GLOBAL CARBON COUNCIL

Driving Climate Actions

Project Verification Report

V3.1 - 2020

CONTENTS

COVER PAGE Project Verification Report Form (PVR)	
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BASIC INFORMATION	
Name of approved GCC Project Verifier / Reference No. (also provide weblink of approved GCC Certificate)	KBS Certification Services Limited (GCCV003/01) http://globalcarboncouncil.com/wp-content/uploads/2021/10/gcc-verifier-cert-kbs-certification-services-private-limited.pdf
Type of Accreditation	☐ Individual Track[1] ☒ CDM Accreditation ☐ ISO 14065 Accreditation Name of the entity that provided the accreditation: UNFCCC Date of validity: 29/11/2019 to 28/11/2024 Weblink of the active accreditation certificate and approval: https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0051
Approved GCC Scopes and GHG Sectoral scopes for Project Verification	Scope 1 - Energy (renewable / non-renewable sources) E+/Environment Safeguard Standard S+/Social Sustainability Standard SDG+/United Nations Sustainable Development Goals
Validity of GCC approval of Verifier	04/01/2023 to 27/11/2024
Title, completion date, and Version number of the PSF to which this report applies	Title: 10 MW Solar Project_SNWI Dated: 02/01/2024 Version No. 2.2
Title of the project activity	10 MW Solar Project_SNWI
Project submission reference no. (as provided by GCC Program during GSC)	S00798
Eligible GCC Project Type[2] as per the Project Standard (Tick applicable project type)	☒ **Type A:** ☐ Type A1 ☒ Type A2 ☐ **Type B – De-registered CDM Projects:** ☐ Type B1

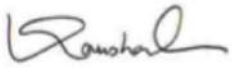
[1] **Note:** GCC Verifier under Individual tack is not eligible to conduct verifications for the GCC project that intends to supply carbon credits (ACCs) for CORSIA requirements.

[2] Project Types defined in Project Standard and Program Definitions on GCC website.

	☐ Type[3] B2
Date of completion of Local stakeholder consultation	13/06/2022
Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.	19/01/2023 GSC was conducted between 05/01/2023 to 19/01/2023 https://www.globalcarboncouncil.com/global-stakeholders-consultation-8/ No comments were received during the GSC period.
Name of Entity requesting verification service (can be Project Owners themselves or any Entity having authorization of Project Owners)	Manikaran Power Limited on behalf of "Sun N Wind Infra Energy Pvt. Ltd."
Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)	Primary Contact Person- Neelabhra Paul Email ID: neel.paul@manikaranpowerltd.in Designation- President Manikaran Power Limited Contact Person- Piyush Sharma Email ID: piyush.s@manikaranpowerltd.in Designation- Asst. General Manager–Business Development Manikaran Power Limited
Country where project is located	India
GPS coordinates of the Project site(s)	**Latitude (N)**: 24°29'16" (24.4877°) **Longitude (E)**: 78°41'45" (78.6958°)
Applied methodologies (approved methodologies of GCC or CDM can be used)	AMS-I.D.: "Grid connected renewable electricity generation", version18.0
GHG Sectoral scopes linked to the applied methodologies	GHG-SS #1. Energy (renewable/non-renewable sources)
Project Verification Criteria: Mandatory requirements to be assessed	☒ ISO 14064-2: 2019, ISO 14064-3: 2019 ☒ GCC Rules and Requirements ☒ Applicable Approved Methodology ☒ Applicable Legal requirements /rules of host country ☒ National Sustainable Development Criteria (if any) ☒ Eligibility of the Project Type

[3] GCC Project Verifier shall conduct Project Verification for all project types except B_2.

	☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Baseline ☒ Additionality ☒ Emission Reduction calculations ☒ Monitoring Plan ☒ No GHG Double Counting ☒ Local Stakeholder Consultation Process ☒ Global Stakeholder Consultation Process ☒ United Nations Sustainable Development Goals (Goal No 13-Climate Change) ☐ Others (please mention below)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria ☒ United Nations Sustainable Development Goals (in additional to SDG 13) ☒ CORSIA requirements
Project Verifier's Confirmation: The *GCC Project Verifier* has verified the GCC project activity and therefore confirms the following:	The GCC Project Verifier [KBS Certification Services Limited], certifies the following with respect to the GCC Project Activity [10 MW Solar Project_SNWI]. ☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version 2.2, dated 02/01/2024) including the applicability of the approved methodology [*AMS-I.D.: "Grid connected renewable electricity generation", v18.0*] and meets the methodology applicability conditions and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reductions estimates correctly and conservatively. ☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated [154,462 tCO_2] as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2: 2019 and ISO 14064-3: 2019. ☒ The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and is likely to achieve the following labels: ☒ Environmental No-net-harm Label (**E**$^+$) ☒ Social No-net-harm Label (**S**$^+$)

	☒ The Project Activity is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs), complies with the Project Sustainability Standard, and contributes to achieving a total of 5 SDGs, with the following[4] SDG certification label (**SDG+**): ☐ Bronze SDG Label ☐ Silver SDG Label ☐ Gold SDG Label ☒ Platinum SDG Label ☐ Diamond SDG Label ☒ The Project Activity complies with all the applicable GCC rules[5] and therefore recommends GCC Program to register the Project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	Reference Number: GCC.22.VAL.039 A Version: 1.0 Date of approval: 04/01/2024
Name of the authorised personnel of GCC Project Verifier and his/her signature with date	 Mr. Kaushal Goyal Director Date: 04/01/2024

[4] SDG Certification labels: Bronze label (1 star): by achieving 2 out of 17 SDGs; Silver label (2 star): by achieving 3 out of 17 SDGs; Gold label (3 star): by achieving 4 out of 17 SDGs; Platinum label (4 star): by achieving 5 out of 17 SDGs; and Diamond label (5 star): by achieving more than 5 out of 17 SDGs.

[5] "GCC Rules" are defined in Project Definitions and refers to the rules and requirements set out by the GCC program related to GHG emission reductions and its voluntary certification labels and are available on the GCC Program's public website: https://www.globalcarboncouncil.com/resource-centre.html

1. PROJECT VERIFICATION REPORT

Section A. Executive summary

Summary of the Project Activity:
The project involves installation of 10MW$_{AC}$ Solar Photovoltaic Power plant in Uttar Pradesh state of India. The electricity generated from project activity is exported to the Indian grid in India through power purchase agreement with Uttar Pradesh Power Corporation Ltd. (UPPCL) /22/, there by displacing electricity from the regional grid which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. This project activity (10MW$_{AC}$) consists Photovoltaic panels and associated connection boxes, Inverters, transformers and electricity meters and connected through 132/33 Mehrauni sub-station, Lalitpur, Uttar Pradesh to Indian grid. Thus, the bundled project activity is estimated to generate an average of 17,520 MWh/year electricity and displacing 15,446 tCO$_2$/year. In the baseline scenario the equivalent amount of electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. The main emission source in the baseline scenario is the power plants connected to the grid and main greenhouse gas involved is CO$_2$. The details of project activity are provided below:

Sr. No	Project Activity and Location	Commissioning date of PA /18/	Latitude	Longitude	Use of electricity
1	Project: 10MW Lalitpur District, Uttar Pradesh, India	20/02/2017	24°29'16" (24.4877°)	78°41'45" (78.6958°)	Sale to Grid

Scope of Verification:
The scope of the services provided by KBS Certification Services Limited for the project is to perform Project Verification of concerned GCC Project Activity and implemented safeguards aimed to achieve environmental and social impacts without causing any net harm. The contribution of the project activity towards the United Nations Sustainable Development Goals would also be verified. The scope of verification is to assess the claims and assumptions made in the Project Submission Form (PSF) /10/ and submitted documents, including the emission reduction calculation spreadsheets /11/, investment analysis spreadsheet /12/, letter of authorization against the GCC criteria /19/, including but not limited to, GCC PS, GCC VS, achievement of CORSIA label, applied GCC methodology and other relevant rules and requirements established under Program process.

Verification Process and Methodology:
The verification process was undertaken by a competent verification team and involved the following:

- the desk review of documents and evidence submitted by the project owner in context of the reference rules and guidelines issued by GCC,
- undertaking/conducting site visit, interview or interactions with the representative of the project owners/representatives,

- reporting audit findings with respect to clarifications and non-conformities and the closure of the findings, as appropriate and
- preparing a draft and final verification opinion based on the auditing findings and conclusions
- technical review of the draft verification opinion along with other documents as appropriate by an independent competent technical review team
- finalization of the project verification opinion (this report)

Conclusion:
The review of the PSF, supporting documentation and the subsequent follow-up interviews have provided KBS with sufficient evidence to determine the project's fulfillment of all the stated criteria. In our opinion, the project activity "10 MW Solar Project_SNWI" meets all applicable GCC requirements for the PSF and correctly applied methodology the AMS-I.D., Version 18.0.

The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project.

The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard and therefore requests GCC Steering Committee to append to this project Environmental No-net-harm Label (E+), Social No-net-harm Label (S+) to this project.

The Project Activity is likely to contribute to the achievement of United Nations Sustainable Development Goals (SDGs), complies with the Project Sustainability Standard and therefore requests GCC Steering Committee to append UN SDG Certification Labels (SDG+) to this project.

Section B. Project Verification team, technical reviewer and approver

B.1. Project Verification team

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Project Verification findings
1.	Team Leader (TA 1.2)	EI	Badaya	Rohit	Central Office	Y	Y	Y	Y
2.	Financial Expert	EI	S	Anuradha	Central Office	Y			Y
3.	Financial Expert	EI	Goyal	Satya Prakash	Central Office				Y
4.	Team Member	IR	Shrivastava	Shruti	Central Office	Y			

B.2. Technical reviewer and approver of the Project Verification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)
1.	Technical Reviewer (TA 1.2)	EI	Krishnan Kutty	Sanjay Kumar	Central Office
2.	Manager (Technical & Certification)	IR	Francis	Margaret	Central Office
3.	Approver	IR	Goyal	Kaushal	Central Office

Section C. Means of Project Verification

C.1. Desk/document review

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The report is based on the assessment of the PSF undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., on site visit, electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and GCC decisions. Additionally, the cross checks were performed for information provided in the PSF using information from sources other than the verification sources, the verification team's sectoral or local expertise and, if necessary, independent background investigations

All the documents used for arriving project verification conclusion are listed in Appendix 03 and referenced accordingly in project verification report.

C.2. On-site inspection

Duration of on-site inspection: 28/02/2023				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	The project verification team conducted interviews with the project owner, plant in-charge, other stakeholders to confirm the information and to resolve issues identified in the document review. An assessment was conducted as a part of project verification activity and involved: 1) An assessment of the implementation and operation of the project activity as per the PSF and GCC requirements 2) To validate that the project design, as documented is sound and reasonable, and meets the identified criteria GCC Standard Requirements and associated guidance 3) To assess conformance with the certification criteria as laid out in the GCC Standards; 4) To evaluate the conformance with the certification scope, including the GHG project and baseline scenarios, additionality; GHG sources, sinks, and reservoirs; and the physical infrastructure, activities, technologies and processes of the GHG project to the requirements of the GCC; 5) To evaluate the calculation of GHG emissions, including the correctness and transparency of formulae and factors used; assumptions related to estimating GHG emission reductions; and uncertainties; and 6) To determine whether the project could reasonably be expected to achieve the estimated GHG reduction/removals. 7) A review of information flows for generating, aggregating and reporting of the ex-ante monitoring parameters. 8) Interviews with relevant personnel to confirm that the operational and data collection procedures can be implemented in accordance with the Monitoring Plan 9) A cross-check between information provided in the submitted documents and data from other sources 10) A review of calculations and assumptions made in determining the GHG data and estimated ERs, and 11) An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters 12) Verification of Stakeholder Consultation by interviewing the stakeholders. 13) Additional labels (E+, S+, SDGs and C+) 14) Confirmation of legal ownership of the project activity and avoidance on double accounting	Lalitpur district, Uttar Pradesh, India	28/02/2023	Rohit Badaya

C.3. Interviews

No.	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1	Banerjee	Prashant	Plant Manager, SWIEPL	28/02/2023	- Project Implementation status - Project Boundary - Methodology - Eligibility criteria - Host country Requirements - Monitoring Plan - Project activity start date and crediting period - Roles and responsibilities of the project owner - Local Stake holder consultation - Baseline assumptions - Additionality - Training to the Monitoring personnel - Emission reduction calculations - Legal Ownership of the project activity - Double counting of the carbon credits of the project activity - E+, S+, SDG+ and CORSIA aspects as per the PSF and GCC requirements	Rohit Badaya
2	Kumar	Ajay	Site Incharge, Sterling & Wilson			
3	Singh	Kunwar	Engineer, Sterling & Wilson			
4		Rajkumar	Helper, Sterling & Wilson			
5		Purushottam	Security Guard, Pioneer Security			
6	Yadav	Ravinder	Security Guard, Pioneer Security			
7	Singh	Gabbar	Security Guard, Pioneer Security			
8	Yadav	Neeraj	Security Guard, Pioneer Security			
9	Singh	Bhikam	Farmer, Local Stakeholder			
10	Panjiyara	Rohit	Dy. Manager-BD, Manikaran Power Limited	20/03/2023 25/12/2023 (telephonic call)		

C.4. Sampling approach

Not applicable as no sampling has been used during the project verification.

C.5. Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

Areas of Project Verification findings	Applicable to Project Types	No. of CL	No. of CAR	No. of FAR
Green House Gas (GHG)				
Identification and Eligibility of project type	A_1, A_2, B_1, B_2			
General description of project activity	A_1, A_2, B_1, B_2	CL01	CAR01	

Application and selection of methodologies and standardized baselines	A_1, A_2, B_1, B_2			
- Application of methodologies and standardized baselines	A_1, A_2, B_1, B_2	CL02		
- Deviation from methodology and/or methodological tool	A_1, A_2, B_1, B_2			
- Clarification on applicability of methodology, tool and/or standardized baseline	A_1, A_2, B_1, B_2			
- Project boundary, sources and GHGs	A_1, A_2, B_1, B_2			
- Baseline scenario	A_1, A_2, B_1, B_2			
- Demonstration of additionality including the Legal Requirements test	A_1, A_2, B_1, B_2	CL03, CL04, CL05		
- Estimation of emission reductions or net anthropogenic removals	A_1, A_2, B_1, B_2		CAR02, CAR03	
- Monitoring plan	A_1, A_2, B_1, B_2	CL06		
Start date, crediting period and duration	A_1, A_2, B_1, B_2	CL07		
Environmental impacts	A_1, A_2, B_1, B_2	CL08		
Local stakeholder consultation	A_1, A_2, B_1	CL10		
Approval & Authorization- Host Country Clearance	A_1, A_2, B_1, B_2			
Project Owner- Identification and communication	A_1, A_2, B_1, B_2			
Global stakeholder consultation	A_1, A_2, B_1			
Others (please specify)	A_1, A_2, B_1, B_2			
VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E^+)	A_1, A_2, B_1	CL09, CL13		
Social Safeguards (S^+)	A_1, A_2, B_1			
Sustainable development Goals (SDG^+)	A_1, A_2, B_1	CL12		
Authorization on Double Counting from Host Country (only for CORSIA)	A_1, A_2, B_1	CL11		FAR01
CORSIA Eligibility (C^+)				
Total		13	03	01

Section D. Project Verification findings

D.1. Identification and eligibility of project type

Means of Project Verification	The project is eligible under Type A2 (Sub-Type1) category as per GCC Project standard /2/ and GCC Clarification No 01 /6/ which is acceptable since the project has not been registered under any GHG program/Non GHG Program and the project operations started since year 2016 as 20/02/2017 is the commissioning date of the project activity. The commissioning document of the project activity has been verified in this regard and found in order. Further following project meets the Type A2 (Sub-Type 1) project category as: • It is not required by a legal mandate and it does not implement a legally enforced mandate as confirmed by the assessment team verification of the relevant policies pertaining to generation of energy in the host country i.e., Electricity Act 2003 /35/, National Electricity Policy 2005 /35/, National Solar Mission /36/, Integrated Energy Policy 2006 /37/, National Action Plan on Climate Change (NAPCC) 2008 /38/, Renewable Energy Certificates (RECs), 2011 /39/, International REC Standard (I-REC) /44/. • It complies with all the applicable host country legal requirements and it ensure compliance with legal requirements. The project is a renewable energy project activity and meets the host country requirements of sustainable development criteria. The project owners received connectivity approval & evacuation approval/21/ and executed power purchase agreement/22/ prior to start date or the commissioning date of the plant which is in line with the paragraph 16 (b) of Project Standard Version 3.1 /2/, the project owner has demonstrated that required approvals and authorizations are available or being processed prior to the start of commercial operations of the project activity which is acceptable to the verification team. • The project also delivers real, measurable and additional emission reduction of 15,446 tCO_2 /11/ annually (average value over the crediting period) as compared to the baseline scenario. • Project applies an approved CDM monitoring and baseline methodology AMS-I.D. “Grid connected renewable electricity generation” -Version 18.0 /13/.
Findings	No findings raised in this context.
Conclusion	The project is eligible as per the requirements under section 4 and Section 5 of the GCC project standard Version 3.1 /2/ and Section 6 of the Clarification No 1 /6/ of GCC which was verified from the documents submitted by the project owner. Further verification team cross checked the other GHG Programme like Clean Development Mechanism (CDM) Registry /40/, VERRA Registry /41/, Gold Standard (GS) Registry /42/, Universal Carbon Registry/64/, International Carbon Registry/64/, Social Carbon/64/ and voluntary non-GHG Programs like I-REC /44/, Renewable Energy Certificate (REC) Mechanism /43/ in India, for the information regarding the consistency of the title of the project activity, GPS coordinates, Legal Ownership of the Project activity and confirmed that the project was not submitted or registered under any other GHG programmes and voluntary non-GHG Programs.

D.2. General description of project activity

Means of Project Verification	The project involves installation of $10MW_{AC}$ Solar Photovoltaic Power plant in Uttar Pradesh state of India. The electricity generated from project activity is exported to the Indian grid in India through power purchase agreement with Uttar Pradesh Power Corporation Ltd. (UPPCL)/22/, there by displacing electricity from the regional grid which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. This project activity is connected through grid sub-station to Indian grid through the transmission line of around 16 km from project site. This project activity ($10MW_{AC}$) consists Photovoltaic panels and associated connection boxes, Inverters, transformers and electricity meters. Thus, the project activity is estimated to generate an average of 17,520 MWh/year electricity and displacing 15,446 tCO_2/year. In the baseline scenario the equivalent amount of electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. The main emission source in the baseline scenario is the power plants connected to the grid and main greenhouse gas involved is CO_2. The Location details of each project locations are mentioned in section A of this report. The location details have been verified during the onsite visit and geo coordinates verified through google earth/maps and found to be correct. The project uses 25,200 number of 320 Wp polycrystalline PV modules and 10,920 number of 315 Wp polycrystalline PV modules /20/ and associated connection boxes, Inverters, other field equipments in all the project premises. Hence the DC capacity of the plant arrives as 11.50 MW/23/. However the AC capacity of the plant is 10 MW as confirmed through commissioning certificates/18/, power purchase agreement/22/. The Purchase order/EPC /23/29/ has been checked and also the technical details /20/29/ (as provided in the PSF) of the equipments including solar panels, inverters, transformers have been verified during onsite visit and found in order. The project owner declared in the PSF the lifetime of the solar modules as 25 Years/20/ and lifetime of inverters as 15 years/20/. As per the technical data sheet/20/ of PV modules provided by the project owner, technology supplier provides power output warranty of 25 years. Further the website of Canadian Solar/20/ has been checked as per which "*Solar projects typically have a designed operating lifetime of 25 years. Canadian Solar's PV panels are manufactured with uncompromising quality control and adherence to strict international standards and it is important to us that this commitment is maintained through to the end of life for our solar modules. A high-quality solar panel has a guaranteed lifespan of 25 to 30 years and experience in the field shows that up to 40 years is possible*" and hence the lifetime of 25 years was found acceptable. Further similar GCC approved projects (S00037, S00093, S00098, S00100, S00102) have been checked and found the lifetime of 25 years as appropriate. However, the Project owner have fixed crediting period 10 years which is accordance GCC project manual version 03.1 paragraph 51. The crediting period start date of the project activity is 20/02/2017 and end date is 19/02/2027. The project activity described as Type A2 (Sub-Type 1) and applied AMS-I.D.: Grid connected renewable electricity generation - Version 18.0 /13/ falls into the small-scale category as per CDM methodology. In addition to generating emission reductions the project activity also qualifies for other voluntary certification labels, Achieving the United Nations Sustainable Development Goals (SDG+) – Platinum Environmental No-net harm - (E+) Social No-net harm - (S+) CORSIA – C+

	In the baseline scenario the main source of emission was found to be CO_2 as electricity was generated mainly through fossil-fuel based power plants whereas in project scenario the electricity is generated by the Solar Power plant thereby reducing the CO_2 emissions. Thus, non-application of GWP in this project activity was found to be acceptable as the project boundary does not include any of the GHG emissions in the project scenario as per the applied methodology. The description in the PSF includes sufficient details and provides clarity on the project activity. Further verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry /40/, VERRA Registry /41/, Gold Standard (GS) Registry /42/, Universal Carbon Registry/64/, International Carbon Registry/64/, Social Carbon/64/ and voluntary non-GHG Programs like I-REC /44/, Renewable Energy Certificate (REC) Mechanism /43/ in India, Carbon Registry-India/63/, Universal Carbon Registry/64/ for the information regarding the consistency of the title of the project activity , GPS coordinates, Legal Ownership of the Project activity to determine if the project was part of any other GHG/non GHG Program prior to commencement of this verification. It was confirmed that the involved project owners have not submitted the project under any other GHG /non GHG program apart from GCC.
Findings	CL 01, CAR 01 raised in this context and closed successfully
Conclusion	The project description was verified based on the review of documents. Based on the review of documents and by means of onsite verification the details provided in the PSF is found acceptable and complete.

