GLOBAL CARBON COUNCIL

Driving Climate Actions

Project Verification Report

V3.1 - 2020

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CONTENTS

COVER PAGE Project Verification Report Form (PVR)	
Complete this form in accordance with the instructions.	
BASIC INFORMATION	
Name of approved GCC Project Verifier / Reference No. (also provide weblink of approved GCC Certificate)	Carbon Check (India) Private Limited / GCCV004/01 http://globalcarboncouncil.com/wp-content/uploads/2021/10/carbon-check-india-private-limited-ccipl.pdf
Type of Accreditation	☐ Individual Track[1] ☒ CDM Accreditation: E-0052 Valid from 28/03/2019 to 01/06/2024 https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0052 ☐ ISO 14065 Accreditation: 28/06/2021 to 27/06/2024 https://nabcb.qci.org.in/wp-content/uploads/2023/06/004.html
Approved GCC Scopes and GHG Sectoral scopes for Project Verification	**GCC Scope** • Green House Gas (GHG# - ACC) • Environmental No-harm (E+) • Social No-harm (S+) • Sustainable Development Goals (SDG+) **GHG Sectoral Scope** Energy (renewable/non-renewable sources)
Validity of GCC approval of Verifier	08/03/2023 to 31/05/2024
Title, completion date, and Version number of the PSF to which this report applies	Pennar Renewables solar power project bundle in Telangana State, INDIA. Version 1.4 Dated 18/10/2023
Title of the project activity	Pennar Renewables solar power project bundle in Telangana State, INDIA.
Project submission reference no. (as provided by GCC Program during GSC)	S00539
Eligible GCC Project Type[2] as per the Project Standard	☒ **Type A:** ☐ Type A1

[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.

<table>
<tr><td>(Tick applicable project type)</td><td>☒ Type A2
☒ Sub-Type 1
☐ Sub-Type 2
☐ Sub-Type 3
☐ Sub-Type 4

☐ Type B – De-registered CDM Projects:
☐ Type B1
☐ Type[3] B2</td></tr>
<tr><td>Date of completion of Local stakeholder consultation</td><td>LSC dates for the 3 Project Activities forming the bundle are as follows:

<table><tr><th>Project Activity</th><th>LSC Completion Date</th></tr><tr><td>Greenko Solar Power (Medak) Limited</td><td>17/02/2022</td></tr><tr><td>Pennar Renewable Pvt. Ltd. – Ellanthakunta</td><td>15/02/2022</td></tr><tr><td>Pennar Renewable Pvt. Ltd. – Manakondur</td><td>15/02/2022</td></tr></table></td></tr>
<tr><td>Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.</td><td>23/10/2022 to 06/11/2022
No comments were received during GSC.
https://www.globalcarboncouncil.com/global-stakeholders-consultation.html</td></tr>
<tr><td>Name of Entity requesting verification service
(can be Project Owners themselves or any Entity having authorization of Project Owners)</td><td>Pennar Renewables Private Limited
Greenko Energies Private Limited</td></tr>
<tr><td>Contact details of the representative of the Entity, requesting verification service
(Focal Point assigned for all communications)</td><td>M. Murali Krishnam Raju
muraliraju.m@greenkogroup.com
Greenko Energies Private Limited</td></tr>
<tr><td>Country where project is located</td><td>India</td></tr>
</table>

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

<table>
<tr><td>GPS coordinates of the Project site(s)</td><td>
<table>
<tr><th>Latitude</th><th colspan="2">Longitude</th></tr>
<tr><td colspan="3"></td></tr>
<tr><td colspan="3">Greenko Solar Power (Medak) Limited
Capacity: 20 MW
Village: Sadashivpet, District: Sangareddy,
State: Telangana</td></tr>
<tr><td>17°39’41.0040" N</td><td>17.66139° N</td><td>77°52’10.1280" E</td><td>77.86948° E</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td colspan="3">Pennar Renewable Pvt. Ltd. – Ellanthakunta
Capacity: 10 MW
Village: Ellanthakunta, District: Karimnagar,
State: Telangana</td></tr>
<tr><td>18°16’48.0360" N</td><td>18.28001° N</td><td>78°51’54.1440" E</td><td>78.86504° E</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td colspan="3">Pennar Renewable Pvt. Ltd. – Manakondur
Capacity: 5 MW
Village: Manakondur / Annaram, District: Karimnagar,
State: Telangana</td></tr>
<tr><td>18°25’22.4400" N</td><td>18.42290° N</td><td>79°13’31.7280" E</td><td>79.22548° E</td></tr>
<tr><td colspan="3"></td></tr>
</table>
</td></tr>
<tr><td>Applied methodologies
(approved methodologies of GCC or CDM can be used)</td><td>GCCM001 - Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers (Version 3.0 - 2022)</td></tr>
<tr><td>GHG Sectoral scopes linked to the applied methodologies</td><td>GHG-SS 1: Energy (renewable/non-renewable sources)</td></tr>
<tr><td>Project Verification Criteria:
Mandatory requirements to be assessed</td><td>☒ ISO 14064-2, ISO 14064-3
☒ 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
☒ 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</td></tr>
</table>

	☒ 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, Carbon Check (India) Private Limited, certifies the following with respect to the GCC Project Activity "Pennar Renewables solar power project bundle in Telangana State, INDIA." ☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version 1.4, dated 18/10/2023) including the applicability of the approved methodology [GCC methodology, GCCM001 version 3.0] and meets the methodology applicability conditions 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 reductions estimates correctly and conservatively. ☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated 520,894 tCO_{2e} over the crediting period, 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. ☒ 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 6 SDGs (SDG 3, SDG 4, SDG 7, SDG 8 ,SDG 9 and SDG 13)), with the following[4] SDG certification label (**SDG⁺**): ☐ Bronze SDG Label

[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.

	☐ Silver SDG Label ☐ Gold SDG Label ☐ Platinum SDG Label ☒ Diamond SDG Label ☒ 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 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	Project verification report: CCIPL 1351 Version: 3.0, Dated: 21/10/2023
Name of the authorised personnel of GCC Project Verifier and his/her signature with date	 Vikash Kumar Singh, Compliance Officer 21/10/2023

[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

Pennar Renewables Private Limited has appointed the Project Verifier, Carbon Check (India) Private Ltd. (CCIPL), to perform an independent project verification of the project activity “Pennar Renewables solar power project bundle in Telangana State, INDIA.” (hereinafter referred to as “project activity”). This report summarizes the findings of verification of the project, performed on the basis of GCC rules and requirements as well as criteria given to provide for consistent project operations, monitoring and reporting. This report contains the findings and resolutions from the project verification and a verification opinion.

The project activity is a 35 MW bundled solar power project jointly owned by Greenko Solar Power (Medak) Limited and Pennar Renewables Private Limited. Pennar Renewables Private Limited and Greenko Energies Private Limited are authorized to act as the Project Owner /24/ in accordance with the requirements of the GCC programme as stated under paragraph 18 of the GCC Clarification No.1 version 1.3 /B01/. The purpose of project activity is to utilize clean technology to generate electricity by harnessing solar irradiation energy and supply the generated electricity to the Indian grid, which is predominantly fossil fuel based. The bundled project activity involves the installation of three solar photovoltaic power plants with capacities of 20MW, 10 MW and 5MW in the state of Telangana, India. The average annual electricity supplied to grid will be of 55,980 MWh, translating into annual average emission reductions of around 52,089 tCO_2e.

The project also contributes to Environmental No-net-harm Label (E+), Social No-net-harm Label (S+), CORSIA requirements (C+) and 6 United Nations Sustainable Development Goals (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 /B01/, 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 purpose of the project verification is to have a thorough and independent assessment of the proposed Project Activity against the applicable GCC rules and requirements, including those specified in the Project Standard, applied methodology/methodological tools and any other requirements, in particular, the project's baseline, monitoring plan and the host Party criteria. These are verified to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Verification requirement for all GCC projects activity is necessary to provide assurance to stakeholders of the quality of the Project Activity and its intended generation of Approved Carbon Credits (ACCs).

Location

The bundled project activity is implemented in the state of Telangana, India. Details of the same are as follows:

Latitude		Longitude	
Greenko Solar Power (Medak) Limited **Capacity: 20 MW** Gopularam village,Munipally mandal, Medak district,, Telangana, India			
17°39’41.0040” N	17.66139° N	77°52’10.1280" E	77.86948° E
Pennar Renewable Pvt. Ltd. – Ellanthakunta **Capacity: 10 MW** Dacharam Village,Ellanthakunta Mandal, Karimnagar district, Telengana India			
18°16’48.0360" N	18.28001° N	78°51’54.1440" E	78.86504° E
Pennar Renewable Pvt. Ltd. – Manakondur **Capacity: 5 MW** Pennar Renewable Private Limited Annaram village, Manakondur mandal, Karimnagar district,			
18°25’22.4400" N	18.42290° N	79°13’31.7280" E	79.22548° E

Scope of Project Verification

The project verification scope is defined as the independent and objective review of the project submission form (PSF /1/). The PSF /1/ is reviewed against the relevant criteria and decisions by the GCC, including the applied GCC approved baseline and monitoring methodology, GCCM001, version 3.0 /B02/, and allied CDM tools. The verification team has, based on the recommendations in the GCC Project Standard, Version 3.1 /B01-1/, Project Verification Standard Version 3.1 /B01-2/, Project Sustainability Standard v 3.0 /B01/ and Environment & Social Safeguards Standard v 3.0 /B01/, employed a rule-based approach, focusing on the identification of significant risks for project implementation and the generation of ACCs.

The verification activity aims to establish that the proposed project activity meets the requirements set forth in the aforementioned frameworks and standards and also fulfils applicable Legal requirements/rules of host country, National Sustainable Development Criteria and CORSIA

requirements and other GCC requirements related to aspects such as project design, applicable conditions, project boundary, baseline scenarios, additionality, emission reduction, monitoring plan, local stakeholder consultation, global stakeholder consultation, GHG emission reductions (ACCs), environmental no-net harm label (E+), social no net harm label (S+), gold SDG label (SDG+), CORSIA+.

The verification is not meant to provide any consulting to the project owner. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the program design.
While carrying out the verification, CCIPL determines if the PSF complies with the requirements of the applicability conditions of the selected methodology /B02/, guidance issued by the GCC and also assess the claims and assumptions made in the PSF /1-d/ without limitation on the information provided by the project owner.

Verification Process

Strategic risk Analysis and delineation of the Verification plan:

CCIPL employed the following Project Verification process:

1. Conflict of interest review at the time of contract review;
2. Selection of Audit Team at the time of contract review;
3. Kick-off meeting with the client;
4. Review of the draft PSF listed on GCC website for public consultation;
5. Development of the Verification plan;
6. Desktop review and evaluation of emission reduction calculations;
7. Follow-up interaction with the client; and final statement and report development.

The Verification process has utilized to gain an understanding of the:

- Project's design, GHG emission sources and reductions,
- Baseline determination and additionality,
- GHG monitoring plan,
- Environmental & Social impacts,
- Stakeholder's consultation,
- SD indicators integrated with the project and
- Verify the collection and handling of data, the calculations that lead to the results, and the means for reporting the associated data and results.

Development of the Verification Plan:

The Audit Team formally documented its Verification plan.

The Verification plan was developed based on discussion of key elements of the Verification process during the kick-off meeting and as per the criteria of engagement. Client had the opportunity to comment on key elements of this plan for Verification. Based on items discussed above and agreed upon with the client in the signed contract, the plan identified the CCIPL audit team members based on following:

- Reasonableness of the assumptions, limitations and methods used to forecast information as per GCC requirements,
- Standards of evaluation and reporting for the Verification.

It also provides an outline of the Verification process and established project deliverables. The project verification consists of the following four phases:

I. A desk review of the project submission form.
   - A review of the data and information;
   - Cross checks between information provided in the PSF /1-d/ and information from sources with all necessary means without limitations to the information provided by the project owner;

II. Follow-up interviews with project stakeholders
   - Interviews with relevant stakeholders in host country with personnel having knowledge with the project development;
   - Cross checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project owner;

III. Reference to available information relating to projects or technologies similar projects under verification and review based on the approved methodology /B02/ being applied, of the appropriateness of formulae and accuracy of calculations.

IV. The resolution of outstanding issues and the issuance of the final verification report and opinion.

The Verification team confirms the contractual relationship between the Project Verifier, CCIPL and the Project Owner signed on 21/06/2022. The team assigned to the Verification meets the CCIPL's internal procedures including the GCC requirements for the team composition and competence. The Verification team has conducted a thorough contract review as per GCC and CCIPL's procedures and requirements.

The report is based on the assessment of the PSF /1-d/ undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews and stakeholder interviews, review of the applicable/applied methodology /B02/ and their underlying formulae and calculations.

This report contains the details of the resolution of findings from the project verification which are successfully resolved by the PO to confirm the program design in the documents is sound and reasonable and meets the stated requirements and identified criteria.

Conclusion

Carbon Check (India) Private Ltd. is of the opinion that the project activity "Pennar Renewables solar power project bundle in Telangana State, INDIA." in India as described in the final PSF (Version 1.3, dated 07/10/2023) /1-d/ meets all relevant requirements of GCC and has correctly applied the GCC baseline and monitoring methodology GCCM001 'Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers' version 3.0 /B02/. The review of the PSF, supporting documentation and subsequent follow-up actions (onsite audit and interviews) have provided CCIPL with sufficient evidence to determine the fulfilment of the voluntary labels E+, S+ /B01-4/ and SDG+ with Diamond (Level 5) rating /B01-5/.

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 22-23 /B01/ 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".

Carbon Check (India) Private Ltd. therefore is able to recommend the project activity to the GCC Steering Committee with a request for registration.

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 / Technical Expert / Local Expert / Financial Expert	IR	Agarwalla	Sanjay Kumar	CCIPL	X	X	X	X
2.	Assessor	IR	Halder	Manas	CCIPL	X	X	X	X
3.	Team Member	IR	Nayak	Kiran[6]	CCIPL	X	-	-	X
4.	Trainee Assessor	IR	Nadkarni	Tanvi	CCIPL	X	-	-	X
5.	Trainee Assessor	IR	Tekapso	Leslie	CCIPL	X	-	-	X
6.	Trainee Assessor	IR	Shirke	Rishika[7]	CCIPL	X	X	X	X

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

[6] Worked until 05/09/2023
[7] Worked until 31/08/2023

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 / Financial Expert	IR	Ranganathan	Seshan	CCIPL
2.	Approver	IR	Singh	Vikash Kumar	CCIPL

Section C. Means of Project Verification

C.1. Desk/document review

The report is based on the assessment of the initial PSF /1-a/ and final PSF /1-d/ undertaken through verification of information using the source provided by the project owner, stakeholder consultations, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., on site visit, 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.

List of all documents reviewed or referenced during the project verification is provided in Appendix-3.

C.2. On-site inspection

Duration of on-site inspection: 26/12/2022				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Discussions and review of: • Project Design • Project Technology • Project boundary • Applicability of GCC methodology • Environmental Management Plan/ EIA • Local stakeholders meeting process • Management structure with Roles and Responsibilities • Project implementation schedule • Pre project (existing) scenario to meet the energy (heat and electricity) demand •Monitoring Plan •Socio-economic Impacts of the project activity •Sustainability aspects of the project (SDGs) • Baseline Scenarios and alternatives • Project additionality	**Greenko Solar Power (Medak) Limited** Village: Sadashivpet, District: Sangareddy, State: Telangana **Pennar Renewable Pvt. Ltd. at Ellanthakunta** Village: Ellanthakunta, District: Karimnagar, State: Telangana	26/12/2022 26/12/2022 26/12/2022	Sanjay Kumar Agarwalla, Manas Halder, Rishika Shirke

	Emission reduction calculations	**Pennar Renewables Pvt. Ltd. at Manakondur** Village: Manakondur / Annaram, District: Karimnagar, State: Telangana		

C.3. Interviews

No.	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Thirupathamma	Arla	Zenith Energy	26/12/2022	Discussion on project implementation, monitoring, Environmental impact, Management structure with Roles and Responsibilities, Socio-economic Impacts of the project activity Sustainability aspects of the project, local stakeholders meeting, legal ownership of the project activity	Sanjay Kumar Agarwalla, Manas Halder, Rishika Shirke
2.	Tiruvuri	Saikrishna	Zenith Energy			
3.	M.	Saravanan	Site incharge – 20 MW GSMPL			
4.	M.	Ratnakumar	HR – 20 MW GSMPL			
5.	Kumar	Surya	O & M – 20 MW GSMPL			
6.	Srivatsava P	Nanada	Site incharge – PRPL (10MW)			
7.	D.	Venu	Technician – PRPL (10MW)			
8.	Reddy	Sanjeeva	Site incharge – PRPL (5MW)			
9.	V.	Ajith	Manager – PRPL (5MW)			
10.	M.	Gopal	Local stakeholder (GSMPL)		Environment and Social impacts of the project	
11.	M.	Narsimhulu	Local stakeholder (GSMPL)		Environment and Social impacts of the project	
12.	B.	Raju	Local stakeholder (GSMPL)		Environment and Social impacts of the project	
13.	R.	Ramesh	Local stakeholder (PRPL – 10MW)		Environment and Social impacts of the project	
14.	-	Pawan	Local stakeholder (PRPL – 10MW)		Environment and Social impacts of the project	
15.	B.	Ramulu	Local stakeholder (PRPL – 5MW)		Environment and Social impacts of the project	
16.	G.	Santosh	Local stakeholder (PRPL – 5MW)		Environment and Social impacts of the project	

C.4. Sampling approach

No sampling approach has been used for this project activity 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	1	1	-
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	-	1	-
- 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	-	1	-
- Baseline scenario	A_1, A_2, B_1, B_2	-	1	-
- Demonstration of additionality including the Legal Requirements test	A_1, A_2, B_1, B_2	1	1	-
- Estimation of emission reductions or net anthropogenic removals	A_1, A_2, B_1, B_2	2	2	-
- Monitoring plan	A_1, A_2, B_1, B_2	2	-	-
Start date, crediting period and duration	A_1, A_2, B_1, B_2	1	-	-
Environmental impacts	A_1, A_2, B_1, B_2	-	-	-
Local stakeholder consultation	A_1, A_2, B_1	-	1	-
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	-	1	-
VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E^+)	A_1, A_2, B_1	1	-	-
Social Safeguards (S^+)	A_1, A_2, B_1		-	-
Sustainable development Goals (SDG^+)	A_1, A_2, B_1	1	-	-
Authorization on Double Counting from Host Country (only for CORSIA)	A_1, A_2, B_1	-		-
CORSIA Eligibility (C^+)		-	-	1
Total		10	9	1

Section D. Project Verification findings

D.1. Identification and eligibility of project type

Means of Project Verification	DR, I
Findings	No findings pertaining to this section.
Conclusion	The Verification team reviewed the PSF /1/ and confirms that the Project Owner determines the type of proposed GCC project activity as Type A2. As per §11 of GCC Project Standard (version 03.1) /B01-1/, "These types of projects are prompt-start and had already started their operations as of 5th July 2020. Their start date of operations shall be after 1st January 2016 but before 5th July 2022. The start date of the Crediting Period for such GCC Project Activities shall be on or after 1 Jan 2016 but not more than one year after the start date of the operations of the GCC Project Activity." Furthermore, as per §03 (c), (iv) of GCC clarification no.01 "The deadline for submission of A2 projects has been extended. As per clarification, A2 type

projects are required to make initial submission to GCC program, for uploading for global stakeholder consultation, prior to 05/07/2022" 1-a/.

