate accounting practices. Hence, this is accepted by assessment team.	
Hence, all the CARs in Finding No. 10 have been resolved and closed.	

Finding No. 11	Date: 30-July-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	
Site Visit and Remote Audit Requirements; Version 02	
Non-Conformity	
Refer Site Visit and Remote Audit Requirements v.02 & 3.2.2 “A physical site visit by VVB is mandatory at the first verification of a project” within 2 years after design renewal certification.	
Evidence	
N/A	
1st Response from PD	Date: 31/07/2024
1. PD will take care the Site Visit and Remote Audit Requirements at the time of verification.	
Documents provided by PD for review	
NA	
1st Review by Assessment Team	Date: 01/08/2024
The FAR raised needs to be addressed by PD during the next verification process of the project activity. The FAR is open.	

HISTORY OF THE DOCUMENT

Version	Date	Amendment Summary*	Prepared By	Approved By
3.1	21.05.2024	Signature section added for Approver and Authorized signatory	Apoorva Gupta	Dr. Vikas Kumar Aharwal
3.0	01.12.2023	Changes done in all the sections as per the requirements of GS	Apoorva Gupta	Dr. Vikas Kumar Aharwal
2.1	22/07/2021	NA	Ayushi Garg	Vikas Aharwal
2.0	29/03/2021	NA	Ayushi Garg	Dr. Vikas Kumar Aharwal
1.0	23/09/2020	NA	Ayushi Garg	Dr. Vikas Kumar Aharwal

*Amendment Summary adopted in VKU System on 12.10.2022