D.3. Application and selection of methodologies and standardized baselines

D.3.1 Application of methodology and standardized baselines

Means of Project Verification	Applicability criterion as per AMS-I.D. version 18.0 /10/	Verifier Assessment
	This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	The project involves installation of 10MW$_{AC}$ Solar Photovoltaic Power plant in Uttar Pradesh state of India. The electricity generated from project activity is exported to the Indian grid in India through power purchase agreement with Uttar Pradesh Power Corporation Ltd. (UPPCL)/22/, there by displacing electricity from the Indian grid which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. Thus, the bundled project activity is estimated to generate an average of 17,520 MWh/year electricity and displacing 15,446 tCO_2/year.
	Illustration of respective situations under which each of the methodology (i.e. "AMS-I.D.: Grid connected renewable electricity generation", "AMS-I.F.: Renewable electricity generation for captive use and mini grid" and "AMS-I.A.: Electricity generation by the user) applies is included in the appendix.	This is renewable power generation activity and the generated electricity from the project activity is exported to the Indian grid in India through power purchase agreement with Uttar Pradesh Power Corporation Ltd. (UPPCL)/22/, this resembles the scenario listed at SI. No. 1 of the table 1 and hence the methodology AMS-I.D. is applied appropriately.
	This methodology is applicable to project activities that: (a) Install a Greenfield plant; (b) Involve a capacity addition in (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; or (d) Involve a replacement of (an) existing plant(s)/unit(s).	This is the solar power project, where there was no renewable power plant operating prior to implementing the project activity (greenfield project). This was verified by the verification team by means of on-site visit and documents/18/22/.
	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: (a) The project activity is implemented in an existing reservoir with no change in the volume reservoir; (b) The project activity is implemented in existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project	This is not applicable as the project activity is the installation of solar PV panels to generate electricity.

	emissions section, is greater than 4 W/m2; (c) The project activity results in new reservoirs and the power density of the power plant, as per the definitions given in project emissions section, is greater than 4 W/m2; or	
	If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	The project activity does not have a non-renewable component. Hence it is not applicable.
	Combined heat and power (co-generation) systems are not eligible under this category.	The project activity does not involve any co-generation as it only involves electricity generation from Solar PV project. Hence this criterion is not applicable.
	In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct1 from the existing units.	This project is not due to any capacity addition in the existing renewable plant. This is a greenfield project, which was verified and confirmed through onsite verification and interviewed with project owner and their representatives. Further the same is confirmed through the commissioning certificates/power purchase agreement/18/22/
	In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW.	There is no retrofit or replacement involved in the project activity. Hence this criterion is not applicable.
	In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as “AMS-I.C.: Thermal energy	This is not a landfill project or waste gas project or waste water treatment project or agro-industries project. Hence this criterion is not applicable.

production with or without electricity" shall be explored.	
In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply	This is a solar project and there is no biomass involved in the project. Hence this criterion is not applicable.

The justification provided for the above applicability criteria in the PSF/10/ has been checked and found appropriate.

Tool 07: Tool to calculate the emission factor for an electricity system, ver07

Applicability condition	Assessment
This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	This project involves electricity generation from the solar PV modules that generate electricity and subsequently export to grid. In the absence of the project activity, the equivalent amount of power would have been drawn from the Indian grid which is dominated by fossil fuel power plants. The baseline emissions are calculated from electricity supplied to the grid by the project activity multiplied with emission factor of the National grid. The emission factor calculated using OM, BM and CM using this tool and same was explained in section D.3.4 of this report. Thus, the applicability criterion is met.
Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e. option IIa and option IIb. If option IIa is chosen, the conditions specified in "Appendix 1: Procedures related to off-grid power generation" should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	The project activity has chosen the emission factor based on calculation performed by CEA. The same has been confirmed from CEA CO_2 database User Guide Version 18.0 /34/. It is also further confirmed that the only grid connected power plant has been considered for OM, BM and CM calculations The point has been assessed in detail under section D.3.4 of the report. The criteria were found to be met.

In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	The project is located on the host country India, which is not Annex I country, hence the criterion is not applicable.
Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	This is not applicable as the project activity is the installation of greenfield solar power plant to generate electricity.

Tool 01: Tool for the demonstration and assessment of additionality; Ver 7.0

Applicability condition	Assessment
The use of the "Tool for the demonstration and assessment of additionality" is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.	The methodology is approved in CDM and the tool is included by the same approved methodology viz., AMS -I.D. version 18.0.0 /13/. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met. The project owner does not propose any new methodologies to demonstrate additionality.
Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory	The methodology is approved in CDM and the tool is included by the same approved methodology viz., AMS-I.D. version 18.0 /13/. Thus, the application of this tool was found to be acceptable and the applicability criterion is met.

Tool27: Investment analysis version 11.0

Applicability condition	Assessment
This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", the guidelines "Non-binding best practice examples to demonstrate additionality for SSC project activities", or baseline and monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.	Project activity applies "Tool for the demonstration and assessment of additionality". Hence this tool is applicable. As per the para26 of the project standard, "*Under GCC Rules, any Project Owner seeking to design a GCC Project Activity shall apply the latest versions of either a GCC approved methodology or methodologies and tools approved under UNFCCC's Clean Development Mechanism, available at the time of submission of project documents to the GCC, as required by the Program Process, for conducting a Global Stakeholder Consultation (GSC)*" The project "submission date" is "27 June 2022" as per the GCC project webpage:

	https://projects.globalcarboncouncil.com/project/781 Hence the version 11 of the Tool was available at the time of submission of the project to GCC for webhosting and hence found appropriate.
In case the applied approved baseline and monitoring methodology contains requirements for the investment analysis that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	The approved baseline and monitoring methodology does not specify any approach which are different from those described in the methodological tool. Hence this tool is applicable.

Tool21: Demonstration of additionality of small-scale project activities, version 13.1

Applicability condition	Assessment
Para 4 of the applied Tool: The use of the methodological tool "Demonstration of additionality of small-scale project activities" is not mandatory for project participants when proposing new methodologies. Project participants and coordinating/managing entities may propose alternative methods to demonstrate additionality for consideration by the Executive Board	The tool is included by an approved methodology AMS I.D version 18.0 which is the applied methodology. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met.
Project participants and coordinating/managing entities may also apply "TOOL19: Demonstration of additionality of microscale project activities" as applicable.	The criterion is not applicable as the project activity is a small-scale activity and not a micro-scale project.

Common Eligibility Criteria for Type A projects as per project standards section 5.1

Applicability condition	Assessment
The Project Owner shall demonstrate that the GHG emission-reduction project complies with the eligibility requirements of one of the project types allowed under the GCC, as stipulated in section 44 above	The project activity falls under type A2, sub-type 1, which has been confirmed. Thus this condition is justified.
Has started operations, and begun generating emission reductions, after 1 January 2016	The project in the project activity was commissioned on 20/02/2017, which is after 01/01/2016 only. Thus this condition is justified.
Complies with the GCC Rules related to: • GHG emission reductions (mandatory requirement);	The condition is justified as follows: • The project activity consist of generation of power based on solar

• Contributions to the UN SDGs (SDG+ label) (voluntary requirement for selection, but mandatory if selected); • Do-no-net-harm Environmental requirements (E+ label) (voluntary requirement for selection, but mandatory if selected); • Do-no-net-harm requirements for Society (S+ label) (voluntary requirement for selection, but mandatory of selected); and • Submission of Host Country Attestation on Double Counting as and when required by CORSIA (mandatory requirement for projects that intend to use ACCs for CORSIA).	energy and hence it leads to GHG emission reductions. • The project activity contributes to UN SDG goals and the same has been discussed in Section F and found appropriate. • The project contributed to Do-no net-harm Environmental requirements. The same has been discussed in detail in Section E of this PSF and found appropriate. • The project contributed to Do-no-net-harm for Society requirements. The same has been discussed in detail in Section E of the PSF and found appropriate. • The FAR has been raised for the same in the Report. Thus this condition is justified.
Project Owners planning to use ACCs for the pilot phase of CORSIA are eligible to apply under project types A1, A2 and B1, and can be registered under the GCC Program provided that they meet all of the GCC Rules and criteria for CORSIA	The project activity is planning to use ACCs for CORSIA and will be registered as Type A2. The project meets all the GCC rules and CORSIA criteria. This condition is justified.

Specific Eligibility Criteria for Type A projects as per project standards section 5.2

Applicability condition	Assessment
The Project Owner shall demonstrate that the Project Activity is not required by a legal mandate and does not implement a legally enforced mandate	The project activity is not a legal mandate in the host country. The same has been justified as Legal test in section B.5. of the PSF and alo concluded in the Section D.3.5 of the Project verification report.
The Project Owner shall demonstrate that the Project Activity complies with all applicable host-country legal requirements19 with compliance focused at project level scope. The Project Owners shall ensure compliance with legal requirements by demonstrating that the project has either acquired the necessary licenses for their implementation and operation or provide an undertaking that these approvals and the licenses are under process and shall be available prior to start of commercial operations of the project	The project activity is not a legal mandate in the host country. The same has been justified as Legal test in section B.5. of the PSF and also concluded in the Section D.3.5 of the Project verification report.

	Delivers real, measurable and additional emission reductions compared to its baseline	The project activity comprises of installation and operation of solar power plant which will generate electricity and supply the same to the Indian grid. This will in turn reduce the dependency on fossil fuel dominated Indian grid which is the baseline scenario. As electricity is generated from a renewable source of energy, i.e., solar energy, the project is also contributing in emission reduction. Thus this criteria is justified.
	Applies an approved CDM or GCC Baseline and Monitoring Methodology.	The project activity applies CDM Baseline and Monitoring Methodology, AMS-I.D, version 18.0/13/ and follow the non-binding practice examples to demonstrate the additionality for SSC project activities as per the para53(a) of the GCC Project Standard/2/. Thus this condition is justified.
Findings	CL 02 was raised and closed successfully.	
Conclusion	The project verification team confirms that approved methodology: AMS.I-D, "Grid connected renewable electricity generation", version-18.0 /13/ is applicable to the PSF which was valid and available at the time of uploading the project documentation for Global Stakeholder Consultation (GSC) process. This is inline with the paragraph 26 of the Project Standard, which states "*Under GCC Rules, any Project Owner seeking to design a GCC Project Activity shall apply the latest versions of either a GCC approved methodology or methodologies and tools approved under UNFCCC's Clean Development Mechanism, available at the time of submission of project documents to the GCC, as required by the Program Process, for conducting a Global Stakeholder Consultation (GSC). In doing so, the Baseline and Monitoring Methodologies shall be applied in full, including the full application of any tools or guidance referred to by a methodology*". All applicability conditions of the applied methodology and applicable Tools are being met and the PSF are in line with all the requirements indicated in the methodology. Related eligibility criteria with respect to the applicability of the methodologies have been established and met by the PSF of the GCC Project activity.	

D.3.2 Clarification on applicability of methodology, tool and/or standardized baseline

Means of Project Verification	Since the applicability of methodology was found to be fulfilled, further clarification to the methodology were not required.
Findings	No finding was raised.
Conclusion	Since the applicability of methodology was found to be fulfilled, further clarification to the methodology were not required.

D.3.3 Project boundary, sources and GHGs

Means of Project Verification	As per the applied methodology AMS-I.D. version 18.0 /13/, the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the project power plant is connected to. The components of the project boundary mentioned in the PSF were found to be in compliance with para 18 of the applied methodology. The verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified. The verification team

	confirmed that all GHG sources required by the methodology have been included within the project boundary. It was assessed that no emission sources related to project activity will cause any deviation from the applicability of the methodology or accuracy of the emission reductions. The project boundary is clearly depicted with the help of a pictorial depiction in section B.3 of the PSF and duly verified by the verification team via commissioning certificates /14/ of the project activity & power purchase agreement/22/ between project owner and state electricity utility which is found to be acceptable and appropriate.
Findings	No findings raised in this context.
Conclusion	• The verification team was able to assess that complete information regarding the project boundary has been provided in PSF and could be assured from the line diagram. • The verification team confirms that the identified boundary, selected emissions sources are justified for the project activity.

D.3.4 Baseline scenario

Means of Project Verification	As per applied methodology paragraph 19 if the project activity is the installation of a greenfield renewable power plant/unit, the baseline scenario is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid, as reflected in the combine margin(CM) calculations described in "TOOL07: Tool to calculate the emission factor for an electricity system" /14/. The project activity involved setting up of Solar plant to harness the power of sunlight to produce electricity and supply to the grid. In the absence of the project activity, the equivalent amount of power would have been supplied by the national grid, which is fed mainly by fossil fuel fired plants and by the addition of new generation sources. Hence, the baseline for the project activity is the equivalent amount of power from the Indian grid. The baseline scenario selected is in compliance with all applicable legal and regulatory requirements as the implementation of project activity is a voluntary initiative and is not mandatory or a legal requirement. The regulations and policies referred in section B.5 of the PSF does not restrict or empower any authority to restrict the fuel choice for power generation and the applicable environmental regulations/45/ do not restrict the use of solar energy and there is no legal requirement on the choice of a particular technology. All the policies and regulations which gives comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies. Hence as per CDM VVS paragraph 81(b) /51/ it can be concluded that the provincial and sectoral policies are E- policies that decrease GHG emissions. Also, these policies have been implemented since the adoption by the COP of the CDM M & P (decision 17/CP.7, 11 November 2001). Hence the project owner has not considered them in developing the baseline scenario for the project activity. Instead, the baseline scenario is based on hypothetical situation without the provincial and sectoral polices being in place. Based on the sectoral expertise of the verification team, the selection of baseline scenario by the project owner is more appropriate and acceptable. As per paragraph 22 of the applied methodology, baseline emissions include only CO_2 emissions from electricity generation in power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions

	are the product of electrical energy produced by the renewable generating unit expressed in MWh multiplied by the grid emission factor in tCO_2/MWh. Determination of Grid Emission Factor (EFgrid,CM,y) The project owner used the "Tool to calculate the emission factor for an electricity system" Version 7.0 /14/ to determine the combined margin emission factor. The value of combined margin is sourced from CO_2 Baseline Database for the Indian Power Sector version 18.0 published by Central Electricity Authority (CEA) /34/, Government of India which is latest version publicly available during the submission of PSF to GCC Verifier for verification. In this case the Combined Margin emission factor (weighted average of Simple Operating Margin and Build Margin) is estimated based on three years average (2019-20, 2020-21, 2021-22) of Simple Operating Margin and Build Margin of current year (2021-22) is in line with steps of "Tool to calculate the emission factor for an electricity system". Both the value of Simple Operating Margin and Build Margin are selected under ex-ante approach. The grid boundary w.r.t the connected grid is Indian grid. In accordance with "Tool to calculate the emission factor for an electricity system", 'Dispatch Data Analysis' is the first methodological choice out of four options of calculating OM emission factor. Nevertheless the "Dispatch data analysis operating margin" is ruled out in India due to lack of necessary dispatch data of the grids. The same fact is also considered by the Central Electricity Authority (Ref the user guide for CO_2 Baseline Database for the Indian Power Sector version 18.0 /34/. Out of other 3 options of calculating OM Project Owner have rightly selected simple OM emission factor calculation as the share of low cost / must run resources of the selected grid over the five most recent years (2017-18,2018-19,2019-20, 2020-21, 2021-22) which is less than 50% of the gross grid generation. For wind and solar projects, "Tool to calculate the emission factor for an electricity system" allows the usage of the default weights are as follows: wOM =0.75 and wBM = 0.25. Using the above values, the combined margin emission factor is estimated at 0.9310 tCO_2/MWh. The calculation of EFgrid,y is current and publicly available and published by the Central Electricity Authority on its web-site/34/. The verification team is convinced of the result of the emission factor calculation. It is deemed to be adequate and transparent. The baseline scenario in the PSF is reported as the supply of electricity to Indian Grid by the project activity would have otherwise been generated by the operation of grid-connected power plants. The baseline scenario applied in the PSF was compared with the requirements of the baseline described in the applied methodology and found consistent. As the project owner has determined the baseline scenario for the project in accordance with the requirements set out in the methodology/13/ applied to the project, hence it meets the requirements of para55 of the project standard/2/ and found correct.
Findings	No findings raised in this context.
Conclusion	The project verification team confirms the following; • All assumptions and data used by the project owner are listed in the PSF, including their references and sources; • All documentation used by project owner as the basis for assumptions and source of data for establishing the baseline scenario is correctly quoted and interpreted in the PSF; • The project verification team also concluded that the identified baseline scenario reasonably represents what would occur in the absence of the project activity.