The proposed bundle activity has started its operations on 25/02/2016, the start date of crediting period is 27/04/2016 and it was published for global stakeholder consultation from 23/10/2022 to 06/11/2022. The project activity was submitted to GCC on 23/06/2022.

The project activities forming the bundle have the following start dates:

Project Activity	Capacity	Start Date
Greenko Solar Power (Medak) Limited	20 MW	27/04/2016
Pennar Renewables Pvt. Ltd. at Ellanthakunta	10 MW	21/03/2016
Pennar Renewables Pvt. Ltd. at Manakondur	5 MW	25/02/2016

The start date of operation of the bundled activity is considered as the earliest start date amongst all of the involved homogenous project activities. The start date of the project activity has been duly verified against the commissioning reports /9/ and found to be acceptable by the verification team. This complies with the requirement of §11 of the GCC Project Standard (version 03.1) including GCC Clarification No. 01 /B01-1/ and § 25 (b) of GCC Project Verification Standard (version 03.1) /B01-2/ and hence the determined project activity type, i.e., Type A2 is found to be acceptable by the verification team.

Furthermore, the project verification team checked the other GHG programmes like, Clean Development Mechanism (CDM) Registry /B11/, VERRA Registry /B12/, and Gold Standard Registry /B13/, 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 Program prior to commencement of this verification. It was confirmed that the project owner has not submitted the said project activity under any other GHG program apart from GCC.

D.2. General description of project activity

Means of Project Verification	DR, I
Findings	CL 10 and CAR 02 were raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The description of the project activity contained in the PSF /1-d/ can be considered transparent, detailed, and provides a clear overview of the project. The same was confirmed by means of document review and interviews to verify the accuracy and completeness of the project description. 'Pennar Renewables solar power project bundle in Telangana State, INDIA.' is a Solar Photovoltaic Power Project with total installed capacity of 35 MW. The bundled project activity involves the installation of solar power plants with capacities of 20MW, 10 MW and 5MW in the state of Telangana, India. The purpose of this project activity is to generate electricity by harnessing solar irradiation energy and supply the generated electricity to the connected Indian grid. The project verification team has confirmed the same by cross verifying the commissioning reports /9/, power purchase agreement /6/ and physical verification of project site /27/.

The project activity at Greenko Solar Power (Medak) Limited uses poly crystalline cells type solar PV Modules of Canadian Solar Make with a rated maximum power of 315Wp/ 310Wp while the activities Pennar Renewables Private Limited at Ellanthakunta and Manakondur employs JC310M-24/Abs module type by Renesola with a rated maximum power of 310W. The solar PV Modules along with associated connection boxes, Transformers, Inverters, other field equipment in all the project premises produce the total project capacity of 35 MW with an expected lifetime of 25 years. The same has also been confirmed from the technical specifications provided by the manufacturer /11/.

The power generation from the project activity replaces the equal amount of power which would otherwise have been supplied from the fossil fuel dominated grid. Thus, project activity helps in an average annual emission reduction of 52,089 tCO_2e/year for a period of 10 years with an annual electricity generation estimated at 55,980 MWh. The same has been crosschecked from the actual generation records /10/ during the physical onsite visit and is found to be acceptable.

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 bundled project activity is implemented in the state of Telangana, India. The geographic co-ordinates for the project activity are:

Latitude		Longitude	
Greenko Solar Power (Medak) Limited **Capacity: 20 MW** Gopularam village,Munipally mandal, Medak district,, Telangana, India			
17°39'41.0040" N	17.66139° N	77°52'10.1280" E	77.86948° E
Pennar Renewable Pvt. Ltd. – Ellanthakunta **Capacity: 10 MW** Dacharam Village,Ellanthakunta Mandal, Karimnagar district,			
18°16'48.0360" N	18.28001° N	78°51'54.1440" E	78.86504° E
Pennar Renewable Pvt. Ltd. – Manakondur **Capacity: 5 MW** Annaram village, Manakondur mandal, Karimnagar district, Telangana,India			
18°25'22.4400" N	18.42290° N	79°13'31.7280" E	79.22548° E

The same was confirmed by the measurement of co-ordinates using google earth software and GPS at the project site and were found appropriate.

The verification team confirms that project owner has described the GHG emission-reduction activity, including schematics, specifications, and a description of how the project reduces GHG emissions. The same is in accordance with §36 of Project Standard Version 03.1 and cross checked with PSF /1-d/. Furthermore, the Project Activity is a voluntary action by the project owner as confirmed by the verification team upon review of the PSF /1-a/ and on-site visit interviews /27/.

As stated in the PSF /1/, the project activity also voluntarily contributes to Environmental No-net-harm Label (E+), Social No-net-harm Label (S+) and 6 United Nations Sustainable Development Goals (SDG+).

As per the PSF /1/, the start date of the Project Activity is 25/02/2016 (earliest start date of operations among all the involved project activities in the bundle). The same is in accordance with requirements of §38 of Project Standard (version 03.1) /B01-1/ as well as §13 of the GCC Clarification No. 1 version 1.3 /B01/. The project verification team confirmed the same during the physical onsite visit /27/ as well as from the commissioning certificates /9/.

The homogeneity of the bundle is ascertained on the basis of the two-level analysis formulated in the GCC Clarification No.1, version 1.3. The same can be summarized as follows:

Level-1 Analysis - Consideration of key aspects for developing Homogeneous Bundles:

All the 3 individual solar power project activities meet the criteria outlined in §11 of the GCC Clarification No. 1 version 1.3 as follows:

1. Similarity in Technological Considerations - All activities in a bundle apply same type of technology i.e. Grid connected Solar PV and apply the same methodology i.e. GCCM001 Version 3.0
2. Similarity in Economic and Policy Considerations: All activities in the bundle apply
    i. Post Tax Equity IRR for investment analysis
    ii. Same implementation year
    iii. employ the same benchmark [Default value for the cost of equity (expected return on equity) as enshrined in the Investment Analysis]
    iv. all the activities in the bundle are located in same country i.e. India
    v. all the activities in the bundle supply electricity to the Indian Grid.

3. Similarity in Environmental or Methodological Considerations - All activities in the bundle
    i. apply the same methodology, i.e., GCCM001 Version 3.0 /B02/
    ii. adopt same baseline approach, i.e., Indian Grid
    iii. adopt same monitoring approach and measurement parameters

Level-2 analysis – Criteria for differentiating the bundles:

All the 3 individual solar power project activities meet the criteria outlined in §12 of the GCC Clarification No. 1 version 1.3 /B01/ as follows:

1. Same baseline of each activity within a bundle, i.e., Indian Grid
2. Same output of each activity, i.e., electricity
3. Same Technology of each activity, i.e., solar power based electricity generation
4. Same additionality approach, i.e., investment analysis using post tax equity IRR

	It can therefore be concluded that all the 3 individual project activities involved in the bundle satisfy the criteria outlined in §11 and §12 of the GCC Clarification No. 1 version 1.3 /B01/ and hence the bundle is homogenous in nature. The project verification team confirmed the same after review of the PSF /1-d/ and other relevant documents. The crediting period is a fixed crediting period of 10 years from 27/04/2016 to 26/04/2026. This is cross checked with the PSF /1/ and conforms with the requirements of §39 and §40 of Project Standard Version 03.1 /B01-1/. CCIPL verification team is therefore able to confirm that the description of the proposed Project Activity in the PSF is accurate and complete and it provides a clear understanding of the Project Activity. The same is found to be acceptable. Furthermore, the verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry /B11/, VERRA Registry /B12/, Gold Standard Registry /B13/,and voluntary non-GHG Programs like I-REC/B15/ Renewable Energy Certificate (REC) Mechanism /B14/ in India 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 Program prior to commencement of this verification. It was confirmed that the project owner has not submitted the said project activity under any other GHG program apart from GCC.

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

D.3.1 Application of methodology and standardized baselines

Means of Project Verification	DR, I
Findings	CAR 03 and CAR 07 were raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The GCC methodology applied is GCCM001, version 3.0 /B02/. It is applicable to grid-connected electricity generation from renewable sources. Applicability of the methodology was confirmed by means of interviews with the PO representatives and document review. The applied methodology is correctly quoted and is identical to the version available on the GCC website. The applied methodology version of the baseline and monitoring methodology /B02/ is valid at the time of submission of the PSF for global stakeholder consultation. All applicability criteria in the methodology are assessed in the below table:

Applicability criteria of the methodology (GCCM001, version 3.0)	Justification in the PSF	Project verifier assessment
Paragraph 9 of the applied methodology states that: The project activities eligible under this methodology aim to build and operate a new USPP or new DPPs, which are subject to following	This criterion is applicable, as the project employs Solar Photovoltaic power generation technology and supply generated	The project activity involves the installation of 35 MW Solar Photovoltaic Panels. The same is a bundled project involving 3 project activities viz. Greenko Solar Power

	eligibility conditions. (a) The renewable energy generation projects shall supply electricity to user(s), either grid or a specific identified user. The project activity will displace electricity from an electricity distribution system that is or would have been supplied by from a national or a regional grid (grid hereafter); the following renewable energy generation technologies qualify under this methodology: (i) Solar Photovoltaic; (ii) On-shore or Off-shore Wind; (iii) Tidal; (iv) Wave	electricity to Indian Grid.	(Medak) Limited (20 MW) Pennar Renewables Pvt. Ltd. at Ellanthakunta (10 MW) and Pennar Renewables Pvt. Ltd. at Manakondur (5 MW). The electricity thus generated from project activity is exported to the Indian grid in India through power purchase agreement (PPA) /06/, there by displacing electricity from the regional grid generated by fossil fuel-based power plants. CCPIL project verification team has confirmed the same from the contract between the project owner and the technology provider power purchase agreement /06/, as well as the commissioning certificates /9/. The said criterion is fulfilled by the project activity and hence the methodology is applicable to the project activity.
	(b) The project activities can also involve setting up and implementation of a BESS along with the renewable energy generation plant.	Not applicable as the bundled project activity doesn't involve setting up and implementation of a BESS.	The project activity involves the installation of a new grid- connected renewable power generation facility i.e. installation of solar PV panels to generate electricity. The project activity design does not involve setting up of battery energy storage systems (BESS). CCPIL project verification team confirmed the same during the onsite visit /27/.

			Hence this condition is not applicable to the project activity.
	(c) The project activity wherein a BESS has been deployed, can either be a greenfield installation wherein the BESS had been conceptualized along with the renewable energy generation unit or may be retrofitted into an existing setup of renewable energy project, whether or not registered with GCC.	Not applicable as the bundled project activity didn't deploy a BESS.	The project activity involves the installation of a new grid- connected renewable power generation facility i.e. installation of solar PV panels to generate electricity. The project activity design does not involve setting up of battery energy storage systems (BESS). CCPIL project verification team confirmed the same during the onsite visit /27/. Hence this condition is not applicable to the project activity.
	(d) In case the Project Owners want to claim carbon credits due to retrofit of BESS into existing renewable energy generation unit, they would need to demonstrate that historically the renewable energy unit was subject to curtailed output due to low grid stability or capacity limitation3 in the grid infrastructure for handling the increased generation. This must be through evidence of existence of technical and regulatory/commercial constraints.	Not applicable as the bundled project activity didn't deploy a BESS.	The project activity involves the installation of a new grid- connected renewable power generation facility i.e. installation of solar PV panels to generate electricity. The project activity design does not involve setting up of battery energy storage systems (BESS). CCPIL project verification team confirmed the same during the onsite visit /27/. Hence this condition is not applicable to the project activity.
	(e) The project activities shall not involve combined heat and power (co-generation) systems.	This criterion is not applicable as bundled project activity generates electricity only and does not involve combined heat and power (co-	The project activity involves the installation of a new grid- connected renewable power generation facility i.e. installation of solar PV panels to generate electricity.

		generation) system.	The project activity design does not involve combined heat and power (co-generation) system. CCPIL project verification team confirmed the same during the onsite visit /27/. Hence this condition is not applicable to the project activity.
	(f) The project activities shall not involve co-firing of fossil fuel of any kind.	This criterion is not applicable as the project does not involve co-firing of fossil fuel of any kind.	The project activity involves the installation of a new grid- connected renewable power generation facility i.e. installation of solar PV panels to generate electricity. The project activity design does not involve co-firing of fossil fuel of any kind. CCPIL project verification team confirmed the same during the onsite visit /27/. Hence this condition is not applicable to the project activity.
	(g) The project activities may have consumption of electricity (grid on on-site generation) for site offices.	This criterion is applicable as project may have consumption of electricity (grid on onsite generation) for site offices during maintenance	The project activity involves the installation of a new grid- connected renewable power generation facility, i.e., installation of solar PV panels to generate electricity. The project activity does consume electricity at the site office during maintenance. CCPIL project verification team confirmed the same during the onsite visit /27/, interviews with site personnel /27/ as well as from the records maintained for onsite electricity consumption /27/.

		Hence this condition is applicable to the project activity.
(h) Distributed Power Plants DPPs that supply electricity also for domestic, commercial or industrial captive purposes either wholly or in addition to supply to grid, shall demonstrate that grid connection was available on the site before the implementation of project activity.	Not applicable as bundled project is a Utility scale power plant (USPP).	The project activity involves the installation of a new grid- connected renewable power generation facility i.e. installation of solar PV panels to generate electricity. CCPIL project verification team confirmed the same during the onsite visit /27/. As the project activity is a Utility scale power plant (USPP), the said condition is not applicable.
(i) Under no condition would the battery storage system (BESS) be charged from the grid except in case of emergency situations like deep discharge or exceptional operational situations due to requirements from regulatory authorities in order to safeguard the safety and operational integrity of the connected grid system. BESS which consumes grid power or fossil fuel-based captive power for auxiliary load associated with BESS setup and employ cooling and/or fire suppression systems based on refrigerants or clean agents with the global warming potential (e.g. Hydrofluorocarbon (HFC) or Chlorofluorocarbon (CFC)) are not included under this methodology.	Not applicable as the project activity didn't deploy a BESS.	The project activity involves the installation of a new grid- connected renewable power generation facility i.e. installation of solar PV panels to generate electricity. The project activity does not deploy a battery energy storage system (BESS). CCPIL project verification team confirmed the same during the onsite visit /27/. Hence this condition is not applicable to the project activity.

Tool 01: Tool for the demonstration and	**Justification in the PSF**	**Project verifier Assessment**

	assessment of additionality; Version 7.0		
	Paragraph 9 states that: 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.	Since the applied methodology is not a new methodology, the project proponent has applied this tool for the demonstration of additionality in compliance with the tool. Hence this tool is applicable	The project activity applies an approved GCC methodology, i.e., GCCM001 "Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers", version 3.0 /B02/ and no new methodology is proposed. Hence this condition is applicable to the project activity.
	Paragraph 10 states that: Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.	In line with the methodology requirement, Project developer has applied this tool for the demonstration of additionality assessment. Hence this tool is applicable	The said tool is included in the applied methodology GCCM001, version 3.0 B01/. Hence, this condition is found to be met.
	Tool 07: Tool to calculate the emission factor for an electricity system; Version 7.0	**Justification in the PSF**	**Project verifier Assessment**
	Paragraph 3 states that: 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 condition is applicable. OM, BM and CM are estimated using the Tool under section B.6.1 for calculating baseline emissions.	The project activity involves the installation of a new grid- connected renewable power generation facility, i.e., installation of solar PV panels to generate electricity which is then supplied to the Indian Grid. In the absence of this project activity, same amount of electricity would have been generated by the operation of existing/proposed grid connected power plants, predominantly fossil fuel based.

			The baseline emissions are calculated from electricity supplied to the grid by the project activity multiplied with emission factor of the Indian grid, which is calculated using OM, BM and CM using this tool. The same has been elaborated upon in section D.3.6 of this report. Hence this condition is applicable to the project activity and found to be met.
	Paragraph 4 states that: 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 is a grid connected solar Power project. Estimation of OM & BM has been prepared and published in India by the Central Electricity Authority (CEA), Government of India publishes this data, and accordingly the same has been used. The latest CO_2 Baseline Database for the Indian Power Sector, Version 17, October 2021, published by Central Electricity Authority (CEA), Government of India has been used for the calculation of emission factor. The above CO Baseline Database follows the "Tool to calculate the emission factor for an electricity system" Version 07.0.	The project activity has chosen the option to calculate the emission factor for grid power plants only by referring to the data published by CEA. This confirms that only grid connected power plants have been considered for OM, BM and CM calculations and is found to be acceptable by the project verification team. The point has been assessed in detail under section D.3.6 of the report.
	Paragraph 5 states that:	No portion of the Project Electricity	The project activity is situated in India, which is

	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.	system (i.e. Indian Grid) is in an Annex I country	not Annex I country, hence the condition is not applicable.
	Paragraph 6 states that: Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	No biofuels are used.	The project activity involves the installation of a new grid- connected renewable power generation facility i.e. installation of solar PV panels to generate electricity and does not involve biofuels. The same was confirmed from power purchase agreement /6/ and site visit /27/. Hence the condition is not applicable.
	TOOL 27: Investment analysis; Version 11.0	**Justification in the PSF**	**Project verifier Assessment**
	Paragraph 2 states that 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.	The project activity utilises the methodological tool "Tool 01: Tool for the demonstration and assessment of additionality", version 07 /B04/. Hence this condition is applicable to the project activity and found to be met.
	Paragraph 3 states that: In case the applied approved baseline and monitoring methodology contains requirements for the investment analysis that are different from those described in this	Not applicable The applied approved baseline and monitoring methodology does not contain requirements for the investment analysis that are different from those	The applied methodology, GCCM001 version 3.0 /B02/ does not contain requirements for investment analysis which are different from that specified in the tool.

	methodological tool, the requirements contained in the methodology shall prevail.	described in this methodological tool. Hence, not applicable	Hence the condition is not applicable.
	TOOL 24: Common Practice; Version 3.1	**Justification in the PSF**	**Project verifier Assessment**
	Paragraph 3 states that: 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", or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality.	Project activity applies "Tool for the demonstration and assessment of additionality". Hence this tool is applicable.	The project activity utilises the methodological tool "Tool 01: Tool for the demonstration and assessment of additionality", version 07. Hence this condition is applicable to the project activity and found to be met.
	Paragraph 4 states that: In case the applied approved baseline and monitoring methodology defines approaches for the conduction of the common practice test that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	Not applicable The applied approved baseline and monitoring methodology does not define any different approaches for conducting common practice test other than those described in this methodological tool	The applied methodology, GCCM001 version 3.0 /B02/ does not contain approaches for conducting common practice test which are different from that specified in the tool. Hence the condition is not applicable.
	The applied baseline and monitoring methodology and relevant tools are valid and applicable to the project activity. The project fulfils all relevant criteria of the applied methodology 'GCCM001: Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers' – Version 3.0 /B01/ and Tool to calculate the emission factor for an electricity system; (Version 7.0) /B04-3/. Hence, use of the selected methodology is appropriate for this project activity.		