D.3.5 Demonstration of additionality

Means of Project Verification	The demonstration of additionality under GCC the project activity is required to undergo the following two tests 1. Legal Requirement test: The relevant national acts and regulations pertaining to generation of energy in the host country i.e., India are Electricity Act 2003 /35/, National Electricity Policy 2005 /35/, National Solar Mission /36/, Integrated Energy Policy 2006 /37/, National Action Plan on climate Change (NAPCC) 2008 /38/, Renewable Energy Certificates (RECs) 2011 /39/ verified by the assessment team. It was confirmed that there are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions or other legally binding mandates requiring its implementation, or requiring the implementation of a similar technology/measure that would achieve equivalent levels of GHG emission reductions. The assessment team assessed the relevant regulations of the host county to confirm the requirements and also confirmed based on the local expertise by the verification team the project is not implemented to meet any legal requirement. 2. An Additionality Test either based on a Positive List test or a projects-specific additionality test. As per the applied methodology AMS-I.D. (Version 18.0) additionality of the project activity demonstrated and assessed by the latest version of "Demonstration of additionality of small-scale project activities v13.1". In accordance with Tool 21, "Demonstration of additionality of small-scale project activities v13.1" Project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers: • **Investment barrier:** A financially more viable alternative to the project activity would have led to higher emissions; • **Technological barrier:** A less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions; • **Barrier due to prevailing practice:** Prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions; • **Other barriers:** Without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher. **Investment Analysis** It has been demonstrated that project activity is not economically or financially feasible, without the revenue from the sale of approved carbon credits. Further to conduct the investment analysis, Methodological tool: Investment analysis, version 11.0, EB 112 Annex 2 has been referred which is appropriate and acceptable to verification team also in line with the paragraph 97 of VVS Version 3.0. **Determine appropriate analysis method:** The project gets revenue from the sale of electricity from the project activity, hence cannot apply simple cost analysis as per Option I. Furthermore, Option II investment

	comparison analysis cannot be applied as the alternative to the project activity is the electricity generated by new and existing grid connected power plants. Hence the project owner has applied the Option III benchmark analysis method to demonstrate the additionality of the project activity in terms of decision-making context which is acceptable to the project verification team. The project cost involves both equity and debt, Project owner has selected Post tax equity IRR as a financial indicator to demonstrate the financial unattractiveness of the project. Furthermore, the financial indicator selected by the project owner is appropriate because the tool does not limit the project owner to use either the project IRR or the equity IRR. The project owner has the discretion to choose the best indicator based on their preference to know the IRR based on their equity or debt investment. The same is reasonable and acceptable to the verification team. **Sub-step 2b: Option III. Apply benchmark analysis:** Benchmark selection and its appropriateness: As per Paragraph 15 of the investment analysis version 11.0 "The *applied benchmark shall be appropriate to the type of IRR calculated. Local commercial lending rates or WACC are appropriate benchmarks for a project IRR. Required/expected returns on equity are appropriate benchmarks for an equity IRR. Benchmarks supplied by relevant national authorities are also appropriate. The DOE shall validate that the benchmarks used are applicable to the project activity and the type of IRR calculation presented".* The Project owner has chosen Equity IRR as the financial indicator, based on the above the appropriate benchmark is required/expected returns on equity which is correctly chosen by the project owner and it is acceptable. As per paragraph 19 of the Investment Analysis tool, version 11.0" '*If the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in Appendix; or by (b) calculating the cost of equity using CAPM.* Project owner has taken the default value for expected return on equity of 10.55% as given in the table of Appendix of Tool 27-Investment Analysis (EB 112 Annex 2) Version 11.0 /15/ which was the latest version applicable at the time of submission of project activity for global stakeholder consultation (GSC) for additionality demonstration. This is inline with the paragraph 26 of the Project Standard, which states "*Under GCC Rules, any Project Owner seeking to design a GCC Project Activity shall apply the latest versions of either a GCC approved methodology or methodologies and tools approved under UNFCCC's Clean Development Mechanism, available at the time of submission of project documents to the GCC, as required by the Program Process, for conducting a Global Stakeholder Consultation (GSC). In doing so, the Baseline and Monitoring Methodologies shall be applied in full, including the full application of any tools or guidance referred to by a methodology*". Hence the value considered by the project owner is appropriate and acceptable to verification team. The benchmark return on equity in the tool is expressed in real terms. The post tax equity IRR calculated is in nominal terms as escalation is considered in O&M cost. Accordingly, Project owner converted the default benchmark which is in real terms into nominal terms by using the following equation: Nominal Benchmark = {(1+Real Benchmark) *(1+Inflation rate)}-1. Verification team referenced the book 'Corporate Finance" 2nd edition, by Aswath Damodaran /55/. In page 320 of the book, the same equation is mentioned for converting real into nominal values. Hence the assessment team considers the above equation as appropriate for converting real benchmark into nominal benchmark.

As per paragraph 16 of the tool state that the inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period, accordingly project owner has chosen the Reserve Bank of India (RBI) is Central Bank of host country (India) and it is India's monetary authority which is acceptable to the verification team.

The Reserve bank of India (RBI) provides the bimonthly forecast (for the next five years and 10 years) for the inflation. RBI forecasted values for the next ten years for CPI inflation has been used to adjust the default value of ROE, which is given in real terms as per below for respective Solar Project.

Investment Decision Date	CPI value (10 years forecast)	Benchmark	Source
25/03/2015 /57/ The investment decision has been checked from the Board resolution passed for the 10MW plant, which is found appropriate.	5.00% The median value is chosen instead of mean and maximum values available in the "*32nd Round of result of survey of professional forecasters on Microeconomic indicator*" and hence found conservative & appropriate.	16.08%	32nd Round of result of survey of professional forecasters on Microeconomic indicator: https://rbi.org.in/Scripts/PublicationsView.aspx?id=16202

Therefore,
Return on Equity$_{Nominal}$ = (1+ 10.55%) x (1+5.0%) – 1=16.08%
Hence, the return on equity 16.08% has been considered as benchmark value.

The verification team has verified the sources and confirmed that the benchmark identified to compare the financial attractiveness of the project activity is appropriate.

Appropriateness of the input parameters:
The input parameters in the financial analysis have been taken as per the values and assumptions applicable and available at the time of decision to invest (25/03/2015) in the project activity in line with Paragraph 10, investment analysis tool. Most of the input values are based on the Detailed Project Report/Income Tax/Companies Act, which was the latest available at the time of investment decision. Hence the

verification team is convinced that the input parameters used in the detailed project report/46/were valid and applicable at the time of investment decision.

Further the input values have been cross-checked with alternate sources (EPC /23/, Invoices/29/, DPR /24/, CERC order and found reasonable. Additional details on the same have been provided in the below sections.

CARs and CLs were raised on non-conformities and they were set right. With the corrections having been incorporated, the input values considered appear to be in order. All the input parameters considered in computation, the basis, correctness and appropriateness thereof are given in below table along with verification team comments. Verification Team, therefore, conforms to guidance given vide paragraphs paragraph 99 and 101 of VVS version 3.0/51/. The equity IRR for the project activity at the time of investment decision comes out as 13.38%. Verification team done detailed assessment of all the input parameters is as follows:

Particulars	Value	Unit	Assessment
Capacity of the project	10	MW_{AC}	The capacity of $10MW_{AC}$ has been considered at the time of investment decision, which is confirmed through the submitted DPR//24/. The capacity is further verified through the grant of connectivity approval/21/ and executed power purchase agreement with Uttar Pradesh Power Corporation Ltd. (UPPCL)/22/ and Commissioning Certificate /18/. Further, the same has been confirmed during onsite visit by the verification team and found to be correct.
Project Lifetime	25	Years	The operational life time of the project activity is sourced from DPR /24/, which was available at the time of investment decision. The project owner declared in the PSF the lifetime of the project activity as 25 Years. As per the technical data sheet/20/ of PV modules provided by the project owner, technology supplier provides power output warranty of 25 years. Further the website of Canadian Solar/20/ has been checked as per which "*Solar projects typically have a designed operating lifetime of 25 years. Canadian Solar's PV panels are manufactured with uncompromising quality control and adherence to strict international standards and it is important to us that this commitment is maintained through to the end of life for our solar modules. A high-quality solar panel has a guaranteed lifespan of 25 to 30 years and experience in the field shows that up to 40 years is possible*" and hence the lifetime of 25 years was found acceptable. Further similar GCC approved projects (S00037, S00093, S00098, S00100,

				S00102) have been checked and found the lifetime of 25 years as appropriate. Hence, the value considered by project owner is correct and appropriate for the project.
	Plant Load Factor (PLF)	PLF for year1: 20% PLF for year2: 19% PLF from year3 onwards: 18.8%	%	The PLF is considered as the following based on the Detailed Project Report (DPR)/24/ which was available at the time of investment decision. PLF for year 1: 20% PLF for year 2:19% PLF from year 3 onwards: 18.8% The DPR same is prepared by third party company and is in line with paragraph 3 (b) of "Guidelines for the reporting and Validation of Plant Load Factors" (Annex 11 of EB 48) /54/. Further it is noted that Central Electricity Regulatory Commission order dated 03/03/2015 which was prevailing at the time of investment decision, which recommend PLF of 19.00% for the tariff determination for the solar PV projects. Hence considering the PLF of 20% has been found conservative for the investment analysis. It is further to be noted that The average PLF achieved during the last 5 years arrives as around 20% as observed during the site visit, which is the same PLF 20% (1st year generation) used in the investment analysis. Additionally the same generation has been considered from year 3 to year 25 onwards, however as per the CERC order, module degradation of 0.6% has been recommended. Hence PLF considered in the investment analysis has been found as conservative and hence appropriate. Additionally as per the signed PPA/22/, "*Procurer, at any time during a contract year, shall not be obliged to purchase any additional energy from the SPP beyond the contracted capacity with a maximum CUF of 21%"*. Hence as per the PPA, the maximum purchase allowed is corresponding to the CUF of 21%. However using the CUF of 21% still results into equity IRR less than the Benchmark (16.08%). Hence the PLF considered in the investment analysis has been found as appropriate.

				Hence the value considered by the project owner in the investment analysis is conservative and acceptable to the verification team.
	Project cost	835	INR million	The project cost has been taken up from the DPR/24/, which was available at the time of investment decision and hence found correct. Additionally the verification team cross-checked the actual cost (776.3 INR million) incurred by the project owner through the Financial Statement certified by the Chartered Accountant /62/ evidence for the investment as per the requirements set forth by CDM VVS paragraph 99. Consequently, it was found that the actual cost incurred is 7.03% lesser than the cost considered in the investment analysis. Hence consideration of the project cost from actual cost against the DPR project cost still results in the equity IRR remaining below the benchmark. A threshold analysis was carried out and found that the project would become non additional only if project cost goes down by 13.40 %. However, reduction in project cost is not a likely scenario in the verification team's opinion, as the project has been already commissioned and also actual cost incurred by the project owner is supported by the financial statement /62/ of the company which was issued based on the verification of books and records maintained by the project owner. Taking into consideration all these factors, the verification team concludes that the project cost is reliable and appropriate for the project activity.
	Tariff	8.5	INR/kWh	The tariff rate is based on the Detailed Project Report/24/, which was available at the time of investment decision. The actual tariff is further cross-checked through the PPA/22/ signed for the project activity with UPPCL. As per the PPA, the tariff rate is 9.27 INR/kWh and with this actual tariff rate, the equity IRR becomes 14.69%, which is still the benchmark of 16.08%, hence the project remains additional with the actual tariff as well. Hence, the tariff considered in the investment analysis is acceptable and found to be appropriate.

	Operation and Maintenance cost Escalation in O&M cost	10.00 5.72%	INR Million %	The O&M cost is based on the Detailed Project Report/24/, which was available at the time of investment decision. As per the DPR, the O&M cost is 10 milliion INR. Further the escalation in the O&M cost has been considered based on the CERC order dated 06/02/2012. It is observed that O&M cost is not a critical factor at all in as much as only a 140% reduction in O&M cost would render the project non-additional. Further decrease in O & M cost more than 100% will breach the benchmark which is not a possibility. Hence the assumption of O&M cost and its escalation is acceptable to the verified team.
	Debt/Equity ratio	72.46 % / 27.54 %	%	The debt equity ratio is based on the DPR/24/ which was available at the time of investment decision. The debt-equity ratio is also confirmed through the CERC order/46/, which also recommends almost the same debt to equity ratio of 70% to 30%. Therefore the debt:equity ratio of the project is considered to be in order. Hence the debt:equity ratio considered is acceptable.
	Interest rate	14.00 %	%	The interest rate is based on the DPR/24/ which was available at the time of investment decision, hence found appropriate. The interest rate of 13% has been considered in the CERC order dated 03/03/2015 available at the time of investment decision. However using the interest rate of 13% still results in the equity IRR remaining below the benchmark.
	Salvage value	10%	%	The Salvage value of 10% has been considered based CERC order/46/ available at the time of investment decision, hence found correct. Further the salvage value of 10% is also inline with the local accounting regulations and hence found appropriate in accordance with latest methodological tool for Investment Analysis.
	Book Depreciation	4%	%	The project owner has considered straight-line method for book depreciation where 90% of the initial value of the project cost is depreciated for the life period of the project considering 10% salvage value. This is as per as per Schedule XIV of the Companies Act, 1956 for computing book profit which is as per accounting practices followed in the host country. The following link has been verified and found correct. https://taxguru.in/company-law/rates-depreciation-companies-act-2013.html

				The same has also been confirmed through the Indian government website and found correct: http://www.incometaxindia.gov.in/charts%20%20tables/depreciation%20rates.htm Further the CERC order /46/ available at the time of decision making has also been checked and found that depreciation has been calculated based on SLM method with depreciation rate as 5.83%, hence depreciation rate is found conservative in the investment analysis calculations. Hence the calculations for the Book Depreciation was found correct based on the accounting principles.
	IT Depreciation Rate	80%	%	The project owner considered the IT depreciation rate 80% for Module, Plant machinery, Erection, installation & Commissioning. This is as per Income Tax Act 1961 stipulated for income tax calculation which is as per accounting practices followed in the host country. The following web link has been verified and found correct. https://incometaxindia.gov.in/charts%20%20tables/depreciation%20rates.htm
	Effective Income tax rate	32.45 %	%	The corporate tax payable is calculated based on the base corporate tax, Surcharge & educational cess given in the Union budget analysis for the year 2014-15 which was available at the time of investment decision. The calculation based on the following values Base corporate tax- 30% Surcharge – 5% of corporate tax Educational Cess- 3% of corporate tax. The corporate tax value considered is correct and applicable to the project activity. The same has been verified in the following weblink and found to be correct. https://taxguru.in/income-tax/income-tax-rate-chart-assessment-year-201516-financial-year-201415.html The same has also been confirmed through the Indian government website and found correct: http://www.incometaxindia.gov.in
	Effective MAT rate	20.01 %	%	The MAT payable based on the value given in the Union budget analysis for the year 2014-15 which was available at the time of investment decision. The calculation based on the following values Minimum Alternate- Tax – 18.5% Surcharge – 5% of corporate tax

			Educational Cess- 3% of corporate tax Hence the MAT value considered is correct and applicable to the project activity. https://taxguru.in/income-tax/income-tax-rate-chart-assessment-year-201516-financial-year-201415.html The same has also been confirmed through the Indian government website and found correct: http://www.incometaxindia.gov.in

Financial calculation and conclusion

The Equity IRR calculations were provided in a spreadsheet. The calculation was verified and found to be correct by project verification team; as well as the assumptions used in the calculation were deemed to be correct. The Equity IRR without carbon credit revenues is 13.38%, while the calculated Benchmark is 16.08% which confirms that the project activity in absence of the carbon credit benefits and compared to the benchmark return on equity is not financially attractive.

Sensitivity Analysis

The Guidance on Assessment of Investment Analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation. The project owner has identified generation, project cost, O&M cost, tariff as critical assumptions. These constitute more than 20% of the project cost/revenue. Guidance 28 of Tool 27 states that as a general point of departure, variations in the sensitivity analysis should at least cover a range of +10% and –10%, unless this is not deemed appropriate in the context of the specific project circumstances. Since project has already been implemented any variation in project cost is hypothetical. Nevertheless, the project cost has also been subjected to 10% variation.

As the project revenue is bound to increase, hence the IRR under following set of conditions and vice versa-

- Increase in expected PLF/ CUF values
- Increase in expected O&M cost
- Decrease in expected Project Cost
- Decrease in expected Tariff rates

Addressing the same, following parameters have been chosen to conduct the sensitivity tests-

1. PLF
2. O&M Cost
3. Project Cost
4. Tariff Rate

The results of the sensitivity analysis are summarized below for the project activity.

Sensitivity Analysis	Equity IRR			
Variation %	-10%	Normal	+10%	Variation needed to reach benchmark

PLF	10.15%	13.38%	14.99%	13.35%
O&M	13.73%	13.38%	13.02%	-140.0%
Project Cost	15.20%	13.38%	9.39%	-12.21%
Tariff Rate	10.15%	13.38%	14.99%	13.35%

An analysis has been done to identify the percentage variation at which the financial indicator will equal/breach the benchmark and the probability of its occurrence. The occurrence of these events is unlikely for the following reasons:

- PLF: The PLF value considered is based on the detailed project report and the PLF will breach the benchmark value at an increase in PLF by 13.35% (PLF arrives as 22.67%). It is evident from the actual generation data the PLF for the years 2017-22 the average PLF achieved was 20.01%. The actual PLF values fall well within the 10% sensitivity range. As being a solar project, it is highly unlikely that subsequent PLF of the plant will increase further than the actual achieved in these initial years. The PLF in the subsequent years surely will not increase. Hence, increase in PLF to breach benchmark value is not a possibility.

- Project Cost: The project cost considered for investment analysis for the project activity are sourced from the Detailed project report (DPR). The project will breach the benchmark value on decrease of project cost by 12.21%. Cost of project as per the DPR is INR 835 million and actual cost for the project activity comes out to be is INR 776.3 million which is 7.03% lower than cost considered for investment analysis. However as breaching value is 12.21% and the actual project cost fall well within the 10% sensitivity range. The project cost is already incurred. Thus, is not a likely scenario, further reduction in the same is not possible.
- O&M Costs: The sensitivity analysis reveals that O&M will breach the benchmark at negative values, which is hypothetical case. The sensitivity analysis of the plant shows that the decrease in O&M cost more than 100% will breach the benchmark which is not a possibility

- Tariff: The Tariff rate of electricity considered investment analysis i.e., INR 8.5/kWh which is sourced from the Detailed project report. The project will breach the benchmark value on increase of tariff rate by 13.35 %. The actual tariff rate signed for the project as per the PPA is INR 9.27/kWh which is well within the 10% sensitivity range and hence likely hood of increase of tariff beyond the breaching value is not a likely scenario for projects for period of assessment considered as the tariff rate fixed for the project.

The results of sensitivity analysis show that even with a variation of ±10% in tariff, PLF, project cost, and O&M cost, Equity IRR is lower than the benchmark. Based on above analysis it can be concluded that project is not financially attractive and equity IRR are well below benchmark value and with all reasonable variation the projects post tax equity IRRs does not breach the benchmark value. The carbon revenue from sale of ACCs will help in reducing viability funding gap.
And it is evident from the results given above; the project remains additional even under the most favorable conditions.

Findings	CL 03, CL04, CL05 was raised in this context and closed successfully.
Conclusion	• The benchmark used in the project activity is found appropriate and all the sources used to arrive the benchmark have been thoroughly assessed by the verification team and found to be correct.

	• All the parameters and assumptions used in the financial analysis were verified and found appropriate. The input parameters were verified and crosschecked with authentic resources as referenced in the relevant parameters and found to be correct • The results of the investment analysis along with sensitivity analysis (variables being the PLF, O&M cost, Project cost and Tariff) confirms that the project activity (without ACCs benefits) generates returns less than the benchmark value. • Based on the information provided in the PSF and guidance by GCC Project Standard version 03.1/2/, Demonstration of additionality of small-scale project activities v13.1 /16/, Investment Analysis Tool Version 11.0 /15/ verification team confirmed the project activity is deemed additional.

D.3.6 Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	The verification team checked whether the equations and parameters used to calculate GHG emission reductions or net anthropogenic GHG removals for PSF is in accordance with applied methodology. Verification team checked section B.6 of the PSF to confirm whether all formulae to calculate baseline emissions, project emission and leakage have been applied in line with the underlying methodology. **Baseline Emissions**: The baseline emissions as discussed in B.6.1 mentioned that the emission would have occurred in the absence of the project activity. The emission reduction calculation has been done as per the small-scale methodology AMS-I.D, Version 18.0 /13/. The baseline emissions of the project activity according to the paragraph 22 of the applied methodology is, $BEy=EG_{PJ,y}\times EF_{grid,y}$ Where, BE_y = Baseline Emissions in year y; tCO_2 $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into grid as a result of the implementation of the GCC project activity in year y (MWh/year) $EF_{grid,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system Version 7.0" (t CO_2/MWh) /14/ As per paragraph 26 of the applied methodology, If the project activity is the installation of a greenfield power plant $EG_{PJ,y} = EG_{facility,y}$ Where $EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/year) As per PSF/10/ & DPR/24/, the estimated net electricity generation from the project activity is 17,520 MWh (year 1), 16,644 MWh (year 2), 16,468 MWh (year 3 onwards) over the crediting period and calculated combined margin emission factor based on the Tool is 0.9310 tCO_2/MWh. Hence the baseline emission value will be 16,311 tCO_2 (year 1), 15,495 tCO_2 (year 2), 15,332 tCO_2 (year 3 onwards) accordingly/11/. The basis for electricity generation from the project activity is calculated based on the values of PLF as discussed in the ERs Excelsheet. Hence the value considered for the calculation of emission reductions for the project activity is reasonable and appropriate. For ex-post, this parameter ($EG_{PJ,y}$) is being calculated as difference of electricity exported to the grid by the project activity and electricity imported from the grid by the project activity and those are being measured by energy meters of accuracy class 0.2s. **Project emissions**:

	As per paragraph 39 of the applied methodology, For most renewable energy project activities, PEy = 0. Since Solar power is a GHG emission free source of energy project emission considered as Zero for the project activity. **Leakage Emissions**: As per the paragraph 42 of the applied methodology, there are no emissions related to leakage in this project. **Emission reductions** As per Paragraph 43 of the applied methodology, emission reductions are calculated as follows ERy = BEy − PEy - LEy Where: ERy = Emission Reductions in year y (t CO_2/y) BEy = Baseline Emissions in year y (t CO_2/y) PEy = Project Emissions in year y (t CO_2/y) LEy = Leakage Emissions in year y (t CO_2/y) Based on the above estimation ERy = BEy, Hence the annual emission reductions based on the ex-ante parameters is 15,446 tCO_2 (annual average over the crediting period).
Findings	CAR02, CAR03 was raised and closed successfully
Conclusion	Project verification team confirm that the algorithms and formulae to calculate project emissions, baseline emissions, leakage and emission reductions in the PSF is in line with the requirements of the selected methodology AMS-I.D. Version 18.0, For ex-ante calculation, the assessment team confirms that • All assumptions and data used by the project owner are listed in the PSF including their references and sources. • All documentation used by project owner as the basis for assumptions and source of data is correctly quoted and interpreted in the PSF. • All values used in the PSF are considered reasonable in the context of the project activity. • The baseline methodology and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions; • All estimates of the emissions can be replicated using the data and parameter values provided in the PSF. • All calculations are complete and without any omissions.

D.3.7 Monitoring plan

Means of Project Verification

The monitoring plan described in the PSF is in compliance with the applied methodology AMS-I.D. Version 18.0 /13/. The monitoring plan has been found to be in compliance with the requirements of the applied methodology for calculation of GHG emission reductions, GCC Environment and-Social-Safeguards-Standard-v3.0 /4/ and Project-Sustainability-Standard-v3.1 /5/. The assessment team has reviewed all the parameters in the monitoring plan against the requirements of the applied methodology and confirmed that monitoring parameters are applied in line with the requirement of the methodology and relevant in the context of the program. The procedures have been reviewed by the assessment team through document review and interviews with the respective monitoring personnel. The information provided has allowed the assessment team to confirm that the monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the project owner. Specifically, these points include the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the project. Therefore, the project owner will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

The parameters that are fixed ex-ante are:

Parameter	Value	Source
Operating margin emission factor (tCO_2/MWh)	0.9518	Sourced from Baseline CO_2 Emission Database, Version 18.0 published by Central Electricity Authority (CEA), Government of India /34/
Build margin emission factor (tCO_2/MWh)	0.8687	Sourced from Baseline CO_2 Emission Database, Version 18.0 published by Central Electricity Authority (CEA), Government of India/34/
Combined margin emission factor (tCO_2/MWh)	0.9310	Database, Version 18.0 published by Central Electricity Authority (CEA), Government of India/34/

The parameters that are to be monitored ex-post as per applied methodology & parameters identified as harmless and harmful under Environmental and Social Safeguard section in the PSF and the applicable SDG parameters are given below.

1	$EG_{PJ,facility,y}$	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (in MWh/y): The power generated from the project activity is exported to grid. The electricity exported is measured through the electricity meters located at the grid sub-station. The net electricity supplied by the project activity is the difference between export and import of the electricity from the project activity. The export and import readings of the project activity will be sourced from joint meter reading issued by the state utility. The energy meters sealed by the state utility and its representatives. These meters are bi-directional tri-vector energy meters (main and check Meters) of 0.2s accuracy class. These meters are continuously measured the electricity generated from the projects and readings of meters shall be taken on monthly basis by authorized officer of State utility in the presence of project owner or representative of Project owner. The calculation is done by state authority and the Project owner has no control over the authority for the calculation.

			This data is directly used for calculation of emission reductions. Thereafter, based on the monthly report, invoices will be raised. These invoices can be used for cross checking the meter readings taken for the respective project activity. The meter details are provided in the PSF which was verified during the onsite visit of the project activity.
	2	CO_2 Emission reductions	The parameter is calculated based on the net electricity generation from the project activity and grid emission factor. Reduction of CO_2 emissions due to implementation of project activity that would otherwise been emitted by thermal power plants. The monitoring parameter will be calculated on monthly basis through metering of electricity by means of energy meters as mentioned above monitoring parameter $EG_{PJ,facility,y}$.
	3	Replacing fossil fuels with renewable sources of energy-	The parameter is calculated based on the net electricity generation from the project activity. This parameter is about increasing the share of renewable energy sources in the total electricity generation. The monitoring parameter will be continuously monitored by means of energy meters as mentioned above monitoring parameter $EG_{PJ,facility,y}$.
	4	Long-term jobs (> 1 year) created	This parameter is monitored based on the duration for which the employment is generated. It will involve the employments generated with the number of persons with salaries paid for more than 12 months. This will be verified using the HR and payroll records /27/ of the employees who worked on the project activity. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity
	5	Reducing / increasing accidents	This parameter will monitor the number of workplace accidents recorded after providing training. This parameter is monitored on yearly basis based on the number of trainings provided by the project owners to the employees and staffs of the project activity to reduce the accidents at site. This will be verified using the training records /registers maintained in the project site. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	6	Specialized training imparted	This parameter will monitor the number of technical and non-technical trainings provided to local employees as per the training needs. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	7	Exploitation of Child labour	This parameter will monitor that no child below the age of 14 will be employed and make to work in the project

			activity. The project proponent confirms that the company's HR policy is strictly practiced at site and confirms no child labour is deployed at the site at any cost. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	8	Solid waste pollution from E- wastes	As per monitoring plan E-waste generated from the project activity shall be stored and disposed-off as per the guidance of E-waste management and Handling Rules 2016 in the host country. As per the guidance the E-waste generated from the project activity will be collected by the dealer of producer or dismantler or recycler or through the designated take back service provider of the producer to authorized dismantler or recycler. This will be monitored by means of the records by the project owner in the installation site when E waste will be disposed of or sent for refurbishment. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	9	Solid waste Pollution from end-of-life products/ equipment	This parameter is monitored on continuous basis based on the solar PV modules after ending lifecycle or damaged/defunct solar PV modules which could not be reused in the project activity. There is no prevailing law in place in regard to how the ending lifecycle or damaged/defunct solar PV modules shall be stored or replaced in the host country. The project owner is in the process of devising an internal policy for the same based on the standard practice followed domestically/internationally. In the meantime, if regulation or guideline of the host country is released, it shall be ensured that the same is adhered to. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
Findings	CL 06 were raised and closed successfully		
Conclusion	The verification team confirms that, • The project verification team confirms that the monitoring plan based on the approved monitoring methodology is correctly applied to the PSF. • The monitoring plan will give opportunity for real measurements of achieved emission reductions. The verification team considers that monitoring arrangements described in the monitoring plan is feasible within the project design. • The means of implementation of the monitoring plan are sufficient to ensure that the emission reduction and other voluntary labels achieved from the project activity is verifiable and thereby satisfying the requirement of Verification Standard. • The monitoring plan will give opportunity for real measurements of achieved emission reductions. There are no host country requirements pertaining to		

	monitoring of any sustainable development indicators. Therefore, there are no such parameters identified in the PSF.

D.4. Start date, crediting period and duration

Means of Project Verification	The start date of the project activity is 20/02/2017/18/ which is the earliest commercial operation date of the project activity. The Commissioning certificates of the installation of the project activity has been verified and confirmed start date as per PSF is found correct and acceptable to verification team. A crediting period of a maximum length of 10 years has been selected by project owner. The start date of the crediting period is stated as 20/02/2017, which is appropriate as per paragraph 40(b) of the Project Standard version 03.1. The expected lifetime of the project activity is 25 years which is verified by the technical details of the PV panels and confirmed based on the sectoral expertise.
Findings	CL 07 was raised and closed successfully
Conclusion	The start dates and the crediting period type & length have been verified and found to be in accordance with GCC project standard version 03.1 /2/.

D.5. Environmental impacts

Means of Project Verification	As the guidelines on Environmental Impact Assessment have been published by Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006/45/. Further amendments to the notification have been done on 14/07/2018/45/, the Solar power projects are not listed in any of the categories of the schedule, hence the no EIA required as per host country legislation. The project activity is implemented on the barren lands and there is no forest land or any protected land involved in the project activity. Also, necessary approvals have been obtained by the project owner before implementation and of the project activity. This has been evident from the verification of the documents and during onsite site by the verification team. The project was already implemented and there is no possibility of any negative impact during operation phase of the project activity.
Findings	CL08 was raised and closed successfully
Conclusion	In the opinion of the assessment team, in the project activity environmental impacts is not significant as per host country legislation. Further analysis not required in this context.

D.6. Local stakeholder consultation

Means of Project Verification	A LSC was conducted for the project activity on 13/06/2022 at the project site in Barchaun village in Lalitpur district of India. The consultation was performed to meet the requirement of the GCC since there are no Host country requirement to conduct consultation for such projects. The verification team confirms that the local stakeholder consultation process was performed by the project owner before the submission of the project activity for global stakeholder consultation. The objective of the local stakeholder consultation carried out to comply with GCC requirements and identify the comments/concerns that might be required to be addressed by project owner. The local stakeholders were invited through advertisement in newspaper, through public notices and through individual invitations on 05/06/2022/26/. During the meeting 15 stakeholders including the local people attended the meeting. The representative of GCC project owner explained technical aspects and GCC mechanism & its requirement of project to stakeholders, also explained about Social, Environmental benefits and UN sustainable development goal impacts of the project. Furthermore, the project owner was asked to provide feedback on the project activity,

	including whether the project will have a positive, negative, or no impacts The stakeholder consultation responses/26/ were received by the assessment team. The verification team confirmed by review of the stakeholder responses that the summary of stakeholders' comments reported in PSF was accurate. There was no negative feedback received. The list of the relevant stakeholders who were requested for feedback is also provided in the PSF.
Findings	CL10 is raised and closed successfully
Conclusion	The project verification team confirms that the summary of stakeholders' comments reported in PSF is complete. In the opinion of the team, the local stakeholder consultation process was adequately conducted by the project owner considering the ongoing pandemic to receive unbiased comments from the all the stakeholders. The project verification team confirms that the local stakeholder consultation process performed for the project activity fulfils the requirements and all the LSC documents /26/ are verified and found acceptable.

D.7. Approval and Authorization- Host Country Clearance

Means of Project Verification	As per the GCC program guidelines the submission of HCA on double counting is required by CORSIA labelled project after 31/12/2020 as verified under section D.13 of this report. The project Owner has applied for CORSIA eligibility. Paragraph 33(d) of GCC Program Process requires Project Owner to submit the HCLOA together with the project documentation required for submission of request for registration of the project activity can be displayed as having market eligibility flag (C+) on the GCC Project website and GCC registry. However, Para 16 of Standard on Avoidance of Double Counting, version 1.0 also allows project owners to submit the HCLOA at the time of issuance stage provided they make a declaration under the PSF. For carbon credits issued during 01/01/2016 to 31/12/2020 the host country approval is not required. Thus, for this project activity Host country clearance is not required at the time of project verification.
Findings	CL 13 raised and closed. Also FAR 01 raised.
Conclusion	The project verification team confirms that no Host Country approval is required by the CORSIA labelled project activity and the HCA will be required during the first or subsequent verification, when the issuance of carbon credit is considered beyond 1st January 2021.

D.8. Project Owner- Identification and communication

Means of Project Verification	The information and contact details of the project owner and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF which was checked. The Authorization letters /19/ signed by the project owners has been verified and also the company registration documents/19/ and project owner valid passports/19/56/ have been checked. The legal owner of the project is "Sun N Wind Infra Energy Pvt. Ltd.", same is demonstrated by the project owner through the approvals /21/, commissioning certificates/18/, power purchase agreement/22/, EPC /23/. The project verification team interviewed the authorized personnel & project owners as per LoA and confirmed the authenticity of the Letter of Authorization (LoA)/19/ and ownership of the project activity. As per GCC requirement, only the legal owner of the project can hold or assign/transfer the ownership of the ACCs. The legal owner of the project is "Sun N Wind Infra Energy Pvt. Ltd. /18/21/22/23/24/31/32/59/. Further, the majority of renewable energy projects in the host country that supply power to the grid or third-party sale via grid, executing power purchase agreements with state utilities or any power purchaser, only carbon credits revenue is shared with the parties involved in the projects, but ownership of the carbon credits will always

	lies with the legal owner/investor of the project. Based on the verification team's sectoral and local expertise, the "Sun N Wind Infra Energy Pvt. Ltd." ownership of Carbon Credits claim is acceptable and reasonable. Further "Sun N Wind Infra Energy Pvt. Ltd." has authorized "Manikaran Power Limited" to act as a project owner for this GCC project activity. It is evident that there is no clear statement regarding the ownership of the carbon credits generated from the project activity in the PPA between state utility and legal owner which does not signify anything about the ownership of the carbon credit itself. Hence as per the GCC requirement, the project owner has filled and submitted the "Letter of Authorization for Project Owners and Project Representatives" for further process which is acceptable to the verification team. All information were consistent between in these documents and acceptable to the project verification team.
Findings	No findings raised in this context.
Conclusion	The project verification team confirms that the information of the project owners has been appended as per the template and the information regarding the project owners stated in the PSF and authorization letter were found to be consistent.

D.9. Global stakeholder consultation

Means of Project Verification	The PSF was made available through the dedicated interface on the GCC website. The duration of the period for submission of comments for the global stakeholder consultation was from 05/01/2023 to 19/01/2023. https://www.globalcarboncouncil.com/global-stakeholders-consultation-8/ There were no comments received during this period
Findings	No findings raised.
Conclusion	The PSF had been made public for receiving stakeholder feedback and no comments were raised during the GSC process.

D.10. Environmental Safeguards (E+)

Means of Project Verification	The Project owner has chosen to apply for the Environmental No-net-harm Label (E+). The assessment of the impact of the project activity on the environmental safeguards has been carried out in section E.1 of the PSF. Out of all the safeguards no risks were identified to the environment due to the project implementation and operation and the following impacts/indicators have been considered for the monitoring purpose (as per the indicators for environmental impacts as per Section E.1) - Environment – Air- CO_2 emissions - Environment – Land- *Solid waste Pollution from E-wastes* - Environment – Land - *Solid waste Pollution from end-of-life products/ equipment* - Environment - Natural Resources - Replacing fossil fuels with renewable sources of energy Few risks identified regarding solid waste pollution from PV module waste generated at the end of life or damaged/defunct module generation during operational life of the project activity and project owner provided mitigation plan to reduce the risk is not likely to cause any harm in section B.7.2 of the PSF. The appropriate monitoring plan has been put in place to monitor the elements marked positive and risks identified due to implementation of the project activity and the parameter compliance with local regulations/laws i.e., Solid waste like disposal of Transformer oil and other hazardous, E-Waste generated from the project activity etc. will be also monitored to ensure the compliance of the laws during the crediting

	period has been provided in Section B.7.1/B.7.2 of the PSF. The detailed matrix has been included in Appendix 5 of the report.
Findings	CL09, CL13 was raised and closed successfully
Conclusion	Based on the documentation review the project verification team can confirm that Project Activity is not likely to cause any negative harm to the environment but would have a positive impact, hence, is eligible to achieve additional E+ certifications.

D.11. Social Safeguards (S+)

Means of Project Verification	The Project owner has chosen to apply for the Social No-net-harm Label (S+). The assessment of the impact of the project activity on the social safeguards has been carried out in section E.2 of the PSF. Out of all the safeguards no risks were identified to the society due to the project implementation and operation. Only positive impacts identified by the Project owner which is not likely to cause any harm. The following impacts/indicators have been considered for the monitoring purpose (as per the indicators for environmental impacts as per Section E.1) Social – Jobs - *Long-term jobs (> 1 year) created/ lost* Social - Health & Safety - *Reducing / increasing accidents/Incidents/fatality* Social – Education - *Specialized training / education to local personnel* Social – Welfare - *Exploitation of child labour (human rights)* The parameters scored in the social safeguard section is the voluntary initiative by the project owner and not planning to achieve this social parameter by complying with 2% CSR compliance of Ministry of Corporate affairs. Also, as per section 135, Companies Act 2013, the employment and their salaries paid to regular staffs will not counted as CSR expenditure. The employment provided here is for O&M and other activities associated with this project activity, If any Salaries paid by the companies to regular CSR staff as well as to volunteers of the companies (in proportion to company's time/hours spent specifically on CSR) can be factored into CSR project cost as part of the CSR expenditure. Also, activities undertaken by the company in pursuance of its normal course of business will not be considered as CSR expenditure. This is verified in the following weblink, https://www.mca.gov.in/MinistryV2/faq+on+csr+cell.html and also verified from the Notification General Circular No. 21/2014 No: 05/01/2014 dated 18/06/2014 by Ministry of Corporate Affairs, Govt of India. The appropriate monitoring plan has been put in place to monitor the elements marked positive in social safeguard section E .2 of the PSF. The detailed matrix has been included in appendix 6 of the report.
Findings	No findings raised in this context.
Conclusion	Based on the documentation review the verification team can confirm that Project Activity is not likely to cause any negative harm to the society but would have a positive impact, hence, is eligible to achieve additional S+ certifications

D.12. Sustainable development Goals (SDG+)

Means of Project Verification	The assessment of the contribution of the project activity on United Nations Sustainable Development Goals has been carried out in section F of the PSF. Out of the 17 Goals project activity has no adverse effect on any of the goal and contribute to 5 SDGs: Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

	Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable Goal 13. Take urgent action to combat climate change and its impacts The detailed matrix has been included in appendix 7 of the report.
Findings	CL 12 was raised and closed successfully
Conclusion	Based on the documentation review the verification team can confirm that Project Activity is likely to contribute to the United Nations Sustainable Development Goals and would have a positive impact, hence, is eligible to achieve additional SDG+ certifications

D.13. Authorization on Double Counting from Host Country (for CORSIA)

Means of Project Verification	A declaration under section A.5 of the PSF has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 20/02/2017 to 19/02/2027.
Findings	CL11, FAR 01 was raised for future verification.
Conclusion	The project owner has clarified the intent of use of carbon credits for CORSIA hence no double counting will take place. The project owner declared that no host country attestation is required for the pilot phase of 2021-23 (accepting credits issued for monitoring periods between 2016 and 2020), which is appropriate and acceptable according to paragraph 16 of the Standard on Avoidance of Double Counting, V1.0. Also, the verification team raised to Forward Action request to project owner to submit Host Country Authorization beyond the issuance period 31/12/2020 and also the host country must ensure that no emission reductions from the corresponding monitoring period of project are claimed under NDC during issuance of HCLOA for the project activity as per the guidance.

D.14. CORSIA Eligibility (C+)

Means of Project Verification	The project activity meets the CORSIA Eligibility since the crediting period is after 01/01/2016 and the project is applying for registration under GCC which is one of the approved programmes for eligibility. It was also confirmed that the project activity does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes. The Project Activity does not cause any net harm to the environment and/or society and therefore achieves Environmental No-net-harm Label (E+) and Social No-net-harm Label (S+) as per the Environmental and Social Safeguards Standard also make contributions for achieving United Nations Sustainable Development Goals (SDGs) to achieving at least three SDGs as per Project Sustainability Standard to achieve SDG+ Label
Findings	FAR 01 was raised for future verification.
Conclusion	The project activity meets the CORSIA Label (C+) eligibility: a) The Project Activity complies with all the requirements for the Emission Unit Criteria of CORSIA b) A written attestation from the host country's national focal point on double counting is not required for Emission units till 31st December 2020; c) The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project. d) The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard and will achieve Environmental No-net-harm Label (E+), Social No-net-harm Label (S+) for this project activity

	e) The Project Activity is likely to contribute to the achievement of United Nations Sustainable Development Goals (SDGs), complies with the Project Sustainability Standard and will achieve UN SDG Certification Labels (Platinum SDG+ Label) for this project activity.

Section E. Internal quality control

The project verification report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by KBS are duly followed and the Verification report/opinion is reached in an objective manner and complies with the applicable GCC requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team. The independent technical reviewer(s) may approve or reject the draft verification report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before submit final report to GCC. The final approval decision is taken by the Head of the DOE/Director.

Section F. Project Verification opinion

KBS has been contracted by 'Manikaran Power Limited' to undertake verification of the project activity "10 MW Solar Project_SNWI" in India. The verification was performed based on rules and requirements defined by GCC for the project activity. The project involves installation of $10MW_{AC}$ Solar Photovoltaic Power plant in Uttar Pradesh state of India. The electricity generated from project activity is exported to the Indian grid in India through power purchase agreement with Uttar Pradesh Power Corporation Ltd. (UPPCL)/22/, there by displacing electricity from the regional grid which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid. This bundled project activity ($10MW_{AC}$) consists Photovoltaic panels and associated connection boxes, Inverters, transformers and electricity meters. Thus, the bundled project activity is estimated to generate an average of 17,520 MWh/year electricity and displacing 15,446 tCO_2/year.