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

Means of Project Verification	DR, I
Findings	-
Conclusion	No further clarifications were sought as the applicability criteria of methodology and the associated tools was found to be fulfilled.

D.3.3 Project boundary, sources and GHGs

Means of Project Verification	DR, I
Findings	CAR 04 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	As per §12 of the applied methodology GCCM001, version 3.0 /B-02/, the project boundary is stated as "The spatial extent of the project boundary includes the project power plant, BESS (where deployed) and all power plants connected physically to the electricity system that the GCC project power plant or distributed type power generation devices are connected to". Section B.3 of the PSF /01/ clearly depicts the project boundary along with a pictorial representation. The verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified and the same was found to be in conformity with the applied methodology. Furthermore, the physical boundary of the project activity identified by the project owner has been cross verified during site visit /27/ and duly verified from the commissioning reports /9/ and power purchase agreement /6/. The same was found to be appropriate and acceptable. The verification team also 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 verification team therefore confirms that the identified boundary and the selected emissions sources are justified for the project activity.

D.3.4 Baseline scenario

Means of Project Verification	DR, I
Findings	CAR 05 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	As per §13 of the applied methodology GCCM001, version 3.0 /B-02/, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid. The Project activity involves generation of electricity by harnessing solar irradiation energy and selling it to the Indian grid. The same was confirmed through the power purchase agreement /6/ and commissioning reports /9/. In the absence of this project activity, same amount of electricity would have been generated by the operation of existing/proposed grid connected power plants, predominantly fossil fuel based. The verification team confirms that all assumptions and data used by the project owners are listed in the PSF, including their references and sources. All relevant national and/or sectoral policies and circumstances are considered and listed in the PSF /1-d/. Furthermore, the verification team also concludes that the identified baseline scenario reasonably represents what would occur in the absence of the project activity. The baseline scenario in the PSF /1-d/ is reported as the supply of electricity to grid and thereby displacement of electricity from the electricity distribution system connected to the Indian Grid. The baseline scenario applied in the PSF was compared with the requirements of the baseline described in the applied methodology and found to be consistent. Therefore, the verification team also

	concludes that the identified baseline scenario reasonably represents what would occur in the absence of the project activity and is found to be acceptable.

D.3.5 Demonstration of additionality

Means of Project Verification	DR, I
Findings	CL 06 and CAR 06 were raised and closed successfully. Please refer Appendix 4 for further details.
Conclusion	Project Owner has described the Demonstration of additionality according to the GCC Project Standard Version 03.1 /B01/ and the applied methodology GCCM001, version 3.1 and relevant methodological tools. In section B.5 of the PSF /1-d/, two components are applied for the demonstration of additionality: - A Legal Requirement Test - Additionality Test Legal Requirement: The project activity is a Type A project and requires undergoing a 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 /B08/, National Electricity Policy 2005 /B08/, National Solar Mission /B08/, National Action Plan on Climate Change (NAPCC) 2008 /B10/ 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. The project activity is therefore voluntary in nature and hence is additional as per paragraph 46 of GCC Project Standard V3.1 and passes the legal requirement test. Additionality is demonstrated at the bundle level for the bundled project. Accordingly, common practice analysis is also demonstrated at project activity level. This is in accordance with paragraph 7 and 20 of GCC Clarification No. 1 version 1.3 /B01/. Additionality Test: To cover this requirement from the GCC Project Standard 3.1 /B01/, section 6.4.8, paragraph 45 and as per the applied methodology GCCM001 Version 3.0 /B02/, additionality of the project activity is demonstrated and assessed using the latest version of Tool 01: Tool for the demonstration and assessment of additionality" Version 7.0 /18/ The PO has adopted the stepwise approach for demonstrating and assessing the additionality of the project activity as follows: Step 0: Demonstration whether the proposed project activity is the first-of-its-kind The project activity is a grid connected solar power project in India. This is not the first such project to be installed in the country and therefore project activity does not meet this criterion.

	Step 1: Identification of alternatives to the project activity consistent with current laws and regulations Sub-step 1a: Define alternatives to the project activity Alternative 1: The proposed project activity not undertaken as a GCC project activity. Alternative 2: Continuation of the present situation, i.e., the power generated from the project activity will be fed into India National Grid. Sub-step 1b: Consistency with mandatory laws and regulations Both the alternatives are consistent with the laws and regulations of India. The environmental regulations, legislations and policy guidelines in respect to the project activity are governed by various regulatory agencies. The principal environmental regulatory agency in India is Ministry of Environment, Forest and Climate Change (MoEF &CC), Delhi supported by Central Pollution Control Board (CPCB). The Solar Power Projects are not covered under the ambit of EIA Notification, 2006. Hence, it does not require preparation of Environmental Impact Assessment Report and pursuing Environmental Clearance from Ministry of Environment, Forest and Climate Change (MoEF & CC). (Annexure-II MOEF&CC, OM on J-11013/41/2006-IA. II (I) dated 7th July 2017) Further, MoEF & CC has included Solar Power Projects under “White category” for Consent to Establish/Operate. Newly introduced White category contains 36 industrial sectors which are practically non-polluting. There shall be no necessity of obtaining the Consent to Establish/Operate for White category of industries and an intimation to concerned SPCB / PCC shall suffice. In accordance with the requirement of the Modified directions under section 18(1)(b) of the Water (P&PC) Act, 1974 and the Air (P & PC) Act, 1981 regarding harmonization of classification of industrial sectors under red/ orange/ green/ white categories by the CPCB /25/, acknowledgement of Letter to PCB for White Category Industry /25/ received by the PO was checked and found to be acceptable. Step 2: Investment analysis: In this section it is demonstrated that the project activity is not financially feasible without the revenue from the sale of ACCs. This is demonstrated in following sections as per “Investment analysis” (Version 11.0). The project was awarded under competitive bidding of government of Andhra Pradesh vide GO MS No 46 dated 07/11/2012. The investment decision date for the project activities are the of letter of award through state government competitive bidding process – for M/s Greenko Solar Power (Medak) Limited (Karvy Solar): January-2015 Pennar Renewables Pvt Ltd at Ellanthakunta : August-2013, Pennar Renewables Pvt Ltd at Manakondur: August-2013. These dates are considered as the investment decision date for the project owner to start the project implementation despite inherent financial barriers. The additionality has been established using the data available at the time of investment decision which are mainly CERC RE tariff order dated 15/05/2014 /6/. Sub-step 2a: Determine appropriate analysis method Since project activity generates revenue, Option III - Benchmark Analysis has been chosen to carry out investment analysis. Sub-step 2b: Option III. Apply benchmark analysis

Since the project is funded through equity and debt funds, Post Tax Equity IRR has been considered an appropriate financial indicator which will be tested against an appropriate benchmark cost of equity.

These indicators are industry accepted indicators and are commonly used for financial analysis of similar kinds of projects.

In line with para 16 of investment analysis, as the investment analysis is carried out in nominal terms and the available IRR benchmarks are in real terms, therefore, project owner has converted the real term values of benchmarks to nominal values by adding the inflation rate.
As per para 19 of investment analysis, the cost of equity is determined by selecting the values provided in the Appendix, i.e., Default values for cost of equity (expected return on equity) is presented below:

The Required return on equity (benchmark) was computed in the following means:

Nominal Benchmark = {(1+Real Benchmark) * (1+Inflation rate)} – 1

Where:
- Default value for Real Benchmark = 10.55%, as per TOOL27, version11.0, which is the latest version available at the time of preparation of PSF
- Inflation Rate forecast for by Reserve Bank of India (RBI) i.e., Central Bank of India.

TOOL27, version 11.0 specifies default value of expected return on equity in real terms for Energy Industries (Group 1) in India = 10.55%

As per RBI report “Results of the Survey of Professional Forecasters on Macroeconomic Indicators – 25th Round (Q2:2013-14) dated 28/10/2013 /x/, the latest report available at the time of decision making, the 10-year inflation forecast projected was 5.6%.

Therefore, Benchmark is calculated as {(1+10.55%) x (1+5.6%)} -1 = 16.74%

Sub-step 2c: Calculation and comparison of financial indicators
For calculation of financial indicator, all relevant costs and revenues were found to be included in the IRR sheet /x/ provided by the PO. All assumptions and estimates used for input values were checked against the relevant sources.

GCC project activity has a less favourable post tax Equity IRR compared to the benchmark, and hence the GCC project activity cannot be considered as financially attractive.

The key data parameters used to calculate Equity IRR are tabulated below:

Parameter	Value	Project verifier assessment

	Capacity	M/s Greenko solar power (Medak) limited: 20 MW	The rated capacities of all three PAs are based on the commissioning reports /9/, and found to be consistent and thus acceptable. The same was further confirmed from the purchase order /12/ as well as the PPA /6/. Installed capacities of all three PAs proposed at the time of decision making (i.e. internal management decision) and post decision making (actual implementation) are same.
		Pennar renewables Private Limited – Elanthakunta: 10 MW	
		Pennar renewables private limited – Manakondur: 5 MW	
	PLF	M/s Greenko solar power (Medak) limited : 19.00%	Value is based on CERC RE tariff order dated 15/05/2014 /22/. The same is equivalent to the PLF offered by the technology provider /11/, and is found to be acceptable. To further cross-check the robustness of the PLF, validation team has cross-checked the actual generation of the project activity to ascertain the conformity of the estimated PLF to the actual and observed that the generation yielded a PLF of 18.67% /11/.
		Pennar renewables Private Limited – Elanthakunta: 19.00%	Value is based on CERC RE tariff order dated 28/02/2013 /22/. The same is equivalent to the PLF offered by the technology provider /11/, and is found to be acceptable. To further cross-check the robustness of the PLF, validation team has cross-checked the actual generation of the project activity to ascertain the conformity of the estimated PLF to the actual and observed that the generation yielded a PLF of 20.21% /11/.
		Pennar renewables private limited – Manakondur: 19.00%	Value is based on CERC RE tariff order dated 28/02/2013 /22/. The same is equivalent to the PLF offered by the technology provider /11/, and is found to be acceptable.

			To further cross-check the robustness of the PLF, validation team has cross-checked the actual generation of the project activity to ascertain the conformity of the estimated PLF to the actual and observed that the generation yielded a PLF of 19.82% /11/.
	Auxiliary consumption	M/s Greenko solar power (Medak) limited: 0.00%	Value is based on CERC tariff order dated 15/05/2014 /22/ which has considered auxiliary consumption of 0% and hence the same is acceptable. The value has been cross checked against PPA where the value is 0.1% /11/ and was cross checked with, the month-wise record of auxiliary consumption /10/. The same is found to be reasonable and hence acceptable.
		Pennar renewables Private Limited – Elanthakunta: 0.00%	Value is based on CERC tariff order dated 28/02/2013 /22/ which has considered auxiliary consumption of 0% and hence the same is acceptable. The value has been cross checked against PPA where the value is 0.1% /6/ and was cross checked with, the month-wise record of auxiliary consumption /10/. The same is found to be reasonable and hence acceptable.
		Pennar renewables private limited – Manakondur: 0.00%	Value is based on CERC tariff order dated 28/02/2013 /22/ which has considered auxiliary consumption of 0% and hence the same is acceptable. The value has been cross checked against PPA where the value is 0.1% /6/ and was cross checked with, the

			month-wise record of auxiliary consumption /10/. The same is found to be reasonable and hence acceptable.
	Annual generation	M/s Greenko solar power (Medak) limited: 33,288 MWh	The value is calculated as: Capacity * PLF * 8760 = 20 MW * 19% * 8760 h = 33,288 MWh. The input values used in calculation were available at the time of investment decision making. The actual PLF since the start of operation of the project activity is 18.67% and therefore the annual average generation value comes to 32,710 MWh which is less than the input value used for IRR analysis.
		Pennar renewables Private Limited – Elanthakunta: 16,644	The value is calculated as: Capacity * PLF * 8760 = 10 MW * 19% * 8760 h = 16,644 MWh. The input values used in calculation were available at the time of investment decision making. The actual PLF since the start of operation of the project activity is 20.21% /11/ and therefore the annual average generation value comes to 17,703 MWh which is more than the input value used for IRR analysis.
		Pennar renewables private limited – Manakondur: 8,322	The value is calculated as: Capacity * PLF * 8760 = 5 MW * 19% * 8760 h = 8,322 MWh. The input values used in calculation were available at the time of investment decision making. The actual PLF since the start of operation of the project activity is 19.82% /11/ and therefore the annual average generation value comes to 8,681 MWh which is more than the input value used for IRR analysis.
	Revenue & Expenses		

	Power tariff	M/s Greenko solar power (Medak) limited: 6.95 INR/kWh	The Value is based on CERC RE tariff order 2014-15 /22/ which was available at the time of investment decision making date and is deemed acceptable to the project verification team. The project activity exports the entire power generated to DISCOM at a maximum fixed tariff ₹6.7/kWh (based on PPA /6/) which is lower than the input value and is deemed acceptable.
		Pennar renewables Private Limited – Elanthakunta: 7.87	The Value is based on CERC RE tariff order 2013-14 /22/ which was available at the time of investment decision making date and is deemed acceptable to the project verification team. The project activity exports the entire power generated to DISCOM at a maximum fixed tariff ₹6.7/kWh (based on PPA /6/) which is lower than the input value and is deemed acceptable.
		Pennar renewables private limited – Manakondur: 7.87	The Value is based on CERC RE tariff order 2013-14 /22/ which was available at the time of investment decision making date and is deemed acceptable to the project verification team. The project activity exports the entire power generated to DISCOM at a maximum fixed tariff ₹6.7/kWh (based on PPA /6/) which is lower than the input value and is deemed acceptable.
	Annual degradation during 1st year (%)	2.50%	The value considered is based on standard performance warranty by the PV module manufacturers (data module sheet) /15/. Based on the data module sheet for the PV modules /15/: Annual degradation from 2nd year till 10th year: (97.5-90)/9= 0.83
	Annual degradation from 2nd year till 10 th year (%)	0.83%	
	Annual degradation from 11th year till 25 th year (%)	0.67%	

			Annual degradation from 11th year till 25th year: (90-80)/15=0.67 The percentage of annual degradation is therefore considered appropriate for the project activity.
	O & M cost	M/s Greenko solar power (Medak) limited : 28.29 INR million	Value is based on CERC RE tariff order dated 15/05/2014226/ and found to be consistent and thus acceptable. According to the said order, O&M expense norm for solar PV power project as 12.30 Lakh/MW for FY 2014-15 has been considered.
		Pennar renewables Private Limited – Elanthakunta: 13.37 million	Value is based on CERC RE tariff order dated 28/02/2013 /22/ and found to be consistent and thus acceptable. According to the said order, O&M expense norm for solar PV power project as 11.63 Lakh/MW for FY 2014-15 has been considered.
		Pennar renewables private limited – Manakondur: 6.69 million	Value is based on CERC RE tariff order dated 28/02/2013 /22/ and found to be consistent and thus acceptable. According to the said order, O&M expense norm for solar PV power project as 11.63 Lakh/MW for FY 2014-15 has been considered.
	Escalation in O&M expenses p.a.	M/s Greenko solar power (Medak) limited: 5.72%	Value is based on CERC RE tariff order dated 15/05/2014 /22/. The same was further checked against the purchase order /12/ and found to be consistent and thus acceptable.
		Pennar renewables Private Limited – Elanthakunta: 5.72%	Value is based on CERC RE tariff order dated 28/02/2013 /22/. The same was further checked against the purchase order /12/ and

			found to be consistent and thus acceptable.
		Pennar renewables private limited – Manakondur: 5.72%	Value is based on CERC RE tariff order dated 28/02/2013 /22/. The same was further checked against the purchase order /12/ and found to be consistent and thus acceptable.
	Project cost and financing structure		
	Project cost	M/s Greenko solar power (Medak) limited: 1,382.00 INR million	The value is based on the CERC RE Tariff order 2014-15 /22/. According to the said order, the capital cost norm for FY 2014-15 is INR 691 Lakh/MW for Solar PV Power Projects. The project cost for IRR analysis is calculated as (70% * 69.1 INR million * 20MW) + 30% * 69.1 INR million * 20MW = 1382.20 INR Million. Actual project cost incurred for the three bundles is INR 2722 million against INR 2582 million considered for financial analysis which is conservative.
		Pennar renewables Private Limited – Elanthakunta: 800.00 INR million	The value is based on the CERC RE Tariff order 2013-14 /22/. According to the said order, the capital cost norm for FY 2013-14 is INR 800 Lakh/MW for Solar PV Power Projects. The project cost for IRR analysis is calculated as 80 INR million * 10MW = 800 INR Million. Actual project cost incurred for the three bundles is INR 2722 million against INR 2582 million considered for financial analysis which is conservative.
		Pennar renewables private limited – Manakondur: 400.00 INR million	The value is based on the CERC RE Tariff order 2013-14 /22/. According to the said order, the capital cost norm for FY 2013-14 is INR 400 Lakh/MW for Solar PV Power Projects. The project cost for IRR analysis is calculated as 80 INR million * 5MW = 400 INR Million. Actual project cost incurred for the three bundles is INR

			2722 million against INR 2582 million considered for financial analysis which is conservative.
	Loan Amount	M/s Greenko solar power (Medak) limited : 967.40 INR million	The value is based on the CERC RE Tariff order 2014-15 /22/. According to the said order, the computations of interest on loan carried out for determination of tariff in respect of the RE projects treating the value base of loan as 70% of the capital cost and the weighted average of base rate prevalent during the first six months of the previous year (i.e. 9.70%) plus 300 basis points (equivalent to interest rate of 12.70%). Therefore, the loan amount considered for IRR calculations is 70% of the project cost which is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the loan amount is 65.83 % of the project cost which is almost in the similar range and will not make the project non additional.
		Pennar renewables Private Limited – Elanthakunta : 560.00 INR million	The value is based on the CERC RE Tariff order 2013-14 /22/. According to the said order, the computations of interest on loan carried out for determination of tariff in respect of the RE projects treating the value base of loan as 70% of the capital cost and the weighted average of base rate prevalent during the first six months of the previous year (i.e. 10%) plus 300 basis points (equivalent to interest rate of 13%). Therefore, the loan amount considered for IRR calculations is 70% of the project cost which is deemed acceptable to the project verification team.