The project correctly applies the approved baseline and monitoring AMS-I.D. version 18.0 and is assessed against latest valid PS, VS and Environment and Social Safeguards Standard, Project-Sustainability-Standard and/or other applicable GCC/CDM Decisions/Tools/Guidance/Forms.
The project activity is likely to achieve the anticipated emission reductions stated in the PSF provided the underlying assumptions do not change. The expected emission reductions (annual average) from the project activity are estimated to be 15,446 tCO_2/year over the 10 years fixed crediting period starting from 20/02/2017.
KBS has verified and hereby certifies that the GCC bundled project activity "10 MW Solar Project_SNWI":

- has correctly described the Project Activity in the Project Submission Form (version 2.2, dated 02/01/2024) including the applicability of the approved methodology AMS-I.D., version 18.0 and meets the methodology applicability conditions, is additional and is expected to achieve the forecasted real measurable and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder

consultation processes and has calculated emission reduction estimates correctly and conservatively;

- is likely to generate GHG emission reductions amounting to the estimated 154,462 tCO_2 over the fixed crediting period of ten years, as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2 and ISO 14064-3, and therefore requests the GCC Program to register the Project Activity
- is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and therefore requests the GCC Program to register the Project Activity, which is likely to achieve the requirements of the Environmental No-net-harm Label (E+) and the Social No-net-harm Label (S+); and
- is likely to contribute to the achievement of United Nations Sustainable Development Goals (SDGs), comply with the Project Sustainability Standard, and contribute to achieving a total of 5 SDGs, which is likely to achieve the Platinum SDG certification label (SDG+).
- The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project.
- is likely to contribute to CORSIA Eligible Emission Units and has CORSIA Label (C+) certification valid till 31 December 2020. A written attestation from the Host country on double counting is not required until 31 December 2020 and the project was found meeting the applicable requirements prescribed by ICAO.

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
BE	Baseline Emission
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CM	Combined Margin
CPCB	Central Pollution Control Board
CO_2	Carbon dioxide
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CP	Crediting Period
CSR	Corporate Social Responsibility
DPR	Detailed Project Report
DVVNL	Dakshinanchal Vidyut Vitran Nigam Ltd.

EIA	Environmental Impact Assessment
FAR	Forward Action Request
GCC	Global Carbon Council
GHG	Green House Gas
GW	Giga Watt
GWh	Giga Watt hour
GSC	Global Stakeholder Consultation process
HCA	Host Country Approval
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
kW	kilo Watt
kWh	kilo Watt hour
LSC	Local Stakeholder Consultation
MAT	Minimum Alternate Tax
MCA	Ministry of Corporate Affairs
MoV	Means of Verification
MoEFCC	Ministry of Environment, Forest and Climate Change
MP	Monitoring Plan
MPL	Manikaran Power Limited
MW	Mega Watt
MWh	Mega Watt hour
NAPCC	National Action Plan on Climate Change
OM	Operating Margin
O&M	Operation and Maintenance
PA	Project Activity
PSF	Project Submission Form
PS	Project Standard
PE	Project Emission
PLF/CUF	Plant Load Factor/Capacity utilization factor
PO	Project Owner
PPA	Power Purchase Agreement
PS	Project Standard
RBI	Reserve Bank of India
REC	Renewable Energy Certificates
SECI	Solar Energy Corporation of India Limited
SDG	Sustainable Development Goal
SWIEPL	Sun N Wind Infra Energy Pvt. Ltd.
tCO_2	Tonnes of Carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
UPPCL	Uttar Pradesh Power Corporation Ltd.
UPPTCL	Uttar Pradesh Power Transmission Corporation Limited
VS	Verification Standard
VVS	Validation and Verification Standard (CDM)

Appendix 2. Competence of team members and technical reviewers

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Personnel Name:		**Rohit Badaya**	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			

Sectoral Scope	Technical Area
Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar
	TA 1.2: Energy generation from renewable energy sources
Energy distribution	TA 2.1: Energy distribution
Energy demand	TA 3.1. Energy Demand
Waste Handling and Disposal	TA 13.1 Solid waste and wastewater TA 13.2 Manure
Approved By	Manager Competency & Training
Approval date:	29/12/2018

Personnel Name:		**Shruti Shrivastava**	
Qualified to work as:			
Team Leader	☐	Technical Expert	☐
Validator/Verifier (trainee)	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope		**Technical Area**	
-		-	
Approved by (Manager C & T)		Shikha Sharma	
Approval date:		18/11/2021	

Personnel Name		**Anuradha S**			
Schemes	☒ CDM	☒ GCC	☒GS	☒VCS	☐ Other GHG Schemes (mention here)
Qualified to work as					
Team Leader		☐	Technical Expert		☐
Validator/Verifier		☐	Financial Expert		☒
Technical Reviewer		☐	Local Expert		☐
Area(s) of Technical Expertise					
Sectoral Scope		**Technical Area**			

-	-
Approved by (Manager Competence & Training)	Shikha Sharma
Approval date	12-05-2022

Personnel Name		**Satya Prakash Goyal**				
Schemes	☒ CDM	☒ GCC	☒GS	☒VCS	☐ Other GHG Schemes (mention here)	
Qualified to work as						
Team Leader		☐	Technical Expert		☐	
Validator/Verifier		☐	Financial Expert		☒	
Technical Reviewer		☐	Local Expert		☐	
Area(s) of Technical Expertise						
Sectoral Scope			**Technical Area**			
-			-			
Approved by (Manager Competence & Training)			Shikha Sharma			
Approval date			13-01-2022			

Personnel Name		**Mr. Sanjay Kumar Krishnan Kutty**				
Schemes	☒ CDM	☒ GCC	☒GS	☒VCS	☐ Other GHG Schemes (mention here)	
Qualified to work as						
Team Leader		☒	Technical Expert		☒	
Validator/Verifier		☒	Financial Expert		☐	
Technical Reviewer		☒	Local Expert (India)		☒	
Area(s) of Technical Expertise						
Sectoral Scope			**Technical Area**			
SS 1: Energy industries (renewable/non-renewable sources)			TA 1.2. Renewables			

SS 3: Energy demand	TA 3.1. Energy demand
SS 13: Waste handling and disposal	TA 13.1. Solid waste and wastewater
Approved by (Manager Competence)	Dr. Rajesh Monga
Approval date	14-08-2023

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
1	GCC	GCC Program Manual	Version 04.0	Publically available
2	GCC	Project Standard	Version 03.1	Publically available
3	GCC	Project Verification Standard	Version 03.1	Publically available
4	GCC	Environment and Social Safeguards Standard	Version 3.0	Publically available
5	GCC	Project-Sustainability-Standard	Version 3.1	Publically available
6	GCC	GCC Clarification No. 01	Version 1.3	Publically available
7	GCC	Template for Letter of Authorization of Project Owners and Project Representatives	Version 01.1	Publically available
8	GCC	Project Submission Form (PSF)- Template	Version 4.0	Publically available
9	GCC	Project Verification Report Template	Version 03.1	Publically available
10	Project Owner	PSF Version 1.1 (initial version) PSF Version 2.2 (final version)	Dated 29/09/2022 Dated 02/01/2024	Project Owner
11	Project Owner	ER Sheet (initial version) ER Sheet (final version)	Version 1.1 Version 2.1	Project Owner

12	Project Owner	IRR Sheet for 10 MW Plant (initial version) IRR Sheet for 10 MW Plant (final version)	Version 1.1 Version 2.1	Project Owner
13	UNFCCC	Methodology: AMS-I.D.: Grid connected renewable electricity generation	Version 18.0	Publically available
14	UNFCCC	Tool to calculate the emission factor for an electricity system	TOOL 07	Publically available
15	UNFCCC	Tool 27- Methodological Tool Investment Analysis Version 11.0	TOOL-27	Publically available
16	UNFCCC	Tool for the demonstration and assessment of additionality Version 7.0	TOOL 01	Publically available
17	UNFCCC	Tool-05 Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation.	Version 03.0	Publically Available
18	Project owner/UPPTCL/UPNEDA/UPPCL/DVVNL	Commissioning Certificate for the 10 MW Plant	Dated 20/02/2017	Project Owner
19	Project Owner	Authorization Letter regarding Project Owner between Sun N Wind Infra Energy Pvt. Ltd. and Manikaran Power Limited Incorporation Certificate of Manikaran Power Limited Incorporation Certificate of Sun N Wind Infra Energy Pvt. Ltd. Passport copy of representative of Sun N Wind Infra Energy Pvt. Ltd. Passport copy of representatives of MPL (Mr. Neelabhra Paul and Mr. Piyush Sharma)	Dated 15/05/2022	Project Owner
20	Project Owner	Technical Details & Data sheets of Major Equipments involved in the project activity Website of Canadian Solar PV modules: https://www.canadiansolar.com/make-the-difference/industry-leading-quality-control/ Website of SMA Inveters: https://www.solarvest.ro/Download/SMA.pdf	-	Project Owner
21	DVVNL/	Evacuation Approval letter from Dakshinanchal Vidyut Vitran Nigam Ltd.	Dated 17/02/2017	Project Owner
22	Project Owner/UPPCL	Power Purchase Agreement between “Sun N Wind Infra Energy Pvt. Ltd.” and Uttar Pradesh Power Corporation Ltd. (UPPCL)	Dated 06/04/2015	Project Owner
23	Project Owner	EPC contract for the project activity	12/02/2016	Project Owner
24	Project Owner	Detailed Project Report prepared for the 10 MW Power Plant	15/03/2015	Project Owner
25	Project Owner	Solid Waste handling Records/Register	-	Project Owner

26	Project Owner	Local Stakeholder Consultation documents like Invitation, Newspaper advertisement, MoM on LSC, Meeting Photos, Attendance sheet	-	Project Owner
27	Project Owner	Employee Records / HR Records	-	Project Owner
28	Project Owner	Grievance Register maintained at Site.		Project Owner
29	Yash Metrology Laboratory Pvt. Ltd.	Calibration Certificate for the main meter and check meter installed in the project activity.	29/01/2022	Project Owner
30	Project Owner	Actual Generation Details of the project activity during the operation years for the solar plants	-	Project Owner
31	Project Owner	Invoice (sample basis) from project owner to DVVNL	-	Project Owner
32	Project Owner	Single line diagram of the plants	-	Project Owner
33	CPCB	Revised Categorization of the Industrial Sector namely "Solar power generation through solar photovoltaic cell, wind power and mini hydel power (less than 25 MW)"- Policy CPCB modified direction No. B29012/ESS(CPA)/2015-16.	Dated 17/11/2017	Publically Available
34	CEA	Baseline CO_2 Emission Database, Version 18.0, – December 2022 https://cea.nic.in/cdm-co2-baseline-database/?lang=en	Version 18.0	Publically available
35	Govt of India	Electricity Act 2003 National Electricity Policy 2005	Dated 26/05/2003 Dated 12/02/2005	Publicly available
36	Govt of India	Jawaharlal Nehru National Solar Mission (JNNSM) 2010	-	Publically available
37	Govt of India	Integrated Energy Policy, 2006	-	Publically available
38	Govt of India	National Action Plan on Climate Change (NAPCC), 2008		Publically available
39	Govt of India	Renewable Energy Certificates (RECs), 2011		Publically available
40	CDM	CDM Website https://cdm.unfccc.int/Projects/projsearch.html https://cdm.unfccc.int/Projects/Validation/index.html	-	Publically Available.
41	VERRA	Verra Registry https://registry.verra.org/app/search/VCS/All%20Projects		Publically Available
42	Gold Standard	GS Website https://registry.goldstandard.org/projects?q=&page=1		Publically Available
43	Indian REC	Renewable Energy Certificate Registry https://www.recregistryindia.nic.in/index.php/publics/registered_regens		Publically Available
44	I.REC Standard	International REC Standard (I-REC) https://www.irecstandard.org/registries/		Publically Available.
45	MoEFCC	Environmental Impact Assessment notification Environmental Impact Assessment Notification Amendment	Dated 14/09/2006 Dated 14/07/2018	Publically Available

46	CERC order	Draft CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 (cercind.gov.in) CERC order dated 03/03/2015 in the matter of Determination of generic levellised generation tariff for the FY 2015-16 under Regulation 8 of the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 Petition No. SM/004/2015 (Suo-Motu) https://cercind.gov.in/2014/draft_reg/Petition%20No%20SM%20004%202015.pdf CERC order dated 23/12/2015 in the matter of Determination of Benchmark Capital Cost Norm for Solar PV power projects and Solar Thermal power projects applicable during FY 2016-17 Petition No. 17/SM/2015 (Suo-Motu) https://cercind.gov.in/2015/orders/SO17N.pdf As per CERC order dated 06/02/2012 https://cercind.gov.in/2016/regulation/4.pdf	06/02/2012 Dated 03/03/2015 Dated 23/12/2015 Dated 06/02/2012	Project Owner
47	CERC order	Determination of Benchmark Capital Cost Norm for Solar PV power projects and Solar Thermal power projects applicable during FY 2015-16	Dated 31/03/2015	
48	UPPCL	Uttar Pradesh Power Corporation Ltd. https://uppcl.org/uppcl/hi/	-	Project Owner
49	UPPTCL	Uttar Pradesh Power Transmission Corporation Limited https://upptcl.org/upptcl		Project Owner
50	DVVNL	Dakshinanchal Vidyut Vitran Nigam Ltd. https://www.dvvnl.org/		Project Owner
51	UNFCCC	CDM validation and verification standard for project activities Version 3.0	Version 3.0	Publically Available
52	UNFCCC	Methodological Tool 24: Common Practice	Version 3.1	Publically Available
53	UNFCCC	CDM Glossary Terms	Version 11.0	Publically Available
54	UNFCCC	Guidelines for the reporting and validation of plant load factors EB 48 Annex 11	Version 1.0	Publically Available
55	Project owner	Corporate Finance" 2nd edition, by Aswath Damodaran page 320 of the book	-	Publically Available
56	MCA	Ministry of Corporate Affairs https://www.mca.gov.in/content/mca/global/en/home.html	-	Publically Available
57	Project owner	Extract of Board resolution for investment decision for the 10 MW power plant	25/03/2015	Project Owner
58	NREL	https://www.nrel.gov/docs/fy12osti/51664.pdf https://www.solarquotes.com.au/blog/solar-panel-degradation/		Publically Available
59	UPPTCL	Grant of Connectivity approval from UPPTCL to Project owner	Dated 27/02/2016	

				Project Owner
60	-	Land documents for the project activity		Project Owner
61	CEA	Plant-wise details of All India Renewable Energy Projects	20/03/2020	Project Owner
62	Project owner	Financial Statement certified by Chartered Accountant	25/08/2017	Project Owner
63	NCCF	Carbon Registry-India	-	Project Owner
64	UCR ICR Social Carbon	Universal Carbon Registry https://www.ucarbonregistry.io/ International Carbon Registry https://www.carbonregistry.com/ Social Carbon https://www.socialcarbon.org/	-	Project Owner

Appendix 4. Clarification request, corrective action request and forward action request

Table 1. CLs from this Project Verification

CL ID	**CL 01.**	**Section no.**	Section D.2	**Date:** 14/03/2023
Description of CL				
1. PSF (Table of contents): The Section A.3 (Technologies/Measures) is repeated two times in the table of contents section on page-2 of the PSF. Check. 2. PSF (Section A.2 & Cover page): The format of the geodetic coordinates presented in the decimals (24.4877° N, 78.6958° E) does not look correct. Check. 3. PSF (Section A.3): It is observed that two different types of capacities of Solar modules (315 W and 320 W) are installed at the project site, however the details corresponding to the single capacity is provided in Section A.3 of PSF. Hence all the technical details corresponding to both type of installed modules shall be provided in the Section A.3 of PSF. 4. PSF (Section A.3): The total number of inverters and it's correct type (as installed at the project site) shall be provided in the PSF. 5. PSF (Section A.3): It is mentioned that "*the average lifetime of the solar modules under the project activity is around 25 years*". However the lifetime of modules is not traceable from the technical specifications submitted. Hence clarify on the relevant supporting evidence for the lifetime of the solar modules. 6. PSF (Section A.3): The Plant Load Factor of 18.30% has been considered for the Solar plant. It shall also be clarified as how the PLF is inline with the "Guidelines for the reporting and validation of plant load factors, ver01" (EB48 Annex 11). Additional details shall be provided in this regard. 7. PSF (Section A.6): Additional details on the CORSIA shall be provided inline with the PSF filling guidelines in Section A.6 of the PSF. 8. As per the Project standard, version 3.1 para 14c, submission of Host Country Attestation is a mandatory requirement for projects that intend to use ACCs for CORSIA. The latest GCC document Standard on Avoidance of Double Counting, version 1.0 dated 09/03/2022 requires Project Owner to submit Host Country Letter of Authorization (HCLOA). Para 14 of the same document states				

Project shall provide a 'HCLOA' from the designated national authority or designated focal point of the host country of the project activity (where the project is located). The template for HCLOA is provided in Annexure 1 and 2 of Appendix". Hence relevant details may be provided in this regard.
Project participant response **Date:** 17/07/2023
1. There was a formatting error. The same has been corrected in the revised PSF. 2. The format of the geodetic coordinates presented in the decimals are corrected in the revised PSF. 3. The details for both the solar module capacities are updated under section A.3. in the revised PSF. 4. The total number of inverters and its type has been updated under section A.3 in the revised PSF. 5. The average lifetime of the solar module is 25 years, which is indicated in the manufacturer specifications. The same is also shared with verifier for review. 6. As per the Guidelines for the reporting and validation of plant load factors, v01, The PLF can be defined ex-ante by a third party contracted by the project participants. The PLF estimated for the project activity is reported in the Detailed Project Report made by 3rd party, hired by the PO. Thus, PLF considered is in line and appropriate. 7. The Additional details on the CORSIA for the project activity is now being discussed as per the template filling guidelines in the revised PSF. 8. As already declared in the cover page and section H of the PSF, host country approvals shall be furnished upon the first or subsequent issuance of the ACCs. Thus, it is not mandatory right now and PO will apply for the same during first or subsequent emission reduction verifications.
Documentation provided by project participant
Project submission form, v2.0 *Manufacturer Specification*
DOE assessment **Date:** 07/08/2023
1. The formatting error in the table of contents in the PSF has been corrected. The comment is closed. 2. The format of the geodetic coordinates presented in the decimals has now been corrected on Cover page and Section A.2 of the PSF. The comment is closed. 3. The different type of capacities of Solar modules installed are provided in the Section A.3 of PSF. Further all the technical details corresponding to the installed modules are now provided in the Section A.3 of PSF. The comment is closed. 4. The total number of inverters and it's make/type has now been provided in the Section A.3 of PSF. The comment is closed. 5. The technical specifications of the solar module have been submitted. As per the technical specifications, "25 years linear power output warranty" is applicable to the solar modules and hence the lifetime of 25 years has been considered as reasonable. The comment is closed. 6. The Detailed Project Report has not been submitted. The comment is open. 7. The additional requirements from CORISA has been provided in Section A.6 of the PSF. The comment is closed. 8. PP shall submit the host country approval at the time of issuance of ACCs, which is found Ok.

The comment is closed.	
Project participant response	**Date:** 11/12/2023
6. DPR is provided along with this response.	
Documentation provided by project participant	
Detailed Project Report	
DOE assessment	**Date:** 25/12/2023
1. The comment is closed. 2. The comment is closed. 3. The comment is closed. 4. The comment is closed. 5. The comment is closed. 6. The PLF has been sourced from the DPR, which is inline with the "Guidelines for the reporting and validation of plant load factors, ver01" (EB48 Annex 11) and hence found correct. The comment is closed. 7. The comment is closed. 8. The comment is closed.	

CL ID	**CL 02.**	**Section no.**	Section D.3.1	**Date:** 14/03/2023
Description of CL				
1. PSF (Section B.1): The weblink provided for the "General guidelines for SSC CDM methodologies, v23.1" in Section B.1 does not work. Check. 2. PSF (Section B.1): The reference of all the Clarifications (GCC Clarifications) referred by the project activity shall also be included in the Section B.1 of PSF. The Standards (including GCC Standard on double accounting etc.) referred by the project shall also be included. 3. PSF (Section B): The Applicability Criteria of all the applicable Tools (including 'Tool 7: Tool to calculate the emission factor for an electricity system', 'Tool 21: Demonstration of additionality of small-scale project activities etc., 'Tool 27: Investment Analysis', 'Methodological Tool: Assessment of debundling for small-scale project activity') shall also be discussed in the PSF. 4. PSF (Section B): The Eligibility Criteria related to the "Common Eligibility Criteria for all the Project Types (Section 5.1 of Project Standard)", "GCC Clarifications" etc. shall also be demonstrated in the PSF. 5. PSF (Section B): The Eligibility Criteria related to the "Specific Eligibility Criteria for Type A Projects (Section 5.2 of Project Standard)" shall also be demonstrated in the PSF. 6. PSF (Section B.2): Please refer to the "*Table: Applicability of AMS-I.D, AMS-I.F and AMS-I.A based on project types*", where the AMS I.D. is corresponding to the type "*Project supplies electricity to household users (included in the project boundary) located in off grid areas*", however in the case of project activity, the electricity is delivered to the Indian grid and not to the household users located in off grid areas. Hence clarify as how the AMS I.D. is applicable to the project activity. Clarify. 7. PSF (Section B.4): It shall also be described as how the relevant national and/or sectoral policies, regulations and circumstances are taken into account in the determination of the Baseline scenario. Hence more details shall be provided in this regard.				
Project participant response			**Date:** 17/07/2023	

1. The web link for the “General guidelines for SSC CDM methodologies, v23.1” have been corrected in the revised PSF.

2. The reference of all the Clarifications (GCC Clarifications) referred by the project activity and The Standards (including GCC Standard on double accounting etc.) have been included in the revised PSF.

3. The Applicability Criteria of all the applicable Tools are included and discussed accordingly in the revised PSF.

4. The criteria specific to section 5.1 of the Project standard has now been justified in the revised PSF.

5. The criteria specific to section 5.2 of the Project standard has now been justified in the revised PSF

6. There was the typo error. The same has been corrected in the revised PSF.

7. The relevant National/Sectoral policies taken into account for determination of the baseline scenario has been taken into account in section B.4. of the revised PSF.

Documentation provided by project participant

Project submission form, v2.0

DOE assessment	**Date:** 07/08/2023

1. The web link for the “General guidelines for SSC CDM methodologies, v23.1” have been corrected in the revised PSF. The comment is closed.

2. The reference of all the Clarifications (GCC Clarifications) and Standards (including GCC Standard on double accounting etc.) referred by the project has been included in the Section B.1 of PSF. The comment is closed.

3. The Applicability Criteria of all the applicable Tools has now been in the Section B of PSF. The comment is closed.

4. The Common Eligibility Criteria for the Type A projects and “GCC Clarifications etc. has now been discussed in the PSF. The comment is closed.

5. The Specific Eligibility Criteria for Type A projects has now been discussed in the PSF. The comment is closed.

6. The corrections have now been provided in the Table related to the “*Applicability of AMS-I.D, AMS-I.F and AMS-I.A based on project types*” and the AMS I.D is applicable to the “*project supplies electricity to a national/regional grid*”. The comment is closed.
7. The sentence “*The project activity involves installation of 2 solar PV based power generation project having individual installed capacity 5 MW and 3 MW*” available in the Section B.4 of the PSF is not clear, since the project capacity is 10 MW as per the Section A.1 of PSF.
The comment remains open.

Project participant response	**Date:** 11/12/2023

7. There was a typo error in the Section B.4 of the PSF and the same has been corrected in the revised PSF, as project is standalone 10MW solar PV based power generation project.

Documentation provided by project participant

Project submission form, v2.1

DOE assessment	**Date:** 25/12/2023

1. The comment is closed. 2. The comment is closed. 3. The comment is closed. 4. The comment is closed. 5. The comment is closed. 6. The comment is closed. 7. The error in the sentence is now corrected, which is found appropriate. The comment is closed.

CL ID	**CL 03.**	**Section no.**	Section D.3.5	**Date:** 14/03/2023
Description of CL				
1. PSF (Section B.5): All the steps related to the Additionality (Section 6.4.8 of Project Standard: Project Additionality) shall be followed and discussed, so as to conclude as how the Additionality is inline with the GCC requirements. Hence details related to the GCC Additionality requirements shall be provided in the PSF. 2. PSF (Section B.5): "Benchmark spreadsheet": The interest rate of the following banks are provided in the "Benchmark" spreadsheet of the IRR sheet of IRR Excelsheet. **Interest Rate** **BPLR** State Bank of India 14.75% State Bank of India - Current I Bank of India 14.50% Base Rate of Indian Banks,Ba Punjab National Bank 14.00% Base Rate of Indian Banks,Ba Union Bank of India 14.75% Base Rate of Indian Banks,Ba Allahabad Bank 13.95% Base Rate of Indian Banks,Ba **Average** **14.39%** As the above weblinks have been updated to the recent dates, hence the relevant screenshots of the relevant page in the reference document may be submitted to check the values used in the Benchmark calculation for the power plants.				
Project participant response			**Date:** 17/07/2023	
1. The additionality of the project activity is conducted as per small scale additionality tool, further legal test is incorporated in revised PSF in line with GCC template requirement. The additionality is performed in line with GCC requirement. The interest rate sourced from prevailing interest on long term loan by major banks available in public domain, the web link for the same is already incorporated in PSF and IRR sheet, the screenshots the same is submitted as an evidence.				
Documentation provided by project participant				
Project submission form, v2.0 *Screenshots to support BPLR*				
DOE assessment				**Date:** 07/08/2023
1. All the steps related to the Additionality (Section 6.4.8 of Project Standard: Project Additionality) has been discussed in Section B.5 of the PSF and hence inline with the GCC Additionality requirements. The comment is closed. 2. The appropriate weblink of the BPLR rates of the 5 Banks have now been incorporate in the IRR Exccel sheet and the relevant screenshot submitted, which is found correct. The comment is closed.				

CL ID	CL 04.	Section no.	Section D.3.5	Date: 14/03/2023
Description of CL				

1. PSF (Section B.5): The relevant evidences for the "investment decision date" (25/01/2015) for the 10 MW Power Plant shall be submitted. Further it shall also be explained as how the submitted document may be considered as relevant for the investment decision of the project.

2. PSF (Section B.5, B.1): The different version (version 7, version 11) of the Tool has been used in different sections (Section B.5, B.1) of the PSF. Check.

3. PSF (Section B.5, page-24): The following issues have been observed with respect to the input values/cost for the IRR calculation of the 10 MW Plant.

a. Many of the input values have been sourced from the DPR, hence the DPR document shall be submitted for review purpose.
b. The Loan to Equity ration of 70% / 30% has been considered based on "*as per CERC order dated 06/02/2012"*, it shall further be clarified as what was the loan to equity ratio at the time of decision making. Further what actual loan to equity ratio is applicable in the case of project activity.
c. The MAT rate and Corporate rate has been considered based on the source (http://www.arthapedia.in/index.php?title=Minimum_Alternate_Tax_(MAT), https://taxguru.in/income-tax/income-tax-rate-chart-assessment-year-201516-financial-year-201415.html). PP shall submit more authentic source of data (e.g. government source of data) for the above rates.

Check and Clarify.

4. PSF (Section B.5, page-25, Sensitivity Analysis, PLF): For the sensitivity analysis on the PLF, it is mentioned that "*It is evident from the actual generation data the PLF for the years 2017, 2018, 2019, 2020, 20221 was 18.1%, 18.3%, 17.7%, 18.5%, 18.3%. The actual PLF values fall well within the 10% sensitivity range. As being a solar project it is highly unlikely that subsequent PLF of the plant will increase further than the actual achieved in these initial 5 years. The PLF in the subsequent years surely will not increase. Hence, increase in PLF to breach benchmark value is not a possibility*". Hence the relevant sources/data to check the correctness of the statement shall be presented.

5. PSF (Section B.5, page-25, Sensitivity Analysis, Project cost): For the sensitivity analysis on Project cost, "*The project will breach the benchmark value on decrease of project cost by 24.23%. Cost of project as per the DPR is INR 835 million and actual cost as per the EPC agreement is INR 680 million which is 22.15% lower than cost considered for investment analysis. However as breaching value is 22.79% and project cost already incurred is not a likely scenario, further reduction in the same is not possible*". The relevant evidences (EPC agreement) shall be submitted for check the above costs. Further in case the total based on several components, each of the components may be clarified, so as to arrive at the total costs as mentioned above.

6. PSF (Section B.5, page-26, Sensitivity Analysis, Interest rate): Please submit the actual loan sanctioned documents to confirm on the claims made in the PSF.

Project participant response	Date: 17/07/2023

1. Board Resolution is submitted which acts as evidence for Investment Decision Date for the project activity, there was typo error the investment decision date is corrected as 25/03/2015.

2. There was a typo error. The same has been corrected in the revised PSF.

3. a) Detailed Project Report (DPR) is submitted for verifier's review.

b) The debt/Equity ratio at the time of investment decision was considered from DPR which is

72.46:27.54. The same has also been considered for IRR analysis in the revised calculations. Further actual loan and equity can be reviewed form the loan agreement which is also submitted along with the responses.

c) The value of MAT and other taxes are taken from a publicly available/published sources which is authentic. Verifier can cross-check the same by comparing them at other relevant sources available.

4. Electricity Generation details from the project activity is furnished for verifier's review along with the response.

5. All the relevant documents is submitted for verifiers review along with the response. Furthermore, the cost of the project is corrected as there was typo error also PLF values corrected as per DPR.

6. The actual loan sanctioned documents is submitted for verifiers review along with the response.

Documentation provided by project participant

Project submission form, v2.0

Board Resolution

DPR

IRR sheet, v02

EPC

Land Agreement

Loan Agreement

Monthly electricity generation details.

DOE assessment	**Date:** 07/08/2023

1. The Board Resolution has been submitted, which states on the decision to execute contracts for the investment in 10 MW Solar Project and hence the same considered as appropriate evidence for the investment decision in the project activity.

The comment is closed.

2. The version of the Tool is now made consistent between Section B.1 and B.5 of the PSF and hence found correct.

The comment is closed.

3. The validation team assessment is as follows:

a. The DPR has not been submitted and hence input values have not been verified.

The comment remains open.

b. The DPR has not been submitted and hence input values have not been verified.

The comment remains open.

c. The Corporate rate tax and MAT rate applied to the project has been found correct. Hence the comment is closed.

4. The source/evidence of the generation date presented in the Excel sheet shall also be submitted.

The comment remains open.

5. The actual cost incurred in the project is INR 680.75 million, however the actual cost mentioned in the sensitivity analysis section is "INR 776.3 million". Check and Clarify on the differences observed.

The comment remains open.

6. The Loan sanction document has been submitted and actual interest rate of 12.70% has been found

correct. The comment is closed.
Project participant response **Date:** 11/10/2023
3-5. DPR is provided along with this response to the findings. 4. The relevant documents for generation data is provided along with the findings response. 5. The project cost as per EPC was INR 680.75 million however the actual cost has increased due to change in module and inverter pricing the same can be checked from the balance sheet by CA. Furthermore, the EPC cost 680.75 million was exclusive of land and land development cost which is as per actual is higher. Based on above under sensitivity analysis the value has been considered for cross check and comparison which is appropriate. The actual total project cost as per final audited balance sheet is INR 776.30 million. The balance sheet is provided along with this response.
Documentation provided by project participant
Detailed Project Report Financial Statement from CA Project submission form, v2.1
DOE assessment **Date:** 25/12/2023
1. The comment is closed. 2. The comment is closed. 3. The DPR has been submitted and the input values are found appropriate. Further the input values in the ERs Excelsheet matches with the source of data submitted to the assessment team. Hence the comment is closed. 4. The comment is closed. 5. The comment is closed. 6. The comment is closed.

CL ID	**CL 05**	**Section no.**	Section D.3.5	**Date:** 14/03/2023
Description of CL				
Please address the following comments with respect to the IRR Calculations of the 10 MW Plant 1. The IRR calculation is presented for 24 years 40 days instead of 25 years. 2. The O & M cost for the first year is considered for 365 days, clarify. Also, check the O & M workings for 25 years. 3. The interest on debt for the first year is March 2016 as per the Loan Schedule tab and the first year is March 2017 as considered in the P & L tab, clarify. 4. To recheck the calculations for depreciation as per Companies Act. The total amount to be depreciated (90% of cost) is Rs.701.01 million and the total amount of depreciation as per P & L tab is Rs. 751.15 million, clarify. 5. The total debt is Rs. 584.50 million. The total debt repayment in the cash-flow tab is 631.26 million, clarify. 6. Why cost of land is not considered as part of salvage value in the cash-flow tab?				
Project participant response			**Date:** 17/07/2023	

1. There was an error in calculation of number of days. The same has been corrected and the calculations have been revised in the IRR sheet. 2. The scheduled date of commissioning is used for investment analysis as 01 April 2016, accordingly the O&M cost for whole year is considered which is appropriate. 3. There was typo error, the same has been corrected in revised IRR sheet 4. There was typo error in formulae used, the same has been corrected in revised IRR sheet. The value is consistent now. 5. There was typo error the same has been corrected in revised IRR sheet. 6. The land cost plus 10% cost of Plant and Machinery is considered as salvage value in revised IRR sheet.
Documentation provided by project participant
IRR sheet v02.1
DOE assessment **Date:** 07/08/2023
1. The correct number of days used for the IRR calculations have been revised. The comment is closed. 2. The correct number of days have now been used in the O&M calculations and hence in the IRR calculations. The comment is closed. 3. The interest on the debt has now been consistently presented in both the “P&L” spreadsheet and “Loan Schedule” spreadsheet and found correct. The comment is closed. 4. The total depreciation in the “P&L” spreadsheet matches with the 90% of project cost (excluding land cost) and hence found correct. The comment is closed. 5. The total debt as mentioned in the “Assumptions” spreadsheet matches with the total debt repayment in the “Cashflow” spreadsheet and hence found correct. The comment is closed. 6. The land cost has now been considered as the salvage value in the IRR sheet. The comment is closed.

CL ID	**CL 06**	**Section no.**	Section D.3.7	**Date:** 14/03/2023
Description of CL				

1. PSF (Section B.6.1): The following equation does not look correct: As project activity is a greenfield project, in accordance with para 26 of applied methodology EGPJ,y = c Check. 2. PSF (Section B.7.1): It shall be clarified in the monitoring parameter table ($EG_{PJfacility,y}$), whether the value of "16,030" is an annual amount and for any other durations. Clarify. Please refer to the section "*measurement/monitoring equipment*" in the table of the monitoring parameter ($EG_{PJ,y}$), where complete information has not been provided as per the table requirements. Hence the relevant information shall be provided in the monitoring parameter table (like date of calibration/validity, reference no. of calibration certificate, calibration status etc.) inline with the PSF filling guidelines. Similarly the sections (frequency of monitoring) in the monitoring parameter table of the parameter (Solid waste Pollution from end-of-life products/ equipment shall be filled with the required details. 3. PSF (Section B.7.1): For the parameter ($EG_{PJfacility,y}$), the calibration frequency is provided as "Yearly" as per the row "measurement/monitoring equipment", however the calibration frequency is provided as "atleast once in 5 years" in the row "QA/QC procedures" of the same table. Check on the differences observed. 4. PSF (Section B.7.2): The risk management actions of the E+/S+ assessments (negative impacts) including PV module waste shall be included in the Section B.7.2 of the PSF. 5. PSF (Section B.7.4): The monitoring plan provided in section B.7.4 of the PSF is specific to GHG emission reduction and how the other monitoring parameters related Environmental & Social Safeguards and SDG parameter will be monitored by the project owner w.r.t to the project activity to be explained. Additional details shall be provided in this regard.
Project participant response **Date:** 17/07/2023
1. There was a typo error. The same has been corrected in the revised PSF. 2. The amount of the electricity is an annual amount. There was a typo error in the value and the same has been corrected in the revised PSF. Also, the relevant information about the parameters are updated in the revised PSF. 3. There was a typo error. The same has been corrected in the revised PSF. 4. The waste are generated will be collected and disposed properly as per the rules The same has been change accordingly and updated in relevant sections of the revised PSF. 5. The monitoring plan has been corrected according to the parameters related Environmental & Social Safeguards and SDG parameter All the details are provided in the revised PSF.
Documentation provided by project participant
Project submission form, v2.0

DOE assessment	Date: 07/08/2023
1. The corrections equations/calculations for the baseline emissions are now provided in the Section B.6.1 of the PSF. The comment is closed. 2. The net electricity supplied value has been revised to “15,768 MWh”, however the generation value is still “16030 MWh” as per the submitted ERs Excelsheet. Check. The date (29/01/2022) has been provided in the monitoring parameter table, however please also indicate whether this date is for calibration/validity. The calibration frequency “once in 5 years” considered, hence the basis of frequency shall also be clarified. The comment is open. 3. The calibration frequency “once in 5 years” considered, hence the basis of frequency shall also be clarified. The comment is open. 4. Please refer to the Section E.1, where the impact “*Limited quantity of hazardous wastes are generated during maintenance activities. In the baseline scenario, the solid waste pollution from hazardous wastes is very high*” is described, however the same is considered as “Not Applicable”. It is not clear as how the same is appropriate inline with the para 22 (d) of the “Environment and Social Safeguards Standard”. Check. The comment is open. 5. The monitoring plan related other monitoring parameters related Environmental & Social Safeguards is now provided in Section B.7.4 of the PSF. The comment is closed.	
Project participant response	**Date:** 11/12/2023
2. The net electricity supplied value is still 17,520 MWh for year 1 and onwards for 2 years degradation is applied as per DPR, the same is mentioned in the revised PSFs and ER sheet. Kindly check PSF and ER sheet. The date (29/01/2022) provided in the monitoring parameter table is the calibration date. The calibration frequency “once in 5 years” is referred from DISCHOM and same can be checked on DISCHOM’s website. 3. The calibration frequency “once in 5 years” is referred from DISCHOM and same can be checked on DISCHOM’s website. 4. Under the section E1. the parameter “solid waste pollution from hazardous waste” has been considered as “Harmless” and necessary corrections have been made in the revised PSF.	
Documentation provided by project participant	
Project Submission Form, v2.1 ER sheet v2.1	
DOE assessment	**Date:** 25/12/2023
1. The comment is closed. 2. The electricity generation value in the PSF is inline with the ERs Excelsheet. The calibration details are now provided in the PSF. Further the calibration frequency of all the meters is planned to be carried out in-line with the national standard, which recommends calibration at least once in five years. Hence the comment is closed. 3. The calibration frequency of all the meters is planned to be carried out in-line with the national standard, which recommends calibration at least once in five years. Hence the comment is closed. 4. The appropriate revisions have now been carried out in Section E.1 and Section B.7.2 of PSF, which is found correct. 5. The comment is closed.	

CL ID	CL 07	Section no.	Section D.4	Date: 14/03/2023
Description of CL				
PSF (Section C.1): The source for the start date of the project activity is provided as footnote 17, however the footnote 17 has been checked and it does not provide any source for the start date, but only provided information as "*A reservoir is a water body created in valleys to store water generally made by the construction of a dam*". Check.				
Project participant response			**Date:** 17/07/2023	
There was a typo error. The same has been corrected in the revised PSF.				
Documentation provided by project participant				
Project submission form, v2.0				
DOE assessment				**Date:** 07/08/2023
Although the wrong footnote/weblink has been removed, however no reference/basis of the start date has been provided in Section C.1 of PSF. Hence the basis for the start date shall also be indicated accordingly. The comment is open.				
Project participant response				**Date:** 11/12/2023
In the section C.1 of the PSF the start date is considered as the commissioning date of the project activity and the same has been mentioned in the revised PSF. Also commissioning certificate can be checked for the reference.				
Documentation provided by project participant				
Commissioning certificate.				
DOE assessment				**Date:** 25/12/2023
The basis for the start date is now clarified in the PSF and relevant evidence for the same is now submitted. The comment is closed.				