			According to the loan sanction letter /28/, the loan amount is 57 % of the project cost and the verification team noted that even with the actual debt:equity ratio (with higher equity component), the equity IRR will be further lowered only and hence the project remains additional.
		Pennar renewables private limited – Manakondur : 280.00 INR million	The value is based on the CERC RE Tariff order 2013-14 /22/. According to the said order, the computations of interest on loan carried out for determination of tariff in respect of the RE projects treating the value base of loan as 70% of the capital cost and the weighted average of base rate prevalent during the first six months of the previous year (i.e. 10%) plus 300 basis points (equivalent to interest rate of 13%). Therefore, the loan amount considered for IRR calculations is 70% of the project cost which is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the loan amount is 57 % of the project cost and the verification team noted that even with the actual debt:equity ratio (with higher equity component), the equity IRR will be further lowered only and hence the project remains additional.
	Equity Investment	M/s Greenko solar power (Medak) limited : 414.60 INR million	The value is based on the CERC RE Tariff order 2014-15 /22/. The value is equivalent to 30% of the total project cost which is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the loan amount is 65.83 % of the project cost which is almost in the similar range and will not make the project non additional.

		Pennar renewables Private Limited – Elanthakunta : 240.00 INR million	The value is based on the CERC RE Tariff order 2013-14 /22/. The value is equivalent to 30% of the total project cost which is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the loan amount is 57 % of the project cost and the verification team noted that even with the actual debt:equity ratio (with higher equity component), the equity IRR will be further lowered only and hence the project remains additional.
		Pennar renewables private limited – Manakondur : 120.00 INR million	The value is based on the CERC RE Tariff order 2013-14 /22/. The value is equivalent to 30% of the total project cost which is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the loan amount is 57 % of the project cost and the verification team noted that even with the actual debt:equity ratio (with higher equity component), the equity IRR will be further lowered only and hence the project remains additional.
	Interest rate on loan	M/s Greenko solar power (Medak) limited: 12.70%	The value is based on the CERC RE Tariff order 2014-15 /22/. According to the said order, the computations of interest on loan carried out for determination of tariff in respect of the RE projects treating the value base of loan as 70% of the capital cost and the weighted average of Base rate prevalent during the first six months of the previous year (i.e. 9.70%) plus 300 basis points (equivalent to interest rate of 12.70%). This is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the applicable interest rate is 12.25%.

		Pennar renewables Private Limited – Elanthakunta: 13%	The value is based on the CERC RE Tariff order 2013-14 /22/. According to the said order, the computations of interest on loan carried out for determination of tariff in respect of the RE projects treating the value base of loan as 70% of the capital cost and the weighted average of Base rate prevalent during the first six months of the previous year (i.e. 10%) plus 300 basis points (equivalent to interest rate of 13%). This is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the applicable interest rate is 12.4%.
		Pennar renewables private limited – Manakondur: 13%	The value is based on the CERC RE Tariff order 2013-14 /22/. According to the said order, the computations of interest on loan carried out for determination of tariff in respect of the RE projects treating the value base of loan as 70% of the capital cost and the weighted average of Base rate prevalent during the first six months of the previous year (i.e. 10%) plus 300 basis points (equivalent to interest rate of 13%). This is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the applicable interest rate is 11%.
	Loan Tenure	M/s Greenko solar power (Medak) limited : 48 Quarters	The value is based on the CERC RE Tariff order 2014-15 /22/. According to the said order, the loan tenure of 12 years is to be considered for the purpose of determination of tariff for RE projects. This is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the loan tenure is 12 years.

		Pennar renewables Private Limited – Elanthakunta : 48 Quarters	The value is based on the CERC RE Tariff order 2013-14 /22/. According to the said order, the loan tenure of 12 years is to be considered for the purpose of determination of tariff for RE projects. This is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the loan tenure is 12 years.
		Pennar renewables private limited – Manakondur : 48 Quarters	The value is based on the CERC RE Tariff order 2013-14 /22/. According to the said order, the loan tenure of 12 years is to be considered for the purpose of determination of tariff for RE projects. This is deemed acceptable to the project verification team. According to the loan sanction letter /28/, the loan tenure is 12 years.
	Salvage Value (%)	10.00	Salvage value is considered as 10% of the total project cost (excluding cost of land lease, erection and commissioning charges as well as transportation charges) as per the CERC tariff order dated 15/05/2014 /22/ (applicable for Greenko solar power (Medak) limited) and 28/02/2023 /22/ (applicable for Pennar renewables Private Limited – Elanthakunta and Pennar renewables private limited – Manakondur). These have been added back to the cash flow. Land cost is not considered in IRR calculations which is deemed acceptable to the project verification team. PO considered 10% of cost of plant and machinery (solar plant) as residual (salvage) value for the project activity conservatively). This is further validated as per the accounting practises and same has been also cross checked from Schedule II of

		the Companies Act 2013 which allows 95% of original cost to be depreciated implying a consideration of 5% as salvage value as a standard accounting practice. Thus, the consideration by the PO of 10% salvage value is conservative and hence appropriate for the project activity.
IT Depreciation (SLM)	7.69%	As Per Income Tax, Depreciation rates for power generating units. http://www.incometaxindia.gov.in/charts%20%20tables/depreciation%20rates.htm The verification team found that the value is acceptable in accordance with the accounting principles of the host country.
Income tax rate (%)	30.00%	Values are based on tax rates notified by the Government of India for the said FY 2014-2015 (year in which decision was taken). The values are verified from the following links: https://taxguru.in/income-tax/income-tax-rate-chart-assessment-year-201516-financial-year-201415.html https://taxguru.in/service-tax/service-tax-rate-increased-1236-14-subsuming-ec-shec-effective-01062015.html
MAT (%)	18.50%	
Service Tax (%)	15.00%	
Surcharge (%)	10.00% (income >100m) 5.00% (income is in between 1-100m)	
Education cess (%)	3.00%	

Combined Equity IRR for the bundled project is 7.74 % which is less than the benchmark i.e., 16.74% and therefore renders the project activity financially non-feasible.

Sub-step 2d: Sensitivity analysis

As per Tool 27, version 11, variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation. 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 (± 10%). The project developer has identified PLF, project cost and electricity tariff as critical assumptions. The sensitivity analysis reveals that even under more favourable conditions, the equity IRR would not cross the benchmark return as given in the following table:

Parameter	-10%	0	+10%
PLF	5.64%	7.74%	10.12%
Electricity tariff Rate	5.64%	7.74%	10.12%
Project Cost	9.82%	7.74%	6.37%

The validation team carried out its own an independent assessment on the likelihood of the equity IRR breaching the benchmark and this assessment reveals that the project would become non additional only if:

- PLF goes up by 34.5%
- Project cost goes down by 29.50%
- Tariff increases by 34.5%

PP has submitted that such a reduction in project cost or increase in PLF / tariff is highly unrealistic and unlikely to happen for the following reasons:

PLF: Generation taken into consideration is equal to CERC recommended PLF. However, as per actual generation since COD, the PLF works out to only 18.67% for Medak, 20.21% for Ellanthakunta and 19.82% for Manakondur. Hence, to get a PLF 34.5% higher than the estimated value on a sustained basis is highly hypothetical and unrealistic.

Project cost: The project cost has to come down by 29.50% for the financial parameter to breach the benchmark. This is not plausible as the project is already implemented at a project cost of INR 2722.2 Million at bundle level against base case investment of INR 2582 Million.

Tariff:

The tariff has to go up by 34.5% for the financial indicator to breach the benchmark. This is not possible as the project proponent has already entered into a PPA with the DISCOM at a maximum fixed tariff of Rs 6.7 /kWh.

In conclusion, the post-tax equity IRR will not reach the benchmark of 16.74% within reasonable fluctuation range of +/-10% of the key financial parameters. The project verification team has cross checked all the input values and calculations which are found to be correct and in accordance with Tool 27, version 11.

Step 3: Barrier analysis
PO has not applied barrier analysis.

Step 4: Common practice analysis
Common practice analysis for the project was conducted using CDM Tool 24, version 3.1)

Sub-step 4a: The proposed project activity(ies) applies measure(s) that are listed in the definitions section above

	The project is a solar power generation project and adopts type (b) measure listed in the Methodological tool am-tool-24-v03.1 Common practice. The applicable geographical area is Telangana state of India. The state of Telangana is chosen as the applicable geographical area as against the rest of the host country as the policy/tariff applicable for the renewable power projects is regulated by respective State Electricity Regulatory Commissions (SERCs) in accordance with the generic policy framed by the Central Electricity Regulatory Commission (CERC) and they differ from state to state. This is based on Electricity Act 2003, section 82 which clearly mentions "Every State Government shall, within six months from the appointed date, by notification, constitute for the purposes of this Act, a Commission for the State to be known as the (name of the State) Electricity Regulatory Commission" Appropriateness of the same has been checked and confirmed from the aforementioned act. (http://www.cercind.gov.in/08022007/Act-withamendment.pdf). The investment climate for the renewable energy projects varies from State to State within India due to state specific local policy & regulatory framework as outlined by the State Electricity Regulatory Commissions of the respective state. Thus, consideration of the specific geographical area i.e. State of Telangana for the common practice analysis of the proposed project activity found to be reasonable and justified. Sub-step 4a-1: calculate applicable capacity or output range as +/-50% of the total design capacity or output of the proposed project activity. The applicable capacity calculated as +/-50% of total design capacity of proposed project activity was 17.5 MW to 52.5 MW, which was found to be in line with Tool 24. Sub-step 4a-2: identify similar projects (both CDM and non-CDM) which fulfil all of the following conditions: (a) The projects are located in the applicable geographical area These fall in the applicable geographical location i.e., state of Telangana in India. (b) The projects apply the same measure as the proposed project activity These apply the same measure i.e., solar radiation based power generation. (c) The projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity These use the same source of input energy i.e., solar. (d) The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant These produce the same goods/services i.e., electricity supplied to the connected grid. (e) The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1 The capacity of these projects is in the range as defined in Step 1 (f) The projects started commercial operation before the project design document (CDM-PDD) is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity.

	These projects started commercial operation before the start date of proposed project activity 31st, October, 2015 (latest start date among the project activities considered in the bundle – Purchase order for supply of major equipment) There are no similar projects which satisfy all of the above conditions. Sub-step 4a-3: within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number Nall. considering projects under all carbon credits mechanisms So, Nall = 0 Sub-step 4a-4: within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number Ndiff. There is no project from the identified above that is different in technology. Hence, $N_{diff} = 0$ Sub-step 4a-5: calculate factor F=1-Ndiff/Nall representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity. The factor of the proposed project activity is calculated as follows: F = 1 – Ndiff/Nall = 1 – 0 = 1 Nall – Ndiff = 0 As per applied tool, the proposed project activity is a “common practice” within a sector in the applicable geographical area if the factor F is greater than 0.2 and Nall -Ndiff is greater than 3. For the proposed project, F is greater than 0.2, but Nall -Ndiff is not greater than 3, therefore, the project activity is not a common practice in the state of Telangana. The project verification team therefore concludes that as the project activity is not financially feasible and not a common practice, the project is additional.

D.3.6 Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	DR, I
Findings	CL 02, CL 03, CAR 07 and CAR 08 were raised and resolved successfully. Please refer to Appendix 4 for further details.
Conclusion	The verification team confirms that the equations and parameters used to calculate GHG emission reductions or net anthropogenic removals in the sections B.6 of PSF/1-d/ are in accordance with applied methodology, GCCM001 version 3.0 /B02/. The baseline emissions are calculated using the formula: $BEy = EG_{PJ,y} \times EF_{grid,y}$ Where: BEy = Baseline emissions in year y (t CO_2)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year *y* (MWh/yr.)
$EF_{grid,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year *y* calculated using the latest version of "TOOL07: Tool to calculate the emission factor for an electricity system" (t CO_2/MWh)

The formula has been correctly applied as per §24 of the applied methodology according to which "baseline emissions include only CO_2 emissions from electricity generation in power plants that are displaced due to the project activity".

As per the PSF the estimated net electricity generation from the project activity ($EG_{PJ,y}$) is estimated to be 55980MWh/year which is derived from the Joint Monthly Reading Reports. The same have been duly verified and the project verification team confirms that the actual generation from the project activity tallies with the estimation in the PSF as well as the ER calculation sheet /2/ and hence is acceptable.

The electricity generation from the project activity is calculated based on the value of PLF i.e. 19 % which is sourced from the generic levellised generation tariff order for the FY 2013-2014 and 2014-2015 by the CERC /22/. The value considered by the project owner for determining the ex-ante emission reductions in the PSF is therefore deemed acceptable to the verification team after verification of the said order .

Also, the degradation of solar panels is assumed as 2.5% for the 1st year and 0.88% on each year up to 10 years (till the end of the crediting period). Based on the sectoral expertise and standard performance warranty of the solar panel suppliers/15/ of the project activity this is acceptable to verification team.

The project activity has applied the "Tool to calculate the emission factor for an electricity system" version 7.0 for the calculation of CO_2 emission factor of the grid. The assessment of the step wise approach for the calculation of the parameter $EF_{grid,y}$ is detailed below:

Steps for Calculation of combined grid emission factor as per TOOL07: "Tool to calculate the emission factor for an electricity system" version 07	**Assessment**
Step 1: Identify the relevant electricity systems	In accordance with §10(e) of the applied tool, the project activity identifies the Indian Grid as the relevant electricity system. In India, all regional grids have been integrated as a single Indian Grid covering all the states in December 2013 by the Central Electricity Authority (CEA), Government of India. Therefore, in accordance with §17(a) of the applied tool the delineation of the project electricity system and connected electricity systems published by the DNA of the host country i.e. CO_2 Baseline Database for the Indian Power

			Sector, Version 17, October 2021 published by Central Electricity Authority (CEA), Government of India/B09/ is used. The same has been duly verified and found to be acceptable.
		Step 2: Choose whether to include off-grid power plants in the project electricity system (optional)	The project activity has chosen only grid power plants. The project verification team has reviewed the ER sheet/2/, the CEA published database and found the same to be acceptable.
		Step 3: Select a method to determine the operating margin (OM) (**($EF_{grid,OMSimple,y}$)**	With reference to the options provided for the determination of OM under §38 of the Tool, the project activity has selected Simple OM emission factor calculation. The same is found acceptable as the options of Simple adjusted OM and Dispatch data analysis OM could not be utilized due to lack of availability of data. The aforementioned fact is also considered by the Central Electricity Authority in the user guide for CO_2 Baseline Database for the Indian Power Sector version 17.0, October 2021 Furthermore, the Average OM method also cannot be applied as low cost/must run resources (LCMR) constitute less than 50% of total grid generation for recent 5year data (2016-2017 to 2020-2021). The same has been verified against the CEA Baseline database . Therefore, as the LCMR share for the recent 5 years is less than 50%, simple OM can be used. The same is found to be in compliance with the applied tool and found to be acceptable. The parameter “Simple OM emission factor”, is fixed ex-ante.
		Step 4: Calculate the operating margin emission factor according to the selected method	The Simple OM emission factor is calculated as a weighted average generation for the recent 3 years i.e. 2018-2019, 2019-2020, and 2020-2021. The values have been verified against the database used i.e. Central Electricity Authority in the user guide for CO_2 Baseline Database for the Indian

	Power Sector version 17.0, October 2021 and found to be accurate. The same is found to be in compliance with §42(a) of the applied tool and found to be acceptable.
Step 5: Calculate the build margin (BM) emission factor **($EF_{grid,BM,y}$)**	The Build Margin emission factor is calculated based on the recent information available i.e. value for the year 2020-2021. The value has been verified against the database used i.e. Central Electricity Authority in the user guide for CO_2 Baseline Database for the Indian Power Sector version 17.0, October 2021 and found to be accurate. The same is found to be in compliance with §72(a) of the applied tool and found to be acceptable.
Step 6: Calculate the combined margin (CM) emission factor	The combined margin emission factor is calculated by the Weighted average CM method and is based on the formula provided in §85 of the applied tool. The verification team has reviewed the calculation in the PSF/1-d/ as well as the ER calculation sheet/2/ and found the same to be transparent and accurate. The result of the emission factor calculation is therefore found to be acceptable.

The combined margin emission factor ($EF_{grid,y}$) calculated on the basis of Tool 07 is 0.9305 tCO_2e/MWh. This complies with the requirement stated in paragraph 9 of GCC Clarification no. 3 (version 1.0) /B01-7/, which states that "if the project owner applies options 8(c) to 8(e) above, the latest available emission factor shall not be older than 3 years, at the time of submission of the project documentation for starting Global Stakeholder Consultation (GSC)".

Therefore, the baseline emission value is derived as 52,089 tCO_2e using the aforementioned formulae and figures and is found to be acceptable.

Project emissions:

As per §26 of the applied methodology "for most renewable energy project activities, project emissions are equal to zero." As solar energy is a GHG emission free source of energy for the project activity, project emissions are considered "Zero" for the project activity i.e. PEy = 0.
The same is in accordance with the applied methodology as well as project design and hence is found to be acceptable.

Leakage Emissions

As per §29 of the applied methodology no leakage emissions are estimated for the project activity. Leakage emission are therefore considered "Zero" for the project activity i.e. LEy = 0.

	The same is in accordance with the applied methodology as well as project design and hence is found to be acceptable. Emission reductions In accordance with §30 of the applied methodology, emission reductions are calculated as follows: $ERy = BEy - PEy - LEy$ Where: ERy = Emission reductions in year *y* (t CO_2) BEy = Baseline Emissions in year *y* (t CO_2) PEy = Project emissions in year *y* (t CO_2) LEy = Leakage emissions in year *y* (t CO_2) Therefore, the annual emission reduction value is derived as 52,089 tCO_2e using the aforementioned formulae and figures and is found to be acceptable. CCIPL verification team confirms that the baseline methodology and the applicable tool(s) have been applied correctly to calculate emission factor, project emissions, baseline emissions, leakage and emission reductions. Furthermore, all the data used in the PSF /1-d/ as well as the ER calculation sheet /2/ is quoted correctly including their source. The verification team therefore concludes that all the values used in the PSF are reasonable and the calculations are complete and accurate without any omissions. The same is found to be acceptable.

D.3.7 Monitoring plan

Means of Project Verification	DR, I
Findings	CL 02, CL 04, CL 05 and CAR 07 were raised and closed sucessfully. Please refer to Appendix 4 for further details.
Conclusion	The monitoring plan described in the PSF is in compliance with the applied methodology "GCCM001" version 3.0 /B-02/. The monitoring plan is also found to be in compliance with the requirements of GCC Environment and Social-Safeguards Standard version 3.0 /B01/ and Project Sustainability Standard version 3.1 /B01/. The CCIPL project verification team has reviewed all the parameters in the monitoring plan against the requirements of the applied methodology and confirmed that no deviations relevant to the project activity have been found. The procedures have been reviewed through document review and interviews with the respective monitoring personnel. The project verification team can hence confirm that the proposed monitoring plan is feasible within the project design. Therefore, the project owner is able to implement the monitoring plan and achieve emission reductions that can be reported ex-post and verified. **Data and parameters fixed ex-ante:** Ex-ante parameters provided under section B.6.2 of the PSF /1-d/ are found to be appropriate and in line with the applied methodology GCCM001 (version 3.0) /B02/. Ex-ante parameters of the project activity would be as follows:

Parameter	Verified Value	Assessment
Operating margin CO_2 emission factor for the project electricity system in year y **$EF_{grid,OM,y}$**	0.9522 tCO_2 /MWh	The values are based on latest CO_2 Baseline Database for the Indian Power Sector User Guide, Version 17.0 , October 2021 published by Central Electricity Authority (CEA), Government of India. For parameter **$EF_{grid,OM,y}$**, as per paragraph 42(a) of the "tool to calculate the emission factor for an electricity system" version 7.0, 3-year generation-weighted average, based on the most recent data available at the time of submission of the PSF has been used and found to be appropriate. For parameter **$EF_{grid,BM,y}$**, as per paragraph 72(a) of the "tool to calculate the emission factor for an electricity system" version 7.0, the most recent data available at the time of submission of the PSF has been used and found to be appropriate. The documentation source/B05/ has been duly verified to confirm the values. Please also refer section D.3.6
Build margin CO_2 emission factor for the project electricity system in year y **$EF_{grid,BM,y}$**	0.8653 tCO_2 /MWh	
Combined margin CO_2 emission factor for the project electricity system in year y **$EF_{grid,y}$**	0.9305 tCO_2 /MWh	In accordance with paragraph 85 of "tool to calculate the emission factor for an electricity system" version 7.0, the parameter **$EF_{grid,y}$** is calculated as the weighted average of the operating margin (0.75) & build margin (0.25) values, sourced from CO_2 Baseline Database for the Indian Power Sector User Guide,

			Version 17.0, October 2021. The PSF as well as Emission Reduction calculation excel sheet /2/ have been duly verified to confirm the calculation. The derived value is found to be appropriate.

Data and parameters to be monitored ex-post:

Ex-post parameters mentioned under section B.7.1 of the PSF /1/ are found to be appropriate and in line with the applied methodology GCCM001 (version 3.0) /B02/. The parameters that are to be monitored ex-post are:

Sr. No.	Parameter	Assessment
1.	**$EG_{PJ,Y}$** Quantity of net electricity generation supplied by the project plant/unit to the grid in year y *(Replacing fossil fuels with renewable sources of energy and SDG 7)*	The electricity generated by the project activity is supplied to the Indian grid. The net electricity generated is based on the difference between export to the DISCOM and import from grid. The amount of electricity exported by the project activity is continuously monitored by bi-directional energy meters (main meter and a check meter) of accuracy class 0.2s which are located at the substation. The serial numbers mentioned in the PSF are in accordance with the onsite observation /27/. The energy meters installed at the substation end are jointly inspected and sealed by the state utility and its representatives. The calibration of the meters has been carried out once in a year by the state electricity officials as per provision in the Power Purchase Agreement for each project activity /6/ which is acceptable to the verification team. The same has been confirmed during the onsite visit /27/. and by checking the calibration certificates /15/. The verification team also confirmed that the metering is performed as per the single line diagram /1/ checked during the onsite visit. The monitoring parameter is recorded on monthly basis. The Joint Meter Readings (JMR) taken every month from the meter, in the presence of authorised official from state electricity board along with a representative of the project owner, gives the net value of electricity supplied by the project activity to the grid. The

			monthly value of metered energy is the basis for PO to raise monthly invoices . Therefore, Net electricity supplied to the grid by the project activity will be cross checked with the JMR and monthly invoices raised /29/. It can therefore be concluded that the project owner has the ability to implement the monitoring plan mentioned in the PSF /1/. Furthermore, the data collected as part of monitoring will be archived electronically and be kept at least for 2 years after the end of the crediting period or till the last issuance of ACCs for the project activity whichever occurs later.
	2.	CO_2 Emission Reductions (SDG 13)	The project activity generates and supplies renewable solar sourced based electricity to the grid, where it replaces fossil fuel source-based electricity. Emission reduction is calculated based on the net electricity generation from the project activity and grid emission factor. While the grid emission factor is fixed ex-ante, the net electricity generation is continuously monitored as stated above for the monitoring parameter $\mathbf{EG_{PJ,Y}}$ The calculation procedures for the reduction in CO_2 emissions are correctly defined in the PSF. The parameter is being monitored to assess to contribution SDG goal -13 Climate Change and also the positive environmental impact. Adequate details for monitoring/reporting/recording are defined in the PSF. The CO_2 emission reduction is validated from the ER calculation sheet /02/ and found appropriate.
	3.	Skill Development Training *(SDG 4)*	The project owner will provide training for both existing employees and local youth and adults with relevant skills. The project will train at least 3 persons throughout the crediting period which can be verified from the training attendance sheet. The means of monitoring was confirmed during interviews conducted on site /27/ and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	4.	Efficiency of health services *(SDG 3)*	The project owner will create basic health services, set up health camps and

			distribute medicines and vaccines to local people. The records for the same will be kept by the project owner and will be monitored once in three years. The means of monitoring was confirmed during interviews conducted on site /27/ and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	5.	Solid waste Pollution from E-wastes	The e-waste generated by the Project activity viz. Spares of SCADA system, inverters and electronic parts involved in the project or post their useful life will be disposed as per prevailing laws and regulations of the host country i.e. E-Waste (Management) Rules, 2011. Accordingly, the e-waste generated from the project activity will be collected by the SPCB authorized Solid E-waste recyclers/ dismantlers/ TSDF/ Scrap dealers. The quantity of E-waste reused/recycled/refurbished/disposed of will be monitored per year by means of the records maintained on site. This was further confirmed by interviewing /27/ the monitoring personnel of the project activity during site visit. The monitoring practice followed is therefore found to be appropriate and is acceptable to the verification team.
	6.	Incidents/Accidents *(SDG 8)*	The number of major incidents/accidents will be monitored yearly. The project owner conducts occupational safety trainings, display of safety posters at site and follows company EHS policy strictly. The monitored value can be confirmed from the EHS records maintained on site. This was confirmed during interviews conducted on site /27/ 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.	Employment – Long Term *(SDG 9)*	This parameter is monitored yearly based on the number of jobs created by the project owner on a long-term basis. The project will provide employment to at least 3 persons yearly which can be verified using the site register /

			employment records maintained for project activity. PO has provided the Project Activity specific Employee Lists segregated into long term and short-term employments /21/. This was confirmed during interviews conducted on site /27/ 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.	Employment – Short Term	This parameter is monitored yearly based on the number of jobs created by the project owner on a short-term basis. The project will at least provide employment to 5 persons yearly which can be verified using the site register / employment records maintained for project activity. PO has provided the Project Activity specific Employee Lists segregated into long term and short-term employments /x/. This was confirmed during interviews conducted on site /27/ and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team
	The verification team therefore confirms that the parameters to be monitored have been presented correctly according to methodological as well as Standard specific requirements/B02/. This is in conformance with the requirements of GCC Verification Standard (version 3.1) /B01-2/.		

D.4. Start date, crediting period and duration

Means of Project Verification	DR, I
Findings	CL 07 was raised and resolved successfully. Please refer to Appendix 4 for further details.
Conclusion	The project activities forming the bundle have the following start dates: **Project Activity** / **Capacity** / **Start Date** Greenko Solar Power (Medak) Limited / 20 MW / 27/04/2016 Pennar Renewables Pvt. Ltd. at Ellanthakunta / 10 MW / 21/03/2016 Pennar Renewables Pvt. Ltd. at Manakondur / 5 MW / 25/02/2016 The start date of the bundle activity is therefore considered as 25/02/2016, which is the earliest date of start of operation amongst all the involved project activities in the

	bundle. The same has been duly verified against the commissioning reports /9/ and found to be acceptable by the verification team. Crediting period has been chosen as fixed 10 years from 27/04/2016 to 26/04/2026. The start date of the crediting period is stated as 27/04/2016, which is appropriate as per §40(b) of the Project Standard version 03.1 /B01/. Project owner has considered the expected lifetime of the project activity as 25 years. The same has been verified against the technical specification /15/ of the Solar Photovoltaic Panels installed and confirmed on the basis of sectoral expertise. The project verification team therefore concludes that the start date, crediting period type and duration are in conformance with the requirements of §38, §39 and §40 of GCC Project Standard, version 03.1 /B01-1/ and §13 of GCC Clarification No. 1, version 1.3 /B01/.

D.5. Environmental impacts

Means of Project Verification	DR, I
Findings	No findings were raised pertaining to this section
Conclusion	The project activity refers to the guidelines on Environmental Impact Assessment published by Ministry of Environment, Forests and Climate Change (MoEF & CC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006 which was further amended on 14/07/2018 /B16/. The said guidelines categorise project activities that require Environmental Impact Assessment. Solar irradiation based power projects are not listed in any of the categories of the schedule and hence are exempted from conducting Environmental Impact Assessment as per host country legislation /B16/. Based on the above referenced documents, the verification team concludes that as per host country legislation, environmental impacts due to solar power plants are not considered significant and hence Environmental Impact Assessment is not mandated.

D.6. Local stakeholder consultation

Means of Project Verification	DR, I
Findings	CAR 09 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The local stakeholder consultation (LSC) was conducted for each project activity in the bundle at their respective project activity site as per GCC requirements. Details of the same are as follows:

Project Activity	LSC Date	Location
Greenko Solar Power (Medak) Limited	17/02/2022	Sadashivpet, Sangareddy, Telangana.
Pennar Renewable Pvt. Ltd. at Ellanthakunta	15/02/2022	Ellanthakunta, Karimnagar, Telangana
Pennar Renewable Pvt. Ltd. at Manakondur	15/02/2022	Manakondur / Annaram village, Karimnagar, Telangana.

	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 relevant local stakeholders were invited through meeting notice /19/. The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders. The verification team confirms that the communication method used to invite the stakeholders is found to be appropriate. As detailed in the PSF /x/, 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 stakeholders were asked to answer a questionnaire to gauge their understanding of the project activity and address their concerns if any. The summary of comments presented in the PSF has been verified with the documentation of the stakeholder consultation /19/ as well as onsite interviews with various stakeholders /27/ and has been found to be complete and appropriate. No negative feedback was received. Therefore, the verification team concludes that the local stakeholder consultation process was adequately conducted by the project participant considering the ongoing pandemic to receive unbiased comments from the all the relevant stakeholders. The verification team confirms that the local stakeholder consultation process performed for the bundled project activity fulfils the GCC requirements and all the LSC documents /19/ are verified and found acceptable.

D.7. Approval and Authorization- Host Country Clearance

Means of Project Verification	DR, I
Findings	FAR 01 has been raised in this context. Please refer to Appendix 4 for further details.
Conclusion	As per the GCC Clarification No. 1 /B01/ the submission of Host Country Attestation on double counting is required by CORSIA labelled project after 31/12/2020. Therefore, for carbon credits issued during the period 27/04/2016 to 31/12/2020 the host country approval is not required. The verification team confirms that Host Country Attestation will be required and provided by the project owner during the first or subsequent verification when the issuance of carbon credit is considered beyond 31/12/2020.

D.8. Project Owner- Identification and communication

Means of Project Verification	DR, I
Findings	No findings were raised pertaining to this section
Conclusion	The project activity is a bundle involving three individual project activities. The project activity at Sangareddy is legally owned by Greenko Solar Power (Medal) Limited and the project activities at Ellanthakunta and Manakondur are legally owned by Pennar Renewable Pvt. Ltd. These are the SPVs for Greenko Energies Private Ltd. The project verification team has also verified the company registration documents /4/, commissioning reports /9/ as well as the power purchase agreement /6/ to ascertain the legal ownership of the project activity and found the same to be acceptable. The entities involved have chosen Pennar Renewable Pvt. Ltd. and Greenko Energies Private Limited to act as the project owner for the bundled project and

	same has been duly verified against the Letter of Authorization signed by all the legal owners and accepted by the designated project owner /24/. The information and contact details of the project owner have also been appropriately incorporated in Appendix 1 of the PSF. The verification team further confirms that the information of the project owner is provided as per the template and the information regarding the project owner stated in the PSF /1-d/ and authorization letter /24/ were found to be consistent and acceptable. The same is also in accordance with paragraph 18 of GCC Clarification No. 1 version 1.3 /B01/.

D.9. Global stakeholder consultation

Means of Project Verification	DR, I
Findings	No findings pertaining to this section
Conclusion	The PSF was published for global stakeholder consultation from 23/10/2022 till 6/11/2022 (https://www.globalcarboncouncil.com/global-stakeholders-consultation/). During the above period no Global stakeholders' comments were received. The verification team therefore concludes that the process for global stakeholder consultation was conducted in accordance with the requirements of paragraphs 25 and 26 of the GCC Project Standard (version 3.1). The PSF was made public for receiving stakeholder feedback and no comments were raised during the GSC process.

D.10. Environmental Safeguards (E+)

Means of Project Verification	DR, I
Findings	CL 08 was raised and resolved successfully. Please refer to Appendix 4 for further details.
Conclusion	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. No risks to the environment were identified due to the project implementation and operation. The following have been identified as positive impacts of the project activity: Environment – Air- CO_2 emissions: Use of Solar energy for electricity production Environment – Natural Resources – Replacing fossil fuels with renewable sources of energy. Furthermore, risks are identified regarding Solid Waste Pollution from E-waste during operational life of the project activity and project owner has provided appropriate mitigation plan for the same in section B.7.2 of the PSF. The appropriate monitoring plan has been put in place to monitor the parameters scored and risks identified due to implementation of the project activity. The detailed matrix, including project verification team assessment, has been included in appendix 5 of this report.

Impact of Project Activity on	Assessment

	Environmental Safeguards	
	CO_2 emissions (EA03)	In absence of the project activity, the electricity generated from the project activity would be generated in the Indian Grid by power plants that are predominantly fossil-fuel based, thereby leading to CO_2 emissions. The generated electricity by the project activity is based on the renewable energy source, which causes no CO_2 emissions. The project will thus have a positive impact by reducing measurable amount of CO_2 emissions. The project is expected to reduce CO_2 emission throughout the crediting period. As no negative environmental impacts are anticipated, the parameter is evaluated as harmless and scored a +1 by the project owner. This is accepted by the project verification team. The amount of emission reduction 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.
	Solid waste Pollution from E-wastes (EL04)	The e-waste generated by the Project activity viz. Spares of SCADA system, inverters and other electrical and electronic parts involved in the project or post their useful life will be disposed as per prevailing laws and regulations i.e. E-Waste (Management) Rules, 2016. Monitoring plan is provided in section B.7.1 of the PSF to ensure the compliance with the regulations in place. The same will be monitored throughout the crediting period by the project owner by means of records of e-waste re-used/recycled/refurbished or disposal from the project activity /20/. The same was confirmed during the onsite assessment /27/ and accepted by the verification team. The monitoring plan provided is provided in section B.7.1 is appropriate assessment of the same is provided section D.3.7 of the Project Verification Report.
	Replacing fossil fuels with renewable sources of energy (ENR07)	In absence of the project activity, the equivalent amount of electricity would be generated from the operation of grid-connected power plants, which is GHG intensive. The project activity generates and supplies renewable solar based electricity to the grid, where it replaces fossil fuel source-based electricity, thus the project activity is unlikely to cause any harm and is assessed as harmless. As the project activity will have a positive impact by replacing fossil fuels with renewable sources of energy, the parameter is evaluated as harmless and scored a +1 by the project owner. This is accepted by the project verification team.

		The amount of emission reduction 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.

The verification team confirms that the project owner has conducted assessment and reporting of the potential aspects which are identified for each project type as per appendix 1 of the GCC Project Environmental and Social Safeguards standard version 3.0 /B01/ and is applicable to the Project activity and the monitoring procedure of each is given in section E.1, B.7.1, and B.7.2 of the PSF. Therefore, it can be concluded that the Project Activity is not likely to cause any harm to the environment and net score for the project comes out to be +3, hence, is eligible to achieve additional E+ certification.
The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to environment.

D.11. Social Safeguards (S+)

Means of Project Verification	DR, I
Findings	CL 08 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	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. No risks to society were identified due to the project implementation and operation. The following have been identified as positive impacts of the project activity: Social – Jobs – Long-term jobs (> 1 year) created/ lost. New short-term jobs (< 1 year) created/ lost Social – Health & Safety – Reducing / increasing accidents / Incidents /fatality Efficiency of health services Social – Education – specialized training / education to local personnel Furthermore, risks are identified regarding accidents/incidents during operational life of the project activity and project owner has provided appropriate mitigation plan for the same in section B.7.2 of the PSF. The appropriate monitoring plan has been put in place to monitor the elements scored in social safeguard section E .2 of the PSF. The detailed matrix, including project verification team assessment, has been included in appendix 6 of this report.

Impact of Project Activity on Social Safeguards	Assessment
Long-term jobs (> 1 year) created/ lost (SJ01)	The project activity will lead to long term employment generation during the operational phase which can be verified from the employment records maintained on site for each project activity. The monitoring approach is discussed in section D.3.7 of this report The aforementioned documents can be verified during

		issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2 The creation of permanent jobs is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team
	Short-term jobs (< 1 year) created/ lost (SJ02)	The project activity has led to short term employment generation during the construction and the operational phase which can be verified from the employment records maintained on site for each project activity. The monitoring approach is discussed in section D.3.7 of this report.. The aforementioned documents can be verified during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2 The creation of temporary jobs is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team
	Specialized training / education to local personnel (SE01)	As per the PSF/1-d/ and interview with the project owner /27/, the project owner would impart training to the local youth periodically so as to increase the skill set on operation and maintenance of project; occupational safety, first aid, accident reporting etc. The monitoring approach is discussed in section D.3.7 of this report The same could be verified from the training records /21/ and interviews with the employees /27/ to confirm the same during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2 The parameter is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Reducing / increasing accidents/Incidents/fatality (SHS03)	As per the PSF /x/, records of major accidents/incidents in a year will be monitored through EHS records. The project owner shall provide the job-related Health and safety trainings to its employees on regular interval, and the number of accidents occurred can be verified at the time on emission reduction verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2. The monitoring approach is discussed in section D.3.7 of this report. The impact created by the project is assessed as harmless. An appropriate monitoring plan has been put in

		place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	Efficiency of health services (SHS07)	The project owner will organize medical camps including distribution of medicines and vaccines for the local people. The number of health camps conducted, vaccines distributed, and Medicine distributed will be monitored once in three years. The same could be verified during issuance verification in accordance with the monitoring plan in the PSF section B.7.1. and E.2 The parameter is a positive impact created by the project activity and thus this impact is assessed as harmless. An appropriate monitoring plan has been put in place to monitor the parameter for the impact, hence the scoring of +1 has found acceptable by the team.
	The verification team confirms that the project owner has conducted assessment and reporting of the potential aspects which are identified for each project type as per appendix 1 of the GCC Project Environmental and Social Safeguards standard version 3.0 /B01/ and is applicable to the Project activity and the monitoring procedure of each is given in section E.1, B.7.1, and B.7.2 of the PSF. Therefore, it can be concluded that the Project Activity is not likely to cause any harm to society and net score for the project comes out to be +5, hence, is eligible to achieve additional S+ certification. The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society.	