CL ID	CL 08	Section no.	Section D.5	Date: 14/03/2023
Description of CL				
PSF (Section D.2): As per the PSF filling guidelines, "*Where relevant, provide a copy of the Environmental Impact Assessment (EIA) or provide evidence that an EIA is not required*". Since no EIA has been conducted, hence provide relevant discussions as why the EIA is not required as per the PSF filling guidelines.				
Project participant response			**Date:** 17/07/2023	
As per the EIA notification by MOEFCC, EIA need not to be conducted for the projects of capacity less than 25 MW. Since the installed capacity of the proposed project activity is less than 25 MW, it doesn't falls under preview to conduct EIA study The same has also been included in the revised PSF.				
Documentation provided by project participant				
Project submission form, v2.0				

DOE assessment	Date: 07/08/2023
PP has now provided more details in Section D.1 and D.2 that the project not result in the direct air pollution, noise pollution and there is no significant impact due to implementation of project activity on air, water, soil quality and ambience are envisaged due to the project activity. Further as per the of Ministry of Environment and Forests (MoEF), Government of India, under the Environment Impact Assessment Notification vide S.O. 1533 dated 14/09/20066 has listed a set of activities in Schedule I of the notification which for setting up new projects or modernization/expansion will require environmental clearance & will have to conduct an Environmental Impact Assessment (EIA) study. As per the notification EIA need not to be conducted for the projects of capacity less than 25 MW. Since the installed capacity of the project activity is less than 25 MW, it doesn't falls under preview to conduct EIA study. Hence EIA is not required for the project activity. Hence the comment is closed.	

CL ID	CL 09	Section no.	Section D	Date: 14/03/2023
Description of CL				
1. PSF (Section E): How the waste oil (from transformer etc.) will be disposed from the project activity during oil filtration and same to be assessed in the relevant indicator in Section E of the PSF. 2. PSF (Section E): The various rules (like 'E-waste Management and Handling Rules' etc.) shall be taken into account while assessing the indicators in Section E of the PSF. Hence it shall be explained as how the wastes are being disposed in a legal manner as it is indicated in the PSF. 3. PSF (Section F): For SDG Goal 8, Project Owner needs to demonstrate that activities mentioned under these goals are beyond CSR commitment made by Organization under Companies' Act.				
Project participant response			Date: 17/07/2023	
1. The waste oil will be collected and disposed off as per the proper guidelines and regulations by 3rd party. 2. The e-waste that is generated from the solar PV and other equipment will be disposed off via 3rd party contractors. 3. Goal 8 talks about employment generation and trainings which does not fall under CSR commitments of the PO. The employees will be given proper trainings and will be provided salaries as per company act.				
Documentation provided by project participant				
Project submission form, v2.0				
DOE assessment				Date: 07/08/2023
1. The relevant details on the handling of waste oil shall also be provided in the PSF. The comment is open. 2. The reference of the rules like 'E-waste Management and Handling Rules' and other "Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016" has been provided in the Section E of the PSF. Hence the comment is closed. 3. PP shall clearly indicate in the PSF that the activities mentioned under these goals are beyond CSR commitment made by Organization under Companies' Act. The comment is open.				
Project participant response				Date: 11/12/2023

[6] http://environmentclearance.nic.in/writereaddata/EIA_Notifications/1_SO1533E_14092006.pdf

1. The quantity of waste oil generated is very less and therefore it is not practical to monitor. However, if in future oil waste is generated, records for the same will be kept and it will be disposed as per regulations. 3. The activities mentioned under the Goal 8 are beyond CSR commitment and the same has been mentioned in section F of the revised PSF.
Documentation provided by project participant
Project submission form, v2.1
DOE assessment **Date:** 25/12/2023
1. The relevant clarification on the handling of waste oil has now been provided. 2. The comment is closed. 3. PO has clearly indicated that the activities mentioned under these goals are beyond CSR commitment made by Organization under Companies' Act. The comment is closed.

CL ID	**CL 10**	**Section no.**	Section D.6	**Date:** 14/03/2023
Description of CL				
PSF (Section G): As per the submitted "minutes of meeting" document, "*the identified stakeholders were invited by sending invitation letter by Sun N Wind Energy Pvt. Ltd., via its project representatives*". However no such details are provided in the Section G.1 of the PSF. Check and Clarify.				
Project participant response			**Date:** 17/07/2023	
There was an error while drafting the minutes of meeting document. Stakeholders were invited by publishing a invitation in newspaper. The newspaper cutting is also annexed in the minutes of meeting document.				
Documentation provided by project participant				
Project submission form, v2.0				
DOE assessment				**Date:** 07/08/2023
The consistent information on the invitations for the stakeholders have been provided in the Section G of the PSF. Hence the comment is closed.				

CL ID	**CL 11**	**Section no.**	Section D.7, D.13	**Date:** 14/03/2023
Description of CL				
PSF (Section H): The details on the Letter of Nomination or Authorization corresponding to the 10 MW Solar Plant not provided in the Section H of PSF.				
Project participant response			**Date:** 17/07/2023	
Letter of Authorization details is reported in Section H of the revised PSF.				
Documentation provided by project participant				
Project submission form, v2.0				
DOE assessment				**Date:** 07/08/2023
The details on the Letter of Authorization have now been provided in the Section H of PSF, please also submit the same to VVB for reference. The comment is open.				
Project participant response				**Date:** 11/12/2023

The details on the Letter of Authorization have been already provided to VVB for the reference.
Documentation provided by project participant
DOE assessment **Date:** 25/12/2023
The details on the authorization has now been provided in the PSF. Further the Letter of Authorization has also been submitted. The comment is closed.

CL ID	**CL 12**	**Section no.**	Section D.12	**Date:** 14/03/2023
Description of CL				
As per the para 21 of the "*Project Sustainability Standard*", "*Project Owners shall submit all information listed in section F of the PSF in Appendix 1, Table 2. The following six-step procedure shall be followed, together with the requirements stipulated in section 5.2 below, when completing this section*". Hence additional details shall be provided inline with the requirements of the Project Sustainability Standard.				
Project participant response		**Date:** 17/07/2023		
All the Project-level SDGs, targets and indicators provided in section F are in line with the Project Sustainability Standard.				
Documentation provided by project participant				
Project submission form, v2.0				
DOE assessment			**Date:** 07/08/2023	
PP has provided details following the *Project Sustainability Standard*" in Section F of the PSF and hence the comment is closed.				

CL ID	**CL 13**	**Section no.**	Section D.10, D.11	**Date:** 14/03/2023
Description of CL				
As per the Section 4.2 of the "*Environmental and Social Safeguards Standard*", "*the project owner shall conduct a Net-harm Assessment and complete the PSF as stipulated in the following eight-step procedure*". However eight-step procedure has not been discussed in the PSF. Check and additional information may be provided in this regard.				
Project participant response		**Date:** 17/07/2023		
All the details related to Net-harm Assessment are provided in Section E.1 and E.2 which is in accordance with the Environmental and Social Safeguards Standard.				
Documentation provided by project participant				
Project submission form, v2.0				
DOE assessment			**Date:** 07/08/2023	
Please refer to the open comments in CL 06 and provide revision accordingly. The comment is open.				
Project participant response			**Date:** 11/12/2023	

The responses have been provided. Kindly refer CL06.
Documentation provided by project participant
DOE assessment **Date:** 25/12/2023
The open comment in the CL06 has now been addressed and hence the comment is closed.

Table 2. CARs from this Project Verification

CAR ID	**CAR 01**	**Section no.**	Section D.2	**Date:** 14/03/2023
Description of CAR				
1. PSF (Section A.2): The village name of the solar plant location/site as per the commissioning certificate is "Barchaun", however only Patha village is mentioned in the Section A.2 of the PSF. Check and provide correct details on the location in the PSF. Similar corrections shall be provided throughout the PSF. 2. PSF (Section A.3): The total modules (36,120) of same type is provided in the Section A.3, however there are two types of module installed at the project site, hence appropriate corrections shall be provided in the PSF.				
Project participant response		**Date:** 17/07/2023		
1. There was a typo error. The village name has been corrected in the revised PSF. 2. The two types of module capacity are present at site and the same has been corrected in the revised PSF.				
Documentation provided by project participant				
Project submission form, v2.0				
DOE assessment				**Date:** 07/08/2023
1. The correct village name of the plant location/site as per the commissioning certificate is now provided in the Section A.2 of PSF. The comment is closed. 2. The correct number of the solar modules of two capacities are now provided in the Section A.3 of PSF. The comment is closed.				

CAR ID	**CAR 02**	**Section no.**	Section D.3.6	**Date:** 14/03/2023
Description of CAR				
1. PSF (Section B.6.1): In the Step-4, the values (0.9648 tCO_2/MWh, 0.9618 tCO_2/MWh, 0.9497 tCO_2/MWh) for Simple OM has been written for "Simple OM, tCO_2/MWh (**incl. Imports**)", however the values are "Emission Factors (tCO2/MWh) (**excl. Imports**)" as per the "Cell I14, J14, K14" of the "CEA EF Result" and as per the "Cell D9, E9, F9" of the "EF Calculations" spreadsheet of the ERs Excelsheet. Check on the differences observed. 2. PSF (Section B.6.1, Step 4): In the Step-4, the years are chosen as "2018-19", "2019-20", "2020-22". However the data for the year (2020-22) not considered in the ERs Excelsheet ("EF Calculations" spreadsheet). Check on the inconsistencies observed.				

3. PSF (Section B.6.1, page-29): In the Step-4, the Simple OM, tCO_2/MWh (incl. imports) values have been considered for year 2018-19 (0.9648 tCO_2/MWh), 2019-20 (0.9618 tCO_2/MWh), year 2020-21 (0.9497 tCO_2/MWh). However as per the CEA database, the values for Simple OM, tCO_2/MWh (incl. imports) are 2018-19 (0.9603099 tCO_2/MWh), 2019-20 (0.9555486 tCO_2/MWh), year 2020-21 (0. 0.9405496 tCO_2/MWh). Hence it appears that correct values are not used in the calculations. Check. 4. PSF (Section B.6.3): For the project emissions, it is mentioned that "*Not applicable as this is a wind energy-based power generation project*". However the project involves solar PV based power generation as per the other sections of the PSF. Similarly check the page-36 of the PSF, which refers to the wind energy as well. Check and provide appropriate corrections, wherever required.
Project participant response **Date:** 17/07/2023
1. The CEA CO_2 database published by the Central electricity authority has been updated. A new version of the database is now available and the calculations for emission reductions has now been revised as per version 18 of the database. 2. There was a typo error. The same has been corrected in the revised ER sheet. 3. The CEA CO_2 database published by the Central electricity authority has been updated a new version of the database is available and the calculations for emission reductions has now been revised as per version 18 of the database. 4. There was a typo error. The same has been corrected in the revised PSF.
Documentation provided by project participant
Project submission form, v2.0 *Emission reduction sheet, v2.0*
DOE assessment **Date:** 07/08/2023
1. As per the PP response, a new version (version 18) of the CEA database is applied, however the reference of version 17 of CEA database is still available in the PSF. Check. Further it shall be clarified as how the CEA database (version 18) is appropriate as compared to the CEA database (version 17). The comment is open. 2. The build margin data for the year (2020-22) has now been considered in the emission factor calculations and hence the comment is closed. 3. The correct values of the operating margin has now been used in the emission factor calculations. The comment is closed. 4. The corrections have now been provided in the PSF and the comment is closed.
Project participant response **Date:** 11/12/2023
1. As the publishing date of the project activity is 5th January 2023 and the latest version (version 18) of the CEA database was published on December 2022 i.e., before the publishing date of the project activity. Therefore, the latest version (version 18) is appropriate compared to the old version (version 17) for the project activity.
Documentation provided by project participant
PSF v2.1
DOE assessment **Date:** 25/12/2023
1. The latest version 18 of the CEA database has been applied to the project activity, which is found appropriate. The comment is closed. 2. The comment is closed.

3. The comment is closed. 4. The comment is closed.

CAR ID	**CAR 03**	**Section no.**	D.3.7	**Date:** 14/03/2023
Description of CAR				
PSF (Section B.7.1, B.7.4): During the site visit, it was observed that Invoice was raised based on the electricity generated and an energy adjustment based on previous months is carried out. Hence the Net Electricity exported (Export-Import) is not reflected in the Invoice. As the Invoice has been used as a cross-check point, hence the monitoring plan shall be updated accordingly.				
Project participant response		**Date:** 17/07/2023		
The net electricity exported from the grids can be cross checked through invoices issued to/from DISCOM. Any adjustment made doesn't change the accuracy or reliability of monitored value. As per historical data on invoices raised there are some adjustment made on due account of MEA. However, the same is not part of monitoring and data can always be checked and cross-checked with JMR and invoices. Hence no change in monitoring plan is required.				
Documentation provided by project participant				
Project submission form, v2.0 *Invoice*				
DOE assessment				**Date:** 07/08/2023
PP has clarified that there is no requirement to update the monitoring plan, which is found correct. Hence the comment is closed.				

Table 3. FARs from this Project Verification

FAR ID	**FAR 01**	**Section no.**		**Date:** 25/12/2023
Description of FAR				
"Project Owners shall demonstrate the compliance to CORSIA requirements for the credits claimed beyond 31 December 2020 with respect to double counting and HCLOA requirements and also future CORSIA requirements applicable time to time for the project activity"				
Project participant response				**Date:** DD/MM/YYYY
N/A.				
Documentation provided by project participant				
N/A.				
DOE assessment				**Date:** DD/MM/YYYY
N/A.				

Appendix 5. Matrix for Identifying Environmental Impacts, Establishing Safeguards and Performing Do-No-Harm Risk Assessments in the PSF and GCC Verifier's conclusion

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**								**Project Owner's Conclusion**		**GCC Project Verifier's Conclusion** **(To be included in Project Verification Report only)**
		Description of Impact *(positive or negative)*	**Legal/ voluntary corporate requirement / regulatory/ voluntary corporate threshold Limits**	**Do-No-Harm Risk Assessment (choose which ever is applicable)**			**Risk Mitigation Action Plans for aspects marked as Harmful**		**Performance indicator for monitoring of impact**	***Ex-ante* scoring of environmental impact**	***Explanation of the Conclusion***	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational Controls**	**Program of Risk Management Actions**	**Monitoring parameter and frequency of monitoring**	**Ex- Ante scoring of the environmental impact (as per scoring matrix Appendix-02)**	**Ex- Ante description and justification/explanation of the scoring of the environmental impact**	**Verification Process**
Environmental Aspects on the identified categories [7] ***indicated below.***	*Indicators for environmental impacts*	*Describe and identify anticipated and actual significant environmental impacts, both positive and negative from all sources (stationary and mobile) during normal and abnormal/emergency conditions, that may result from the construction and operations of the Project Activity, within and outside the project boundary, over which the Project Owner(s) has/have control.*	*Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified risks of environmental impacts.*	*If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If environmental impacts exist but are expected to be in compliance with applicable national regulatory /stricter voluntary corporate requirements and will be within legal/ voluntary corporate limits by way of plant*	*If negative environmental impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause*	*Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as '****Harmful*** *at least to a level that is in compliance with applicable legal/regulatory requirements or industry best practice or stricter voluntary*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been identified as* ***Harmful****.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well including the data source.*	*-1* *0* *+1*	*Confirm the score of environmental impact of the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.*	*Describe how the GCC Verifier has assessed that the impact of the Project Activity against the particular aspect and in case of "harmful impacts" how has the project adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net positive impacts of the project with respect to the most likely baseline alternative.* .

[7] sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

					design and operating principles, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as ***Harmless*** */If the project has a positive impact on the environment mark it as "harmless" as well.*	*harm (may be un-safe) and shall be indicated as* ***Harmful***	*corporate requirements*					
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 13 (e) (ii)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 22*		*Paragraph 24 and Paragraph 26 (a) (i)*
Environment - *Air*	*SO_x emissions (EA01)*	-	-	-	-	-	-	-	-	-	-	No risks identified
	NO_x emissions (EA02)	-	-	-	-	-	-	-	-	-	-	No risks identified
	CO_2 emissions (EA03)	Reduction in CO_2 emission. The Solar power project does not cause any CO_2 emissions in the project scenario.	The Air (Prevention & Control of pollution) Act 1981 stipulates thresholds for both ambient air quality as well as stack emissions.	-	Harmless	-	-	-	The generated electricity by the project activity will be continuously be measured and the related CO_2 emission reduction will be calculated according to the underlying methodology AMS-I.D	+1	GHG emission reduction (Tonnes of CO2e/yr). The parameter will be monitored on monthly basis.	The project will have a positive impact by reducing measurable amount of CO_2 emissions. This amount of emission reduction will be monitored as per monitoring plan in the PSF in Section B.7.1

	CO emissions (EA04)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Suspended particulate matter (SPM) emissions (EA05)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Fly ash generation (EA06)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Odor (EA08)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Noise Pollution (EA09)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Others (EA10)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Add more rows if required and corresponding notation with EA as prefix)											
Environment - *Land*	*Solid waste Pollution from Plastics (EL-01)*	-	-	-	-	-	-	-	-	-	-	No risks identified

	Solid waste Pollution from Hazardous wastes (EL02)	No hazardous wastes is generated during maintenance activities. In the baseline scenario, the solid waste pollution from hazardous wastes is very high.	Hazardous and other wastes (Management and Trans boundary Movement) Amendment Rules 2016.	Not Applicable	-	-	-	-	-	0	PO concludes that hazardous waste generated from project activity will be collected and disposed off as per the regulations.	The hazardous waste will be disposed as per applicable laws and regulations in the host country. Hence there is no impact considered for the project activity however to ensure to compliance of the laws and regulations the project owner monitored the same throughout the crediting period by means of records of oil disposed /replaced from the project activity. The monitoring plan provided is provided in section B.7.1 is appropriate and acceptable to the verification team.
	Solid waste Pollution from Bio-medical wastes (EL03)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Solid waste Pollution from E-wastes (EL04)	E-waste pollution is anticipated through the operation of the project.	E-waste (Management and Handling) Rules	-	Harmless		The products and equipment shall be stored safely and then disposed as per the regulations	The products will be disposed safely as per the national norms.	The details of damaged and returned solar PV modules will be maintained in records for future verification.	+1	Project owner is responsible to maintain records and filling of returns.	The e-waste generated from the Project activity will be disposed as per prevailing laws and regulations applicable in the host country . Hence this parameter will be scored and monitoring plan is provided in section B.7.1 of the PSF to ensure the compliance of the regulations which will be harmless during entire crediting period of the project activity

												which is appropriate and acceptable
	Solid waste Pollution from Batteries (EL05)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Solid waste Pollution from end-of-life products/ equipment (EL06)	In project activity, solid waste is generated from the end-of-life products/equipment's	1. Solid Waste Management Rule, 2016. 2. E-waste management Rule 2016. 3. Batteries (Management and Handling) Rules, 2001.	-	- Harmless		The products and equipment shall be stored safely and then disposed as per the regulations	The products will be disposed safely as per the national norms.	All product records will be kept after their useful life have ended.	+1	PO concludes that the waste from end-of-life products/equipment will be collected and disposed off as per regulations.	Project owner provided mitigation plan to reduce the risk is not likely to cause any harm to the environment The appropriate monitoring plan has been put in place to monitor the risks identified due to the implementation of the project activity This will be monitored as per monitoring plan in the PSF section B.7.2 and assessment of the same is provided in section D.3.7 of the Project Verification Report.
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)	No harmful chemical is released because of the project activity.	In India there are no comprehensive soil quality regulations and standards to ascertain the seriousness of contamination	Not Applicable	-	-	-	-	-	0	No significant soil pollution from chemicals during operation phase of the project activity.	No risks identified
	land use change (change from	Land use change of the project site may have negative impact if the land was a forestry or	-	Not Applicable	-	-	-	-	-	0	The project does not involve diversion of any forest and	No risks identified

	cropland /forest land to project land) (EL08)	agricultural land previously. But it was not a cropland or forest before.									hence it is not monitored.	
	Others (EL09)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Add more rows if required	-	-	-	-	-	-	-	-	-	-	
		-	-	-	-	-	-	-	-	-	-	
Environment - *Water*	*Reliability/ accessibility of water supply (EW01)*	-	-	-	-	-	-	-	-	-	-	No risks identified
	Water Consumption from ground and other sources (EW02)	-	-	-	-	-	-	-	-	-	-	The project owner uses the ground water for the domestic use and cleaning of solar panels. The project owner has declared that "Water (Prevention and Control of Pollution) Act, 1974" shall be followed during the operation of the project activity
	Generation of wastewater (EW03)	-	-	-	-	-	-	-	-	-	-	The project owner uses the ground water for the domestic use and cleaning of solar panels. The project owner has declared that "Water (Prevention and Control of Pollution) Act, 1974" shall be followed during the operation of the project activity
	Wastewater discharge	No wastewater is generated in the project	The Water (Preventio	Not Applicable	-	-	-	-	-	0	There is no significant effect	There is no significant effect as

	without/with insufficient treatment (EW04)	site, except for domestic use which is in a very small quantity.	n & Control of Pollution) Act 1974								as provisions of septic tank and soak pits will be provided onsite for disposal of sewage.	provisions of septic tank and soak pits has been provided onsite for disposal of sewage, which was also confirmed during the site visit.
	Pollution of Surface, Ground and/or Bodies of water (EW05)	No surface or ground water pollution occurs at the project activity	The Water (Prevention & Control of Pollution) Act 1974	Not Applicable	-	-	-	-	-	0	There is no significant effect as provisions of septic tank and soak pits will be provided onsite for disposal of sewage.	There is no significant effect as provisions of septic tank and soak pits has been provided onsite for disposal of sewage, which was also confirmed during the site visit.
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	The project activity doesn't involve the discharge of harmful chemicals.	Coastal Regulation Zone (CRZ) 2019	Not Applicable	-	-	-	-	-	0	The project is not located in the CRZ boundary defined in the CRZ notification 2019.	No risks identified
	Others (EW07)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Add more rows if required											
Environment – *Natural Resources*	*Conserving mineral resources (ENR01)*	-	-	-	-	-	-	-	-	-	-	No risks identified
	Protecting/ enhancing plant life (ENR02)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Protecting/ enhancing species diversity (ENR03)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Protecting/ enhancing	-	-	-	-	-	-	-	-	-	-	No risks identified

	forests (ENR04)											
	Protecting/ enhancing other depletable natural resources (ENR05)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Conservin g energy (ENR06)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Replacing fossil fuels with renewable sources of energy (ENR07)	The project activity generates electricity using solar power, which would otherwise be generated using fossil-fuels in the absence of the project.	1. National conservati on Act, 2001 2. National Renewabl e Energy Act, 2015 (draft)	-	Harmless	-	-	-	The electricity generated will be continuously monitored by PO using electricity meters installed .	+1	The project activity is expected to generate 15,446 MWh/year renewable electricity to the grid.	The project will have a positive impact by equally replacing the energy generated by fossil fuels with renewable energy sources (solar). This amount of energy generation from the project activity will be monitored as per monitoring plan in the PSF Section B.7.1 for the parameter $EG_{PJ,facility,y}$ and assessment of the same is provided section D.3.7 of the Project Verification Report
	Replacing ODS with non-ODS refrigerant s (ENR08)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Others (ENR09)	-	-	-	-	-	-	-	-	-	-	No risks identified
	Add more rows if required											
Net Score:				**+4**								

Project Owner's Conclusion in PSF:		The Project Owner confirms that the Project Activity will not cause any net harm to the environment.
GCC Project Verifier's Opinion:		The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to the environment...