D.12. Sustainable development Goals (SDG+)

Means of Project Verification	DR, I
Findings	CL 09 was raised and closed successfully. Please refer to Appendix 4 for further details.
Conclusion	The project Activity demonstrates that it contributes to achieving the United Nations Sustainable Development Goals (SDGs). Of the 17 defined Goals, the project activity has no adverse effect on any and is expected to contribute to 6 SDGs. Hence the Project owner has chosen to apply for the United Nations Sustainable Development Goals (SDG+ label). The detailed assessment of the impact of the project activity on each of the targeted SDG's has been carried out in section F of the PSF by the project owner and Annexure 7 of this report. The 6 SDGs targeted for the SDG+ Label are: Goal 3: Ensure healthy lives and promote well-being for all at all ages Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all 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 13: Take urgent action to combat climate change and its impacts.

UN-level SDGs	Assessment
Goal 3. Ensure healthy lives and promote well-being for all at all ages SDG Target 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and //vaccines for all Indicator 3.8.1: Coverage of essential health services	The project owner will organize medical camps including distribution of medicines and vaccines for the local people. The number of health camps conducted, vaccines distributed, and Medicine distributed will be monitored once in three years and should be verified during ER verification stage. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all SDG Target 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship Indicator 4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill	The project owner will conduct training on relevant technologies to empower local stakeholders with digital literacy. Records of trainings and workshops conducted should be verified during the ER Verification stage along with the number of people trained over the crediting period. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all SDG target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix Indicator 7.2.1: Renewable energy share	The project activity is a bundled solar power project with an installed capacity of 35 MW and it generates electricity of 55,980 MWh per year. The start date of the project activity is 25/02/2016 (earliest start date of operation amongst the project activities involved in the bundle) and it continues to provide clean energy, thereby increasing the renewable energy share in the total final energy consumption thereby complying with the SDG target 7.2. The same was duly verified by the verification team from commissioning reports /9/ and electricity generation records /10/.

	in the total final energy consumption	The generated power is continuously monitored by the energy meters installed at the substation and details of the same are included in the PSF /1-d/ and found to be acceptable.
	Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all SDG Target 8.8: Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment. Indictor 8.8.1: Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status	PO will ensure to protect labour rights by implementing strict EHS policy and through safety trainings, and display of safety posters/guidelines at project sites. The number of major accidents/incidents will be monitored through EHS records which should be verified during ER Verification stage. The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report.
	Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation SDG target 9.2: Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries Indicator: 9.2.2: Manufacturing employment as a proportion of total employment	The project will provide employment opportunities to at least 10 eligible candidates for operations of the renewable energy related project activity. This can be verified from the employment records maintained on site The parameter being monitored in the monitoring plan is found adequate. This has been discussed under section D.3.7 of this report
	Goal 13. Take urgent action to combat climate change and its impacts	The project is estimated to achieve GHG emission reduction of 52,089 tCO_2e/year, thereby meeting the SDG target 13.2. The generated power is continuously monitored by

	SDG target 13.2: Integrate climate change measures into national policies, strategies and planning. Indicator 13.2.2: Total greenhouse gas emissions per year.	the energy meters installed at the substation and details of the same are included in the PSF /1-d/ and found to be acceptable.
	The verification team confirms that the SDGs chosen by the project owner are in compliance with the paragraph 19, 20 and 21 GCC Project sustainability standard version 3.0 /B01/ and is applicable to the Project activity and the monitoring procedure of each SDG is given in section F and B.7.1 of the PSF. It can therefore be concluded that the 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 Diamond SDG+ certifications.	

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

Means of Project Verification	DR, I
Findings	FAR 01 has been raised. Please refer to Appendix 4 for further details.
Conclusion	A declaration under section A.5 of the PSF has been included for use of the approved carbon credits (ACCs) for the entire crediting period from 27/04/2016 to 26/04/2026 to offset GHG emissions. The project owner has clarified the intention for use of carbon credits for CORSIA. 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, version 1.0 /B01/. Assessment with regards to confirmation on the project activity not being registered under any other GHG reduction certification mechanism, thereby avoiding double counting is provided under section D.2 of this report. The host country attestation is yet to be obtained for authorization on double counting. The verification team confirms that Host Country Attestation will be required and provided by the project owner during the first or subsequent verification when the issuance of carbon credit is considered beyond 31/12/2020.

D.14. CORSIA Eligibility (C+)

Means of Project Verification	DR, I
Findings	FAR 01 has been raised. Please refer to Appendix 4 for further details.
Conclusion	The project activity meets the CORSIA Eligibility criteria as 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. Furthermore, the Project Activity does not cause any net harm to the environment and/or society and therefore achieves Environmental No-net-harm Label (E+) as well as Social No-net-harm Label (S+) in accordance with the Environmental and Social Safeguards Standard, version 3.0. The project activity also contributes towards

	achieving United Nations Sustainability Development Goals (SDGs) by achieving 6 SDGs as per Project Sustainability Standard, version 3.0/B01/ to achieve SDG+ Label. The verification team therefore concludes that "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., v 1.3 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". As per Clarification No.1 version 1.3 /B01-6/, for carbon credits generated during 01/01/2016 to 31/12/2020, Host Country Attestation is not required for CORSIA labeled credits. For carbon credits generated since 01/01/2021, HCA will be submitted by PO prior to submission of requesting issuance for emission reductions to the GCC Program. Therefore, a FAR has been raised in this respect.

Section E. Internal quality control

The Verification report has undergone a technical review and quality review before being submitted to the project owner. A technical reviewer is qualified in accordance with CCIPL's qualification scheme for GCC verification performed the technical review.

Section F. Project Verification opinion

The GCC Project Verifier, Carbon Check (India) Private Ltd, verifies and certifies that the GCC Project Activity "Pennar Renewables solar power project bundle in Telangana State, INDIA.":

(a) has correctly described the Project Activity in the Project Submission Form (version 1.4, dated 18/10//2023) including the applicability of the approved GCC methodology, GCCM001, version 3.0 /B01/ and meets the methodology applicability conditions, is additional 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 reduction estimates correctly and conservatively;

(b) is likely to generate GHG emission reductions amounting to the estimated 520,894 tCO_2e (for the fixed 10 years crediting period), 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 and therefore requests the GCC Program to register the Project Activity;

(c) is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, version 3.0 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

(d) is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs), comply with the Project Sustainability Standard, version 3.0 and contribute to achieving a total of 6

SDGs, which is likely to achieve the Diamond SDG certification label (SDG+).

(e) 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., v 1.3 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 Verification report describes a total of 20 findings, which include:

- 01 Forward Action Request (FAR);
- 10 Clarification Requests (CLs);
- 09 Corrective Action Requests (CARs)

All findings are resolved by the project owner (except the FAR which needs to be resolved during emission reduction verification).

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
BM	Build Margin
CAR	Corrective Action Required
CERC	Central Electricity Regulatory Commission
CDM	Clean Development Mechanism
CL	Clarification Request
CM	Combined Margin
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
E^+	Environmental No net harm Label
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GCC	Global Carbon Council
GHG	Green House Gas
GORD	Gulf Organization for Research and Development
GSC	Global Stakeholder Consultation
I	Interview
IRR	Internal Return Rate
ISO	International Organization for Standardization
Kw	Kilo Watt
KWh	Kilo Watt hour
LSC	Local Stakeholder Consultation
MENA	Middle East & North Africa
MNRE	Ministry of New & Renewable Energy, Government of India.
MW	Mega Watt
MWh	Mega Watt hour
OM	Operating Margin
PO	Project Owner
PPA	Power Purchase Agreement
PLF	Plant load factor
PS	Project Standard
PSF	Project Submission Form
PVR	Project Verification Report
S+	Social No- net harm Label
SDG+	United Nation Sustainable Development Goal Label
SERC	State Electricity Regulatory Commission
tCO_2e	Tonnes of Carbon dioxide equivalent
UNFCCC	United Nations Framework Convention
V	Version
VB	Verification Body
VS	Verification Standard

Appendix 2. Competence of team members and technical reviewers

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Sanjay Agarwalla

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	☐ CCB Expert
☒ Financial Expert	☒ Local Expert for India and Bangladesh		

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☒ TA 2.1	☒ TA 3.1	☒ TA 4.1
☐ TA 4. n	☒ TA 5.1	☒ TA 5.2	☒ TA 7.1	☐ TA 8.1
☒ TA 9.1	☒ TA 9.2	☒ TA 10.1	☒ TA 13.1	☒ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date
1st January 2023

Expiry Date
31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Manas Halder

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☐ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	☐ CCB Expert
☐ Financial Expert	☒ Local Expert for India and Bangladesh		

in the following Technical Areas:

☐ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date

1st January 2023

Expiry Date

31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. S. Ranganathan

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	☐ CCB Expert
☒ Financial Expert	☒ Local Expert for India		

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☒ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date

1st January 2023

Expiry Date

31st December 2023

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

CCIPL_FM 7.9 Certificate of Competency_V2.1_012023

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	PO	a) PSF for GSC	version 1.0, dated, 18/10/2022	PO
		b) Intermediate PSF	version 1.1 dated, 19/06/2023	
		c) PSF	Version 1.2 19/06/2023	
		d) Final PSF	Version 1.4 18/10/2023	
/2/	PO	Emission reduction calculation spread sheet including grid emission factor calculation	Emission reduction sheet (ER cal.xls)	PO
/3/	PO	IRR spread sheet	Pennar Investment analysis.xls	PO
/4/	PO	Legal status of the project owners viz. Greenko Solar Power (Medak) Limited and Pennar Renewables Pvt. Ltd.	Letter of authorization	PO
/5/	TSSPDCL	Evidence for the start date of the project activity on 25/02/2016	Commissioning Certificate(1).pdf	PO
/6/	PO	Evidence for the supply of electricity to Indian Grid (Power purchase agreements)	Power purchase documents for all bundled project activity **Karvy solar** – 20/03/2015 **Pennar-Ellanthakunta**- Amend 4_10MW – 08/02/2016 **PPA_5MW –** 12/01/2016	PO
/7/	PO, Hitachi , Supreme power equipment	Evidence for the project location (all the three project activities in the bundle) including photographs, nameplates of the installed units, and technical specifications of key project equipment installed at site	Equipment nameplate and technical specifications	PO
/8/	MoEF	All relevant statutory clearances for construction and operation of the project activity	Environment Ministry releases new categorization of industries.pdf	PO

			dated 5/03/2016	
/9/	PO	Commissioning reports of all the project activities in the bundle	Commissioning certificates	PO
/10/	PO	Project implementation status (evidence for key project milestones)	Generation records and onsite records. **5MW** April 2016-April 2017 **10 MW** 2020- 2021 2021- 2022 2022-2023 (April to June) **Karvy,** FY – 2017-2018 FY 2018-2019 FY 2020-2021	PO
/11/	PO Hitachi Renesola	Evidence for the technical specifications of the project plant including installed capacity, lifetime (25 years), efficiency, load factor etc.	Data sheets and technical documents	PO
/12/	New ERA Enviro Ventures (Karimnagar) Private Limited	Purchase order copies for the project plant equipment and License for construction	MMS 12 MW PO.pdf 31/10/2015 issued to M/s Pennar Engineered Building System limited	PO
/13/	PO	Evidence for the start of feed of electricity to the grid on by all the project activities in the bundle.	Commissioning certificates	PO
/14/	PO	Single line diagram from electricity generation to the electricity feed point at grid interconnection	PSF version 1.4	PO
/15/	PO	Technical specifications of the monitoring instruments (energy meters) including their calibration frequency specified by the manufacturer	Calibration certificates **10MW –** Certificate No: GCSPL/CAL/8G11/16807 Certificate date: 09/11/2022 Valid till : 08/11/2023	PO

			5MW- Certificate No: GCSPL/CAL/ 8616/16958 Certificate date: 20/10/2022. valid till: 19/10/2023 **Karvy pennar:** Certificate No: EM/23E131/ YESPL/01 Certification date: 15/05/2023	
/16/	PO	Credible evidence for demonstration of additionality of the project activity: • Evidence for the Investment decision date (based on which all the input parameters are taken for financial analysis in line with CDM Tool 27, version 11 “Investment Analysis”). • Evidence for all the input parameters including the benchmark for financial analysis complying Tool 27, version 11	Power Purchase agreement . Southern Power Distribution Company of TG Limited dated : 20/03/2015 Investment Analysis sheet.xls	PO
/17/	PO	Evidence for demonstration of common practice analysis	PSF version 1.4	PO
/18/	PO	Evidence for the calculation of grid emission factor in line with TOOL 07	ER Cal Pennar bundle	PO
/19/	PO	All evidence related to Local Stakeholders Consultation process (invitations, attendance, photos/videos, minutes of meeting, etc.) and informal meetings conducted with the locals before and during the construction phase	LSC evidence	PO
/20/	PO and MOEF	Evidence for each of the stated Environmental Impacts including their monitoring - Solid waste, Hazardous waste, Replacing fossil fuels with renewable sources of energy etc resulting from the project activity, in absence of the project activity and also the legal requirements along with evidences for all the mitigation measures as stated in section D.1 of the PSF with regards to environment management.	Waste records.	PO

/21/	PO	Evidence for each of the stated Social Impacts including their monitoring: - Jobs (Long-term jobs); - Education (Job related training imparted or not) - Project-related knowledge dissemination effective or not	Evidences for job and training from 24/12/2022 to 23/01/2023	PO
/22/	PO	CERC RE tariff order 2013-14, dated 28/02/2013 (https://cercind.gov.in/2013/orders/SO243.pdf) CERC RE tariff order 2014-15, dated 15/05/2014 (https://cercind.gov.in/2014/orders/SO354.pdf)	-	PO
/23/	PO	Credible evidence for each of the applied 6 SDGs for the project activity including their monitoring	Employment details Welfare details	PO
/24/	PO	Letter of Authorization	Letter of authority	PO
/25/	Pollution control board.	Acknowledgement of Letter to PCB for White Category Industry	MoEF for white category.pdf	PO
/26/	Sai Chaithanya & Co C/o: M/s. Pennar Renewables Private Limited,	CA certificate	CA certificates dated 25/02/2022	PO
/27/	Verification team	Site Visit notes	Site visit notes and photos	Project verifier
/28/	State Bank of India and IREDA	Loan sanction letter	Loan sanction letter dated 30/11/2015 And 09/06/2015	PO
/.29	PO	Sample JMR and Invoices copies		
/30/	PO	Declaration by the PO on additional activities conducted beyond CSR to support SDG3		
/B01/	GCC	1. GCC Project Standard, version 3.1 2. GCC Verification Standard, version 3.1 3. GCC Program Manual, version 3.1 4. Environment-and-Social-Safeguards-Standard, version 3.0 5. Project-Sustainability-Standard, version 3.0 6. GCC Clarification No. 1, version 1.3 7. GCC Standard on Avoidance of Double Counting, version 1.0		Others
/B02/	GCC	GCC Methodology: GCCM001 Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers	version 3.0	Others
/B03/	GCC	PSF template	Version 4.0	Others
/B04/	UNFCCC	Tool 01: Tool for demonstration and assessment of additionality	Version 7.0.0	Others
/B05/	UNFCCC	Tool 07: Tool to calculate the emission factor for an electricity system	Version 7.0	Others
/B06/	UNFCCC	Tool 24: Common practice	Version 3.1	Others

/B07/	UNFCCC	Tool 27: Investment analysis	Version 11.0	Others
	CPCB	Modified directions under section 18(1)(b) of the Water (P&PC) Act, 1974 and the Air (P & PC) Act, 1981 regarding harmonization of classification of industrial sectors under red/ orange/ green/ white categories by the CPCB https://mpcb.gov.in/sites/default/files/consent-management/CPCBCategorizationdirection.pdf	Dated 07/03/2016	Others
/B08/	Govt. of India	Electricity Act 2003, dated 26/05/2003 National Electricity Policy 2005, dated 12/02/2005	-	Others
/B09/	Govt. of India	Integrated Energy Policy, 2006	-	Others
/B10/	Govt. of India	National Action Plan on Climate Change (NAPCC), 2008	-	Others
/B11/	CDM	https://cdm.unfccc.int/Projects/proj search.html	-	Others
/B12/	VERRA	https://registry.verra.org/app/search/VCS/All%20Projects	-	Others
/B13/	Gold Standard	GSF Registry (goldstandard.org)	-	Others
/B14/	Indian REC Standard	Renewable Energy Certificate Registry https://www.recregistryindia.nic.in/index.php/publics/registered_regens	-	Others
/B15/	I.REC Standard	International REC Standard (I-REC) https://www.irecstandard.org/regist ries/	-	Others
/B16/	Ministry of Environment, Forest and Climate Change Govt. of India	Environmental Impact Assessment notification 1_SO1533E_14092006.pdf (environmentclearance.nic.in) Environmental Impact Assessment notification Amendment	Dated 14/09/2006 Dated 14/07/2018	Others

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

Table 1. CLs from this Project Verification

CL ID	01	**Section no.**		**Date:** 19/01/2023
Description of CL				
PO is requested to provide the following supporting documents for all the three project activities in the bundle: 1. Proof of Legal Ownership 2. Power Purchase Agreement 3. DPR 4. Technical specification document of installed Solar PV modules, Inverters and Transformers for Greenko Solar Power (Medak) Limited. 5. Technical specification document for monitoring equipment 6. Joint Meter Reading Records (since the commissioning of project till date) 7. Sample Invoices raised for FY 2021-2022				

8. Generation Records for (since the commissioning of project till date)
9. On site electricity consumption records
10. Evidence for Investment decision date
11. Loan sanction letters
12. O&M Agreement
13. Actual project cost incurred
14. Records of Hazardous waste, solid waste generation and disposal and contracts with PCB certified vendors
15. Approval for usage of Ground water, if applicable
16. Details of workers employed / contracts signed for long term during construction and operational stages
17. Details of workers employed / contracts signed for short term during construction and operational stages
18. EHS policy
19. CSR policy
20. Health coverage records
21. Community and rural welfare contribution records
22. HR policy
23. Accident / Incident Records
24. Training records
25. Acknowledgement from PCB for White Category Industry
26. No ODA Undertaking/ declaration from the project owner
27. Local Stakeholder Meeting Photographs, Attendance sheet, Invitation Notice for both Pennar Renewable project activities and Minutes of Meeting.
28. Declaration of intended use of Approved Carbon Credits (ACCs)

Project Owner's response	**Date:** 19/06/2023
All the documents mentioned above are sent through mail, except for point no:3 and 12, as they are not available or not applicable. For point 6: sample JMR documents attached, Recorded JMR values from COD to Jan-2023 is attached. For point 28: Already mentioned in sec A5 of PSF.	
Documentation provided by Project Owner	
Supporting documents and updated PSF	
Project verifier assessment	**Date:** 07/07/2023

The following discrepancies have been observed in the documents provided:

1. The PO has provided the MCA registration details for both M/s Greenko Solar Power (Medak) Limited as well as M/s Pennar Renewables Pvt. Ltd. However, as observed from the PPA as well as Commissioning certificates, the project owners / developers are M/s Karvy Solar Power Limit and M/s New Era Enviro Ventures (Karimnagar) Private Limited. PO to clarify the same along with supporting documents.
4. Technical specification document of installed Solar PV modules, Inverters and Transformers for Greenko Solar Power (Medak) Limited.
9. On site electricity consumption records
11. Loan sanction letter has been provided for the PA by M/s Greenko Solar Power (Medak) Limited but are missing for PAs by M/s Pennar Renewables Pvt. Ltd.
13. Actual project cost incurred – The CA Certificate provided to substantiate the actual cost incurred for the project activity by M/s Sai Chaithanya & Co. dt. 25/02/2022 is a combined certificate for 3 PAs and not all the 3 PA's are a part of the bundle being considered. Hence, the said document is not acceptable to the project verification team.
14. PO has provided records for e-waste generation but no information is provided for Hazardous waste. Furthermore, no specific modes of disposal and contracts with PCB certified vendors have been provided. The Information provided w.r.t M/s Tribo Lubes Pvt. Ltd. does not highlight its use for any of

the 3 PA's involved in the bundle.