Appendix 6. Matrix for Identifying Environmental Impacts, Establishing Safeguards and Performing Do-No-Harm Risk Assessments in the PSF and GCC Verifier's conclusion

Impact of Project Activity on	**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**						**Project Owner's Conclusion**		**GCC project Verifier's Conclusion** **(To be included in Project Verification Report only)**
	Description of Impact (*positive or negative*)	**Legal requirement /Limit, Corporate policies / Industry best practice**	**Do-No-Harm Risk Assessment** **(Choose which ever is applicable)**			**Risk Mitigation Action Plans (for aspects marked as Harmful)**	**Performance indicator for monitoring of impact.**	**Ex-ante scoring of environmental impact**	**Explanation of the Conclusion**	**3rd Party Audit**
			Not Applicable	**Harmless**	**Harmful**	**Operational / Management Controls**	**Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)**	**Ex- Ante scoring of social impact of the project**	**Ex- Ante description and justification /explanation of the scoring of social impact of the project**	**Verification Process** **Will the Project Activity cause any harm?**

Social Aspects on the identified categories[8] indicated below.	*Indicators for social impacts*	*Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all sources during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control*	*Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts*	*If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If social impacts exist but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Harmless****), project having positive impact on society. To the BAU / baseline scenario must also mark their aspect as* ***"harmless"***	*If negative social impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm and shall be indicated as* ***Harmful***	*Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source*	*-1* *0* *+1*	*Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/regulatory limits (if any) including basis of conclusion*	*Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful aspects how has the project owner adopted Risk Mitigation Action / management actions plans and policies to mitigate the risks of negative social impacts to levels that are unlikely to cause any harm.* *Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.*
Social - ***Jobs***	*Long-term jobs (> 10 year) created/ lost (SJ01)*	The project creates long term job opportunities during operation	There is no legal requirement from local authority to create permanent employment from the project activity.	-	Harmless	-	-	Number of people employed by the project will be monitored through checking payroll records or the social insurance.	+1	There is no mandatory law to generate permanent employment from the project activity, however project owner has planned to provide training to the local people and generated employment for local people.	The project operation has created new job opportunities in the area during operational phase of the project activity. The number of persons employed would be monitored through HR records/ payroll records. This will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.
	New short-	-	-	-	-	-	-	-	-	-	

[8] sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

	term jobs (< 1 year) created/ lost (SJ02)										No risks identified
	Sources of income generation increased / reduced (SJ03)	Not Applicable	There is no legal requirement from local authority to create permanent employment from the project activity	Not Applicable	-	-	-	-	-	-	No risks identified
	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04) *(Human rights)*	Project owner had ensured that there was no discrimination based on gender, racism, religion etc. during the recruitment process.	IFC Performance Standard-2: Labour and Working conditions	Not Applicable	-	-	-	-	0	The project will not make employment decisions based on personal characteristics unrelated to inherent job requirements. The project will base the employment relationship on the principle of equal opportunity and fair treatment and will not discriminate with respect to any aspects of the employment relationship.	No risks identified
Social - *Health & Safety*	*Disease prevention (SHS01)*	-	-	-	-	-	-	-	-	-	No risks identified

	Occupational health hazards (SHS02)	-	-	-	-	-	-	-	-	-	No risks identified
	Reducing / increasing accidents /Incidents/fatality (SHS03)	Training will be provided by the project owner to the employee and staffs that will reduce accidents	No regulations	-	Harmless	-	-	Accidents/ incidents occuring per year.	+1	PO has strict EHS policy to reduce accidents and ensures employees health and safety	The Project owner will follow EHS policy and provide regular safety training to the employees for avoiding the accidents at the project site which is assessed as positive impacts of the project activity and hence the score claim by the project owner is acceptable and appropriate This will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.
	Reducing / increasing crime (SHS04)	-	-	-	-	-	-	-	-	-	No risks identified
	Reducing / increasing food wastage (SHS05)	-	-	-	-	-	-	-	-	-	No risks identified
	Reducing / increasing indoor air pollution (SHS06)	-	-	-	-	-	-	-	-	-	No risks identified

	Efficiency of health services (SHS07)	-	-	-	-	-	-	-	-	-	No risks identified
	Sanitation and waste management (SHS08)	-	-	-	-	-	-	-	-	-	No risks identified
	Other health and safety issues (SHS09)	-	-	-	-	-	-	-	-	-	No risks identified
	Add more rows if required	-	-	-	-	-	-	-	-	-	-
Social - *Education*	*specialized training / education to local personnel (SE01)*	The project owner provides job related training according to the positions	There is no legal requirement from local authority to provide training to local people	-	Harmless	-	-	The PO will arrange at least one training per annum. Training records/ evidence by the project owner	+1	The project Owner will provide regular safety training to their workers about the accident hazards and risk related to specific works and preventive measures for avoiding accidents at site.	The project Owner will provide regular safety training to their workers about the accident hazards and risk related to specific works and preventive measures for avoiding accidents at site. The same was also confirmed during the site visit.
	Educational services improved or not (SE02)	-	-	-	-	-	-	-	-	-	No risks identified
	Project-related	-	-	-	-	-	-	-	-	-	No risks identified

	knowledge dissemination effective or not (SE03)										
	Other educational issues (SE03)	-	-	-	-	-	-	-	-	-	No risks identified
	Add more rows if required (SE04)	-	-	-	-	-	-	-	-	-	-
Social - *Welfare*	*Improving/ deteriorating working conditions (SW01)*	The project activity has proper working conditions for the employees.	EHS policy	Not Applicable	-	-	-	-	-	There is no chance of deterioratin g working conditions as the project activity will increase the income and will maintain Project Submission Form 85 of 108 conditions (SW01) high working culture for their employee with complying EHS guideline & local regulation Therefore this parameter will not be scored.	The project owner confirmed that there is no discrimination on the project site and the same was confirmed during the site visit.

	Community and rural welfare (indigenous people and communities) *(SW02)*	The PO will provide employment to the local people which in turn help the community.	CSR policy	Not Applicable	-	-	-	-	0	The local community should benefit from the project in terms of community development activities and development of infrastructure.	No risks identified
	Poverty alleviation (more people above poverty level) (SW03)	Employment will be provided both on short term and long-term basis and therefore income will also increase.	No local regulation	Not Applicable	-	-	-	-	**0**	The objective of the company policy is to assist project sites to reduce poverty and enhance economic growth, human well-being, and development effectiveness by addressing the gender disparities and inequalities that are barriers to development, and by assisting member countries in formulating and implementing their gender and development goals.	No risks identified

	Improving / deteriorating wealth distribution/ generation of income and assets (SW04)	PO will provide training and employment to people on the basis on the work that is to be done in the project area, therefore wages will be distributed on the type and duration of work and there will be no discrimination.	No local regulation	Not Applicable	-	-	-	-	0	Local community might choose to work during the construction of access roads and other project components and as security guards for the plant. There is also a likelihood of reduced dependence on agriculture for income. Therefore this parameter will not be scored.	No risks identified
	Increased or / deteriorating municipal revenues (SW05)	PO employees' people from and around the project site which will help in increasing the municipal revenue.	No local regulation	Not Applicable	-	-	-	-	0	Projects does not cause any activities that reduces the municipal revenue, it in fact may increases the revenue of land of surrounding villages and hence same will not be applicable. Therefore, this parameter will not be scored.	No risks identified

	Women's empowerment (SW06) *(Human rights)*	Equal rights to women in terms of employment and economy.	No local regulation	Not Applicable	-	-	-	-	0	The HSR policy is mainly devoted to gender equality and promoting woman empowerment. Therefore this parameter will not be scored.	During the site visit, it was confirmed that company has the HR policy, devoted to gender equality and promoting woman empowerment. Hence equal rights shall be ensured.
	Reduced / increased traffic congestion (SW07)	The project activity will not lead to any increase in traffic	No local regulation	Not Applicable	-	-	-	-	0	The project activity causes no problem to the road traffic causing no congestion.	No risks identified
	Exploitation of Child labour *(Human rights)* *(SW08)*	Positive impact as company has strong HR policy	Corporate regulations: Zero	-	Harmless	-	-	Number of child labour per year.	+1	Project owner confirms that the company's HR policy is strictly practiced at site and confirms no child labour is deployed at the site at any cost.	No risks identified
	Minimum wage protection *(Human rights) (SW09)*	PO will provide the wages in accordance with the labour Act.	Centralized HR policy based on Indian Labor act	Not Applicable	-	-	-	-	0	The project owner ensures indian labour act on wages and salaries will be followed, to ensure that all the contracted workers are provided with	No risks identified

										condition of services, rate of wages, holidays, hours of work as stipulated in the rules as per applicability and tenure of service, by the deputed contractor. Therefore this parameter will not be scored.	
	Abuse at workplace. (With specific reference to women and people with special disabilities / challenges) *(Human rights) (SW10)*	PO will make sure that there is no complaints on abuse at workplace.	EHS policy	Not Applicable	-	-	-	-	0	The trainings and self education imparted by the project owner to the workers prevent abuse at work and hence not scored	No risks identified
	Other social welfare issues (SW11)	-	-	-	-	-	-	-	-	-	No risks identified
	Avoidance of human trafficking and forced labour	PO and HR policy will make sure that there no such illegal activities taking place at the project site.	EHS policy	Not Applicable	-	-	-	-	0	The project owner has strict HR policy which strictly prohibits such	No risks identified

	(Human rights) *(SW12)*									criminal offence.	
	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs *(Human rights)* *(CW13)*	PO has acquired the project area land and there will be no of forced eviction.	Land Acquisition Act 1894 (Amended in 1984) and The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	Not Applicable	-	-	-	-	0	Land for the project is being procured on willing seller willing buyer basis.	No risks identified
	Provisions of resettlement and human settlement displacement *(Human rights)* *(CW14)*	PO has acquired the project area land from genuine buyer and there is no requirement of human settlement displacement.	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	Not Applicable	-	-	-	-	-	Land for the project is being procured on willing seller willing buyer basis.	No risks identified
	Add more rows if required	-	-	-	-	-	-	-	-	-	No risks identified
Net Score:		+4									
Project Owner's Conclusion in PSF:		The Project Owner confirms that the Project Activity will not cause any net harm to society.									

GCC Project Verifier's Opinion:	The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society.

Appendix 7. Matrix for Demonstration of Contribution of Project to Sustainable Development

UN-level SDGs	**UN-level Target**	**Declared Country-level SDG**	**Defining Project-level SDGs**				**GCC Project Verifier's Conclusion** **(To be included in Project Verification Report only)**	
			Project-level SDGs	**Project-level Targets/Actions**	**Contribution of Project-level Actions to SDG Targets**	**Monitoring**	**Verification Process**	**Are Goal/ Targets Likely to be Achieved?**
Describe UN SDG targets and indicators *See: https://unstats.un.org/sdgs/indicators/indicators-list/*	*Describe the UN-level target(s) and corresponding indicator no(s)*	*Has the host country declared the SDG to be a national priority? Indicate Yes or No*	*Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column for guidance.*	*Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).*		*Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets*	*Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG indicator and its corresponding target, frequency of monitoring and data source*	*Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s).*	*Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or no)*
Goal 1: End poverty in all its forms everywhere	-	-	-	-	-	-	-	N/A	N/A
Goal 2: End hunger, achieve food security and	-	-	-	-	-	-	-	N/A	N/A

improved nutrition and promote sustainable agriculture									
Goal 3. Ensure healthy lives and promote well-being for all at all ages	-	-	-	-	-	-	-	N/A	N/A
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	-	-	-	-	-	-	-	N/A	N/A
Goal 5. Achieve gender equality and empower all women and girls	-	-	-	-	-	-	-	N/A	N/A
Goal 6. Ensure availability and sustainable management of water and sanitation for all	-	-	-	-	-	-	-	N/A	N/A
Goal 7. Ensure access to affordable, reliable, sustainable,	SDG Target 7.2 "By 2030, increase substantially the share of renewable	Yes	Increasing the share of renewable energy sources in the total electricity	The project activity will increase the total share of renewable energy	The project is expected to achieve the targeted goal by the end of	The project increases the share of renewable energy in grid energy	The monitoring will be done with the help of electric meters which will indicate the	This project is renewable solar power project started operation from 22/07/2016 and same was	Yes

and modern energy for all	energy in the global energy mix" by the utilization of Solar Energy as a renewable energy source. Related indicator: 7.2.1 Renewable energy share in the total final energy consumption.		generation delivered to the national grid.	percentage of the country and will inject 17.52 GWh of electricity per year.	crediting period.	generation mix by providing clean energy. The plant provides 17,520 MWh of clean energy to the grid annually.	amount of electricity the will be generated using solar energy.	verified with the commissioning certificates provided by the project owner. The generated power from the project activity is the clean energy and continuously monitored by the energy meters installed at the site and included in the monitoring plan in the PSF.	
Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all	SDG Target 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". Related indicator: 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities	Yes	The project activity generates long -term employment and therefore resulting in economic growth. However, this parameter is beyond CSR commitment.	The project generate employment for both operation and construction period and created long-term employment for the people working at the construction site.	The project is expected to achieve the targeted goal by the end of crediting period.	Providing employment opportunities for at least 5 people and in turn giving sustainable economic growth.	The employment record and register will be provided by the Project owner.	This is a direct positive impact of the project activity, which will help to reduce unemployment in the host country, This parameter is verifiable during the monitoring period. The total number of persons working in the project activity along will be monitored and Payroll/ HR records will be used to monitor this parameter.. The relevant monitoring plan is included in the section B.7.1	Yes

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	SDG Target 9.4 "By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities". Related indicator: 9.4.1 CO_2 emission per unit of value added	Yes	Provides a clean and resilient power generation facility	Electricity generation through solar power and avoiding 15,446 tCO_2 annually.	Providing clean energy	Providing clean energy by avoiding 15,446 tCO_2 annually.	The project has produced clean energy by commissioning a Solar power plant and helps the adaptation of clean energy technologies.	The project has produced clean energy by implementing a solar power plant which will produce clean energy that can be monitored with electric meter. Hence it will build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	Yes
Goal 10. Reduce inequality within and among countries	-	-	-	-	-	-	-	N/A	N/A
Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable	SDG Target 11.6 "By 2030, reduce the adverse per capita environmental impacts of cities, including	No	The project activity will provide clean energy by installing solar panels therefore decrease the	The project activity will provide clean energy by installing solar power plant which will improve the air	The project is expected to achieve the targeted goal by the end of crediting period.	Fossil fuel emissions are secondary sources of $PM_{2.5}$ and PM_{10} in the cities. Since the project reduces	The project has produced clean energy by implementing a solar power plant which will produce clean energy that can	The project has produced clean energy by implementing a solar power plant which will produce clean energy that can	Yes

	by paying special attention to air quality and municipal and other waste management." Indicator 11.6.2 Annual mean levels of fine particulate matter (e.g. $PM_{2.5}$ and PM_{10}) in cities (population weighted)		amount of $PM_{2.5}$ and PM_{10} emissions in the cities making the human settlements resilient and sustainable.	quality and levels of fine particulate matter like $PM_{2.5}$ and PM_{10}.		the use of fossil fuels, $PM_{2.5}$ and PM_{10} formation will be reduced accordingly. Monitoring will done for the same.	be monitored with electric meter.	be monitored with electric meter. Hence it will make the cities, human settlements safe, resilient and sustainable.	
Goal 12. Ensure sustainable consumption and production patterns	-	-	-	-	-	-	-	N/A	N/A
Goal 13. Take urgent action to combat climate change and its impacts	SDG Target 13.2 "Integrate climate change measures into national policies, strategies and planning". Related indicator: 13.2.2 Total greenhouse gas emissions per year	Yes	The project activity will make use of the solar power plant to generate clean energy and thus help in combat climate change by reduction of carbon emission in the atmosphere.	The solar power plant implemented will help in climate change mitigation by reducing the greenhouse gases emission.	The project is expected to achieve the targeted goal by the end of crediting period.	Since solar energy is used in the project, there is no greenhouse gas emission related to the project activity. Eliminates 15,446 tCO_2 annually.	The emission reduction from the project activity will be calculated based on the electricity generated with solar energy.	This is direct positive impact of the project which will avoid around 17,330 tCO_2 annual average over the crediting period. The generated power from the project activity is the clean energy and continuously monitored by the energy meters installed at the site and included in the monitoring plan in the PSF.	Yes

Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	-	-	-	-	-	-	-	-	-
Goal 15. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	-	-	-	-	-	-	-	-	-
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels	-	-	-	-	-	-	-	-	-
Goal 17. Strengthen	-	-	-	-	-	-	-	-	-

the means of implementation and revitalize the global partnership for sustainable development									

SUMMARY	Targeted	Likely to be Achieved
Total Number of SDGs	**5**	**5**
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	Platinum	Platinum

DOCUMENT HISTORY

Version	Date	Comment
V 3.1	31/12/2020	▪ The name of GCC Program's emission units has been changed from "Approved Carbon Reductions" or ACRs to "Approved Carbon Credits" or ACCs.
V 3.0	23/08/2020	▪ Revised version released on approval by the Steering Committee as per the GCC Program Process; ▪ Revised version contains the following changes: ○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC); ○ Considered and addressed comments raised by the Steering Committee: ➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and ➢ electronic consultations EC01-Round 04 (17.08.2020 – 22.08.2020). ▪ Feedback from the Technical Advisory Board (TAB) of ICAO on GCC submissions for approval under CORSIA[9];
V 2.0	25/06/2019	▪ Revised version released for approval by the GCC Steering Committee. ▪ This version contains details and information to be provided, consequent to the latest

[9]See ICAO recommendation for conditional approval of GCC at https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/Excerpt_TAB_Report_Jan_2020_final.pdf

		worldwide developments (e.g., CORSIA EUC).
v1.0	01/11/2016	▪ Initial version released for approval by the GCC Steering Committee under GCC Program Version 1

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