15. Application for Permission for usage of Ground water has been submitted for the PA by M/s Greenko Solar Power (Medak) Limited but are missing for PAs by M/s Pennar Renewables Pvt. Ltd.
16. PA specific Employee Lists have been provided. However, the same has not been segregated into those employed for long term (operational) and short term (construction and operational).
21. Community and rural welfare contribution records apart from photographs as the data source mentioned is "Allotment of funds".
25. Acknowledgement from / Intimation to MoEF for White Category Industry – Not provided
27. While Local Stakeholder Meeting Attendance sheet, Invitation Notices and feedback forms have been provided, the Photographs as well as Minutes of Meeting are missing for all three PAs. Furthermore, the Attendance sheet and Feedback forms do not tally.

PO to also provide documents mentioned under specific CAR/CLs.

PO is requested to provide only those documents that pertain to PAs in the bundle.

Hence, CL 01 remains open.

Project Owner's response	**Date:** 08/09/2023

1. The names of M/s Karvy Solar Power Limited changed to Greenko Solar Power (Medak) Limited and M/s New Era Enviro Ventures (Karimnagar) Private Limited changed to M/s Pennar Renewables Pvt. Ltd. The necessary certificates supporting the name change are attached.
4. Technical specification document of installed Solar PV modules, Inverters and Transformers for Greenko Solar Power (Medak) Limited are attached.

9. On site electricity consumption records are attached

11. Loan sanction letters for M/s Pennar Renewables Pvt. Ltd are attached

13. CA certificate is attached for 5MW &10MW implemented by Pennar Renewables Pvt ltd.
14. The project does not generate any hazardous waste and there is no solid waste pollution from hazardous waste. In respect of E waste the same will be Collected and disposed properly through authorized contractors and comply with the rules of E Waste disposal guidelines
15. The applications made for usage of ground water made with relevant authority is attached.
16. Employee Lists segregated into long term (operational) and short term (construction and operational) are segregated and attached.
21. PSF is changed to community and rural welfare contribution records as the data source.
25. Acknowledgement from / Intimation to MoEF for White Category Industry is provided

27. The Minutes of Meeting are attached all three PAs. Relevant attendance sheet & feedback forms are attached.

Documentation provided by Project Owner

Revised PSF

Project verifier assessment	**Date:** 29/09/2023

1. PO has attached the necessary certificates supporting the name change which is acceptable to the verification team. Hence, finding is closed.
4. PO has provided the required technical specifications hence finding is closed.
9. On site electricity consumption records have been provided by the PO. Hence the finding is closed.
11. Loan sanction letter has been provided for the PA by M/s Pennar Renewables Pvt. Ltd. However, the loan sanction letter states that its purpose is to finance 5MW solar power plant at Manakondur. Therefore, PO is requested to provide loan sanction letter for PA Ellanthakunta . Hence the finding **remains open.**
13. PO has provided the CA Certificates to substantiate the actual cost incurred for the GCC Project.

Additionally, one certificate indicates project cost for 3PAs of 23 MW by M/s Sai Chaithanya & Co. dt. 25/02/2022. One of these PAs is of 8MW which is not a part of the proposed GCC project, and the actual project cost incurred by 5MW and 10MW PAs are not clear. Therefore, these documents are not acceptable. For all PAs, PO needs to transparently quote and discuss the actual project cost achieved so far as per signed agreements. Hence the finding **remains open.**

14. PO is required to justify how the project cannot generate hazardous wastes such a transformer oil. Equally, PO is required to provide the contract with the authorized vendors for the collection of E-waste as stated in section E.1 of the revised PSF. Hence the finding **remains open.**

15. Application for Permission for usage of Ground water has been submitted for the PA Ellanthakunta by M/s Pennar Renewables Pvt. Ltd .PO is required to provide same for PA Manakondur by M/s Pennar Renewables Pvt. Ltd. Hence the finding **remains open.**

16. PO has provided the PA specific Employee Lists segregated into long term and short-term employments. However, there is no means of cross checking this information. Equally for short term jobs, security guards have been included which normally in this type of projects are to be long term jobs. Hence, the finding **remains open.**

21. PO is no longer scoring +1 for the parameter “community or rural welfare” under social safeguards, which is deemed acceptable to the verification team. Therefore, this finding is closed.

25. Acknowledgement from / Intimation to MoEF for White Category Industry – provided. Hence the finding is closed.

27. PO has provided attendance sheets, feedback forms and minutes of meetings for all PAs. Hence the finding is closed.

Project Owner’s response	**Date:** 07/10/2023

11. Loan sanction letter is attached
13. CA certificate of 5MW & 10MW Pennar is attached

14. As per records given for E waste by PO, it is explained that all the quantity of E waste generated is stored separately in a designated area at site and is being refurbished and reused and no quantity is left for disposal. With respect to Hazardous waste, no quantity is generated as of now. So, PO states that as of now there are no contracts for E waste or hazardous waste. For future waste generation, PO stated the procedure followed by them for E waste and hazardous waste in the PSF.

15. During the implementation of the project, there are no mandatory regulations or guidelines for ground water usage/approval

16. For our project, generally security contract is only for one year and being renewed every year (contracts are confidential), so this is treated as short term, for crosschecking the data provided, few photographs of the registers are enclosed in the similar way it is maintained and can be crosschecked during issuance with site records

Documentation provided by Project Owner

Project verifier assessment	**Date:** 13/10/2023

11. PO has provided loan sanction letter. The finding is closed.
13. PO has provided the CA certificates of 5MW & 10MW plants. The finding is closed.
14. PO has explained that all the quantity of E waste generated is stored separately in a designated area at site and is being refurbished and reused and no quantity is left for disposal. With respect to Hazardous waste, no quantity is generated as of now, so as of now there are no contracts for E waste or hazardous waste. For future waste generation, PO stated the procedure followed by them for E waste and hazardous waste in the PSF. Hence, the finding is closed.
15. At the time of implementation of the project, there was no mandatory regulations or guidelines for ground water usage, which is deemed acceptable to the validation team based on their online research. Hence, the finding is closed.
16. PO has explained that the security contract is for one year is renewed every year, so this is treated as

short term. The finding is closed.

CL ID	02	**Section no.**	D.3.6, D.3.7	**Date:** 19/01/2023
Description of CL				
In section B.6.1 of the PSF: i. As per the applied methodology paragraph 42(a), Simple OM emission factor is to be calculated ex-ante using "*a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation*". However, the data used for the same in the PSF pertains to the years 2014-15, 2015-16 and 2016-17 which is not in accordance with the applied methodology. ii. Similarly, the data used in the PSF for Build Margin(BM) emission factor pertains to 2016-17. However, as per the applied methodology paragraph 72, BM is to be calculated ex-ante using "most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation". Hence, the same is not in accordance with the applied methodology.				
Project Owner's response				**Date:** 19/06/2023
I. As per the applied methodology paragraph 42(a), Simple OM emission factor is calculated ex-ante using "a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation" for which Version 17.0 of CEA data is considered and changed accordingly. *II.* Similarly, the data used for Build Margin (BM) emission factor pertains to the latest data i.e., 2020-21. Thus BM is calculated ex-ante using "most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation". Hence, the same is made in accordance with the applied methodology.				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023
Section B.6.1 of the revised PSF now include the most recent available data for the determination of Simple OM emission factor and Build Margin(BM) emission factor. The same is based on "CO_2 Emission Database" Version 17.0, published by CEA. The data used has been found to be appropriate by the verification team and hence CL 02 is closed.				

CL ID	03	**Section no.**	D.3.6	**Date:** 19/01/2023
Description of CL				
Section B.2 of the PSF refers to onsite consumption of electricity "for site offices during maintenance". However, PO has not considered the same as project activity emission referring to it as a "Minor source of emission" in section B.3 of the PSF. PO is required to corroborate and justify the same in accordance with paragraph 26 of the applied methodology.				
Project Owner's response				**Date:** 19/06/2023
Though electricity is consumed for site offices during maintenance as mentioned in section B.2 of PSF, however the same is negligible at less than 0.5% of the generation. Hence is considered as negligible. However carbon credits are claimed on net energy supplied to the grid.				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023
PO is required to substantiate its claim of "less than 0.5%" with proper documentary evidence. Furthermore, the same is to be reflected in the revised PSF. **Hence, CL 03 remains open.**				
Project Owner's response				**Date:** 08/09/2023
In Section B.6.1. since project emission is zero, the statement relating to calculation of CO_2 emission, which has inadvertently crept in, has been removed. Likewise, in table under section B.3. has also been corrected and made consistent with sec. B 6.1.				
Documentation provided by Project Owner				
Project verifier assessment				**Date:** 29/09/2023

In the revised PSF, PO has updated the Project emission to be equal to 0 as per paragraph 26 of the applied methodology GCCM001 version 4.0 which is deemed acceptable to the verification team. Hence the finding is closed.

CL ID	04	**Section no.**	D.3.7	**Date:** 19/01/2023
Description of CL				
In Section B.7.1 of the PSF: i. For the parameter $EG_{PJ,Y}$, as the project activity is already operational, please provide the specific energy meter type installed, calibration status etc. for all the three project activities forming the bundle. Furthermore, the energy meter serial number for 'Greenko (M)' mentioned in the Data/Parameter Table is inconsistent with the serial number of the meter observed during the site visit. ii. The QA/QC procedures should be more specific to the project activity as the same is operational since 2016 and the PO should touch upon the functioning of main and check meter. iii. Please check and correct the “Frequency of Measuring/reading” column. iv. In the Additional Comments column, the archiving period is to be appropriately mentioned				
Project Owner’s response				**Date:** 19/06/2023
In Section B.7.1 of the PSF: i. For the parameter $EG_{PJ,Y}$, as the project activity is already operational, the specific energy meter type installed, their accuracy, serial numbers, calibration status etc. for all the project activities forming the bundle at the feeder as well as substation are provided. ii. The PO has updated QA/QC procedures with more specific to the project activity as the same is operational since 2016 and touching upon the functioning of main and check meter. iii. The Frequency of Measuring/reading column is corrected iv. In the Additional Comments column, the archiving period is changed and mentioned appropriately.				
Documentation provided by Project Owner				
Project verifier assessment				**Date:** 07/07/2023
i. For the parameter $EG_{PJ,Y}$, though the energy meter serial numbers have been mentioned for all the three project activities forming the bundle, the same are not classified into Main / Check / Standby. Furthermore, energy meter type as well as calibration details also to be specified as the project activity is already operational. **Hence, the finding remains open.** ii. The QA/QC procedure to be elaborated upon as the same is operational since 2016. **Hence, the finding remains open.** iii. The “Frequency of Measuring/reading” column has been modified appropriately for the parameter $EG_{PJ,Y}$. Hence, the finding is closed. iv. The archiving period is not provided correctly. For QA/QC purposes’ this should be updated to ‘All data is kept for at least two years after the end of crediting period or two years after the last issuance whichever is later’. **Hence, the finding remains open.**				
Project Owner’s response				**Date:** 08/09/2023
i. Energy meter type as well as calibration details are specified along with classification of meters into Main/Check / Standby in sec. B7.1 ii. The QA/QC procedures are elaborated in sec. B7.1. iv. The archiving period is corrected and updated. The archiving period has been corrected to 2 years beyond the end of crediting period or two years after the last issuance, whichever is later in sec. B7.1				
Documentation provided by Project Owner				
iv. *Supporting documents and updated PSF*				

Project verifier assessment	**Date:** 29/09/2023
i. PSF has been revised and the energy meter type identified on site has been reported into it. However, calibration details are provided only for the year 2023 and PO is required to provide calibration details and calibration certificates since the start date of the project. Hence the finding **remains opened.** ii. QA/QC procedures have been revised in section B.7.1 by the PO and is deemed acceptable by the verification team. Hence the finding is closed. iv. PO has corrected the archiving period in section B.7.1 which is acceptable to the verification team. Hence the finding is closed.	
Project Owner's response	**Date:** 07/10/2023
i. Calibration certificates since the start date of the project will be provided during the monitoring period.	
Documentation provided by Project Owner	
Project verifier assessment	**Date:** 13/10/2023
i PO has provided the latest calibration details in the PSF and all relevant calibration data will be provided during the monitoring periods. Hence, this finding is closed.	

CL ID	05	**Section no.**	D.3.7	**Date:** 19/01/2023
Description of CL				
In section B.7.1 of the PSF, parameters to be monitored for E+/S+ and SDGs: i. The parameters, monitored with reference to scoring in Section E and F, are required to be specific and clear on the frequency of monitoring, the legal requirements in place, QA/QC in line with the PSF completing guidelines. ii. For the parameter "Solid Waste" please correlate with the information provided in section E.1 and be more specific to the project activity as the same is operational since 2016. Monitoring needs to be specific to each type of solid waste category generated. iii. Though the parameter "Community and rural welfare (indigenous people and communities) etc." is scored in section E.2, the same does not find a mention under section B.7.1 Section B.7.2 In Section E.1 some of the parameters which are scored if not managed properly can create harmful impact on environment and hence risk mitigation plan needs to be defined for those for e.g. solid waste from end of life products.				
Project Owner's response				**Date:** 19/06/2023
In section B.7.1 of the PSF, parameters to be monitored for E+/S+ and SDGs: i. The parameters, monitored with reference to scoring in Section E and F, are made specific and clear on the frequency of monitoring, the legal requirements in place, QA/QC as per the PSF completing guidelines. ii. The PO has already indicated in the PSF in section E.1 that the monitoring is specific to solid waste quantity per year iii. The parameter "Community and rural welfare (indigenous people and communities) etc." is scored in section E.2, and the same will be mentioned under section B.7.1 In Section E.1 some of the parameters which are scored if not managed properly can create harmful impact on environment and hence risk mitigation plan is defined for those in section B.7.2				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023

i. The parameters required to be monitored with reference E+/S+/ SDGs are required to be specific and clear on the frequency of monitoring, the legal requirements in place, QA/QC in line with the PSF completing guidelines. Furthermore, where required the PO to co-relate the parameters such as "EG $_{PJ, Y}$" and "Emission Reductions". **Hence, the finding remains open.**

ii. Monitoring needs to be specific to each parameter mentioned in section E.1 and E.2 for example the different types of waste categories, types of employment – short term / Long term.

Section B.7.1 / B.7.2 as well as Section E.1 of the revised PSF lack information on Solid Waste from hazardous waste such as waste oil as well as End of Life Products/ equipment. PO to justify the same. **Hence, the finding remains open.**

iii. The parameter "Community and rural welfare (indigenous people and communities) etc." is now mentioned under section B.7.1. However, the PO is required to elaborate upon the same. **Hence, the finding remains open.**

Section B.7.2
'Solid waste from E-waste' is identified under section B.7.2. However, the table is not appropriately completely w.r.t. the Risk mitigation plan as well as description. **Hence, the finding remains open.**

Project Owner's response	**Date:** 08/09/2023

i. The parameters required to be monitored with reference E+/S+/ SDGs are made specific and clear incorporating the frequency of monitoring, the legal requirements in place and QA/QC in line with the PSF completing guidelines. PO also correlated the parameters.

ii. The monitoring is made specific to all parameters mentioned in section E.1 and E.2.

The project activity does not generate any hazardous waste. However, project activity generates solid waste from E waste (Spares of SCADA system, inverters, etc.), which is recycled/reused/refurbished/disposed off and the same is indicated at sec B.7.2

iii. The parameter "Community and rural welfare" is elaborated under section B.7.1 and same is not claimed.

Section B.7.2
The table for Solid waste from E-waste has been completed along with risk mitigation plan in the revised PSF.

Documentation provided by Project Owner

Project verifier assessment	**Date:** 29/09/2023

i. PO is required to elaborate the purpose (parameter–specific) of monitoring and describe QA/QC procedures for all included in sections B.7.1 and B.7.2, in line with the PSF completing guidelines. Additionally, PO is requested to clarify the addition of the rows titled "value of monitoring parameter" and "data source" which is not in accordance with the template requirement. Hence the finding **remains opened**.

ii. PO is required to make specific all parameters outlined in sections E.1 and E.2 into the sections B.7.1 / B.7.2. Equally PO is required to justify how the project cannot produce end of life equipment and not generate hazardous wastes such as transformer oil. Hence the finding **remains opened.**

iii. The parameter "rural or community welfare" has not been elaborated in section B.7.1 and is no longer scoring +1 for the parameter under social safeguards, which is deemed acceptable to the verification team. Therefore, this finding is closed.

Section B.7.2
'Solid waste from E-waste' is identified under section B.7.2. However, the table is not appropriately completed w.r.t. the Risk mitigation plan. The information in columns 'targets to be achieved by', 'targets achieved on' and 'date of closing the program' have not been correctly added. **Hence, the finding remains open.**

Project Owner's response	**Date:** 07/10/2023

i. Monitoring procedure is elaborated in section B.7. Templates in section B.7.1 are corrected and made consistent with elaborated QA/QC procedures.

ii. All parameters outlined in sections E.1 and E.2 (that are scored) are brought into the sections B.7.1 / B.7.2. Also PO has elaborated on end of life equipment and hazardous wastes in the PSF. Hazardous waste such as transformer oil will be replaced only after few years of operations.

Section B.7.2
'Solid waste from E-waste' is identified under section B.7.2. The table is appropriately completed w.r.t. the Risk mitigation plan with information in columns 'targets to be achieved by', 'targets achieved on' and 'date of closing the program' have been updated.

Documentation provided by Project Owner

Project verifier assessment	**Date:** 13/10/2023

i. PP has corrected the table under parameter description row of section B.7.1 and B.7.2. The finding is closed.
ii. PO has included all parameters that are scored in section E.1 and E.2 into the sections B.7.1 / B.7.2 and also elaborated on end-of-life equipment and hazardous waste in the revised PSF. The finding is closed.

Section B.7.2
'Solid waste from E-waste' table updated under section B.7.2. and information w.r.t. targets have been provided. The finding is closed.

CL ID	06	**Section no.**	D.3.5	**Date:** 19/01/2023

Description of CL

With respect to investment analysis, the following findings are raised:

i. PO needs to confirm (with credible evidence) on the compliance of paragraph 10 of CDM Tool 27, version 11 which states "*Input values used in all investment analysis shall be valid and applicable at the time of the investment decision taken by the project participant*."

ii. In accordance with paragraph 34 of the PSF completion guidelines, PO needs to specify the project milestones including the investment decision date under step 2 of investment analysis, in section B.5 of the PSF, and further needs to check and confirm that the listed input values have been consistently applied in all calculations.

iii. PO to provide Standard performance warranty referred for deration/degradation factor applied.

iv. PO to provide a breakup of the value considered under Gross Depreciation.

v. Under Sensitivity analysis, the breaching values for each of the factors need to be mentioned along with justification as to why is it not possible. Furthermore, As the project is already generating, the sensitivity analysis to be based on realistic values.

Project Owner's response	**Date:** 19/06/2023

i. PO confirms that the project activity complies with paragraph 10 of CDM tool 27, version 11 and all the input values used in the investment analysis are valid and applicable at the time of taking investment decision by the project participant.

ii. The following milestones are considered for determining the investment decision date under step-2 of investment analysis in section B.5 of the PSF and listed input values have been consistently applied in all calculations.

M/s Greenko Solar Power (Medak) Limited (Karvy Solar):

Date of execution of PPA	20-03-2015
Module sale contract	25-06-2015

COD	27-04-2016

Pennar Renewables Pvt Ltd at Ellanthakunta

PPA	10-07-2013
Purchase order for supply of major equipment	31-10-2015
Amended PPA	02-09-2016
COD	21-03-2016

Pennar Renewables Pvt ltd Manakondur

Date of execution of PPA	10-07-2013
Purchase order for supply of major equipment	31-10-2015
COD	25-02-2016
Amended PPA	02-09-2016

III. The degradation normally takes place in solar power generation plants due to degradation of modules. That is reflected in module data sheet provided by manufacturers.

IV. The PO has considered the project cost for the purpose of calculation depreciation as per the prevailing laws. As provided by Sec. 32 of the Income Tax Act, the entire plant and machinery excluding land has been considered as a 'block of assets' and the depreciation has been provided accordingly. Appendix IA prescribes only one rate – 7.69% – for all assets. Moreover, this is more conservative from the demonstration of additionality point of view.

V. Under Sensitivity analysis, the breaching values for each of the factors is mentioned along with justification as to why is it not possible. The sensitivity analysis section also explains the actual situation, which renders the project all the more additional

Documentation provided by Project Owner

Revised PSF
Revised IRR Sheet
PPAs

Project verifier assessment **Date:** 07/07/2023

i. Through document review and due diligence of project activity verification team understand that, this project activity awarded to PO by State Government through competitive bidding process. In this respect PO is requested that the DPR prepared during bidding process needs to provide to verification team and justify the financial additionality based DPR values. Also, the highest tariff values on which bidding initiated needs to be used for investment analysis purpose.

The letter of award can be considered investment decision date by PO.

Furthermore, as observed from the PPAs submitted, the Project Owner at the time of Investment decision were M/s New Ear Enviro Ventures (Karimnagar) Pvt. Ltd. (PAs at Ellanthakunta and Manakondur) and M/s Karvy Solar Power Limited for PA at Sangareddy. In view of the same, PO to justify as to how the Additionality is determined at Bundle level.

ii. The PPAs provided by the PO have been verified found to be acceptable except for the date mentioned for M/s Greenko Solar Power (Medak) Limited. PO to make corrections accordingly.

Furthermore, the table provided in the response is to be provided in the revised PSF as well in a chronological manner. For Amendments in PPA the reason to be mentioned such as change in tariff, Capacity etc. Also, the documentary evidence mentioned therein, apart from PPA, is required to be provided.

iii. PO to substantiate the claim for Annual degradation of 0.83% and 0.67% applied.

iv. Under Sensitivity analysis, the breaching values for each of the factors need to be mentioned along with justification as to why is it not possible. Furthermore, As the project is already operational, PO is requested to justify that the project is still additional using all actual input values of PA. Also, in accordance with para 27 of Tool 27 Ver. 11 "Variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation" PO to justify that parameters only related to above criteria are selected for sensitivity analysis in section B.5.

v. Table in section B.5 of PSF showing list of financial parameters used for investment analysis needs to be presented with source of each parameter included in the IRR spread sheet.

vi. PO is required to substantiate PLF in accordance with paragraph 3 of "Guidelines for the reporting and verification of Plant load factors" EB 48 Annex 11.

vii. PO to also provide evidence for Land Cost etc.

viii. As per the IRR sheet, O&M expenses are sourced from CERC RE Tariff Orders.

The Tariff Order dated 28/02/2013 states O&M expenses to be INR 11.63 Lakh/ MW for solar projects. However, for the 10 MW project the same is considered as INR 13.37 Lakh/ MW and INR 6.69 Lakh/ MW for the 5 MW project. PO to clarify the same along with supporting evidence.

The rational to be also justified for 20 MW Karvy Project where the O&M Expenses as per the Tariff Order dates 15/05/2014 is INR 12.30 Lakh/ MW.

ix. As per para 16 of Tool 27 please explain that the investment analysis is carried out in nominal terms and the available IRR benchmarks are in real terms, hence PO has converted the real term values of benchmarks to nominal values by adding the inflation rate. The same is not clear in PSF section B.5. Also, the calculation of Nominal Benchmark is not transparent.

Hence, CL 06 remains open.

Project Owner's response	**Date:** 08/09/2023

i. Letter of award by the state DISCOM is considered as investment decision date by the PO. At the time of investment decision PO relied on CERC tariff order available at the time of investment decision and the parameters available in the tariff order are considered for investment analysis.

The bundle consists of solar projects implemented by M/s Greenko Solar Power (Medak) Limited and Pennar Renewables Pvt Ltd. Pennar Renewables Private Limited has implemented three projects of 10MW,5MW and 8MW capacities. All the projects are established under GO MS No 46 dated 27/11/2012. The letter of award from IPCC of Government of Andhra Pradesh is issued on Aug-2013 and PPAs are signed in October 2013 for all the three projects. We have therefore taken August-2013 as the date of letter of award. The project owner has considered only 2 out of the 3 projects for GCC registration.

It is further clarified that all the input values for Assumptions made in the PSF/ IRR sheet are available, valid and applicable at the time of the investment decision date

The names of M/s M/s Karvy Solar Power Limited changed to Greenko Solar Power (Medak) Limited and M/s New Era Enviro Ventures (Karimnagar) Private Limited changed to M/s Pennar Renewables Pvt. Ltd. The necessary certificates supporting the name change are attached.

Additionality of the project activities is carried out at the bundle level and justification is provided in section H, Appendix 8 of the PSF.

ii. The PPA date mentioned for M/s Greenko Solar Power (Medak) Limited is corrected.

The table provided in the response is provided in the revised PSF in a chronological manner.

The change in PPA as per the requirements of DISCOM. There is no change in the capacity and other conditions of original PPA except tariff. Other than the amended PPA, there is no other evidence available for Amendment of PPA with the project owner.

iii. Annual degradation of 0.83% and 0.67% is as per the data sheets provided earlier, the calculations is as per the graph in the data sheet and is as below.

Caluclation –

Annual degradation from 2nd year till 10th year : (97.5-90)/9= 0.83

Annual degradation from 11th year till 25th year : (90-80)/10=0.67

Data sheet considered is attached

iv. We have revised the PSF specifying under sensitivity analysis the breaching values for each of the factors along with justification as to why is it not possible to breach the benchmark. PO has worked out equity IRR considering actual parameters with relevant evidence to justify that the project is still additional. Evidence for actual values is also provided. PO has justified in accordance with para 27 of Tool 27 Ver. 11 sensitivity analysis of the parameters specified as per the criteria specified under tool 27 in section B.5

v. Table in section B.5 of PSF showing list of financial parameters used for investment analysis are presented with source for each parameter All the parameters have been sourced from CERC RE tariff order, except depreciation and tax rates which have been sourced from Income Tax Rules and Act

vi. As all assumptions for Additionality are now taken from CERC, PO removes the statement { in accordance with paragraph 3 of “Guidelines for the reporting and verification of Plant load factors” EB 48 Annex 11}

vii. Investment decision has been taken based on the input parameters contained in CERC RE order. The said CERC order does not provided the cost of land separately

viii. As per the IRR sheet, O&M expenses are sourced from CERC RE Tariff Orders.

The O&M expenses considered for analysis is inclusive of 15% service tax that is separately added to the O&M cost provided by CERC.

10 MW Pennar : 11.63 lakh/MW *10 MW *(1+0.15)=13.37 lakhs/10MW

5 MW Pennar : 11.63 lakh/MW *5 MW *(1+0.15)=6.69 lakhs/10MW

20 MW Karvy : 12.3 lakh/MW * 20 MW * (1+0.15) = 282.9 lakhs/ 20MW

ix. As per para 16 of Tool 27, PO has converted the real term values of benchmarks to nominal values by adding the inflation rate. The same is clarified under “estimation of Benchmark” in PSF section B.5.

The calculation of nominal benchmark is clearly stated at Sec B.5

Documentation provided by Project Owner	
Project verifier assessment	**Date:** 29/09/2023

i. PO has attached the necessary certificates supporting the name change of the project developers, which is acceptable to the verification team. The letter of award has been considered as the investment decision date by the PO and the input values are taken from CERC order which was available at the time of investment decision. However, these documents are not provided to the verifier. Hence, the finding **remains opened.** ii. The bidding process is an important milestone in the project which is not elaborated in the revised PSF. Additionally, from the project milestones and documents like PPA, LOA, etc. it is clear that the year of investment decision is different for 20 MW PA and the legal owners are also different. Therefore, PO needs to clarify how the additionality is carried out on a bundle level (Please refer to paragraphs 11-12 of clarification 1). PO is also required to provide all the amended PPAs to justify the change in tariff for each PA in the bundle. Hence the finding **remains opened.** iii. PO is required to provide data sheet reflecting the calculations elaborated in the previous response. The degradation factor calculation should be described in PSF. Equally, the calculation for the annual degradation from year 11 to 25, the number of years interval has been taken as 10 instead of 14. Hence the finding **remains opened.** iv. PO is required to clarify why it has not considered O and M cost for sensitivity analysis. Equally PO has not justified compliance in accordance with para 27 of Tool 27 Ver. 11. Hence the finding **remains opened.** v. Table in section B.5 of the revised PSF showing list of financial parameters used for investment analysis has been elaborated by PO with source / web-links for each parameter included in the IRR spread sheet and the value in the table matches with those in the IRR spreadsheet. Hence the finding is closed. vi. The input values are taken from CERC tariff orders for respective PAs, available at the time of investment decision. This complies with the "Guidelines for the reporting and verification of Plant load factors" EB 48 Annex 11 and is deemed acceptable. However, these documents are not provided to the verifier. Hence, the finding **remains opened.** vii. Investment decision has been taken by the PO based on the input parameters contained in CERC RE order and that the CERC order does not provide the cost of land separately. PO does not consider the Land cost in IRR which is acceptable by the verification team. However, these documents are not provided to the verifier. Hence, the finding **remains opened.** viii. PO has clarified that the O&M expenses considered for analysis is inclusive of 15% service tax that is separately added to the O&M cost provided by CERC, which is deemed acceptable. Therefore, this finding is closed. ix. PO has converted the real term values of benchmarks to nominal values by adding the inflation rate. The same is clarified under "estimation of Benchmark" in the revised PSF in section B.5. This is acceptable to the verification team. Hence, the finding is closed.
Project Owner's response **Date:** 07/10/2023
i. The project was awarded under competitive bidding of government of Andhra Pradesh vide GO MS No 46 dated 07/11/2012. Under this GO several projects were allotted who have received letter of award and signed PPAs during the same period. As per our PPA dated 07/10/2013, we have considered August 2013 as decision making based on letter of awards given to similar projects sanctioned under GO MS No 46. ii. Information regarding bidding is elaborated in sec B.5 and already elaborated in sec A.1 This solar bundle project consists of 3 projects with different capacities with an aggregated capacity of 35 MW. These 3 different solar power projects are located in the State of Telangana of the host country India are bundled together. These plants use solar energy to produce electricity; generated electricity is exported to the same grid; all the three project activities have been commissioned during the year 2016 and for this Bundled Project, the Letter of Authorization states that the legal owners of the projects have nominated M/s PENNAR RENEWABLES PRIVATE LIMITED as project owner and these projects are SPVs under Greenko Energies Private Limited.Since the bundle is in compliance with all the conditions stipulated in the Clarifications issued by GCC, the three activities have been bundled for demonstration of

additionality and common practice analysis at bundle level.

Amended PPAs are attached

iii. Caluclation –

Annual degradation from 2nd year till 10th year : (97.5-90)/9= 0.83

Annual degradation from 11th year till 25th year : (90-80)/15=0.67

Calculation was described in sec B.6.4

iv. Paragraph 27 of Tool 27 Ver. 11 states “Variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation (all parameters varied need not necessarily be subjected to both negative and positive variations of the same magnitude), and the results of this variation should be presented in the PDD and be reproducible in the associated spreadsheets. Where a DOE considers that a variable which constitute less than 20 per cent has a material impact on the analysis they shall raise a corrective action request to include this variable in the sensitivity analysis”. As you would observe in none of the cases O&M cost account for more than 20% of project cost or project revenue. Hence, as per the Tool, O&M cost does not qualify as a variable to be subjected to reasonable variation

vi. The input values are taken from CERC tariff orders for respective project activities available at the time of investment decision. We have attached CERC order dated 15th May 2014 in respect of Greenko solar medak limited and CEREC order dated 28th, February 2013in respect of 10 MW Pennar renewables private limited and 5 MW Pennar renewables private limited

vii.Project cost has been sourced from CERC Tariff order, which does not provide land cost separately. CERC orders are attached

Documentation provided by Project Owner

Project verifier assessment	**Date:** 13/10/2023

i. PO has provided relevant CERC tariff orders. Hence, the finding is closed.
ii. PO has provided the amended PPAs which justify the change in tariff for each PA. Hence, the finding is closed.
iii. PO has described the calculation in section B.6.4 of the revised PSF. Hence, the finding is closed.
iv. The O&M cost does not account for more than 20% of project cost or project revenue. Hence, as per the Tool, O&M cost does not qualify as a variable to be subjected to reasonable variation. This is deemed acceptable. Hence the finding is closed.
vi. PO has provided relevant CERC tariff orders. Hence, the finding is closed.
vii. PO has provided relevant CERC tariff orders. Hence, the finding is closed.

CL ID	07	**Section no.**	D.4	**Date:** 19/01/2023

Description of CL

In section C.3, the start date of the crediting period is mentioned as 25/02/2017 while the start date of operations of the project activity is 25/02/2016. However, as per paragraph 11 of the GCC Project Standard, version 3.1, for Project Type A2 “The start date of the Crediting Period for such GCC Project Activities shall be on or after 1 Jan 2016 but not more than one year after the start date of the operations of the GCC Project Activity”. Please justify.

Furthermore, the commissioning date for PA by M/s Greenko Solar Power (Medak) Limited is not in accordance with the Commissioning certificate. Correction requested.

Project Owner’s response	**Date:** 19/06/2023

In section C.3, the start date of the crediting period is considered 28/04/2016 as latest commissioning date within the bundle is 27/04/2016. PSF has been modified accordingly. The start of the crediting period is considered, as per paragraph 11 of the GCC Project Standard, version 3.1, for Project Type A2, which states, “The start date of the Crediting Period for such GCC Project Activities shall be on or after 1 Jan 2016 but not more than one year after the start date of the operations of the GCC Project Activity”. Hence, the start date of the project is considered as 27/04/2016.

Documentation provided by Project Owner	
Revised PSF Version 1.1 *Commissioning Certificates for all the three Project Activities*	
Project verifier assessment	**Date:** 07/07/2023
The start date of the project activity is considered as 25/02/2016 which is the earliest date of commissioning amongst the three project activities involved in the bundle. Furthermore, the error in commissioning date of 20 MW M/s Greenko Solar Power (Medak) Limited has been rectified. The same has been verified against the respective commissioning certificates and found to be appropriate. The start date of the crediting period is considered as 27/04/2016 i.e. not more than one year after the start date of the operations of the GCC Project Activity. The same is in conformance with paragraph 11 of the GCC Project Standard, version 3.1, for Project Type A2. The revised PSF is found to be appropriate and therefore CL 07 is closed.	

CL ID	08	**Section no.**	D.10, D.11	**Date:** 19/01/2023
Description of CL				
In section E: Environmental and Social Safeguards of the PSF: i. Please complete the table uniformly with appropriate use of “Not Applicable”, “No Action Required” etc. and accordingly fix appropriate KPI for each of the identified harmless and harmful Environmental and Social Safeguards along with proper reference for relevant applicable legislation. ii. Monitoring approach and parameter as well as the basis of the conclusion ‘as to why the parameter will be scored’ to be elaborated upon using specific targets and performance indicators such as targeted CO_2 emission reductions, minimum number of people targeted for imparting training, etc. The chosen parameters should be quantified for the baseline scenario and the project scenario. iii. With reference to solid waste from Plastic, Hazardous waste, E-waste, End of Life Products as the project activity is operational since 2016, please be very specific as to what is being classified here (for e.g. Solar PV modules, inverter, cables, electronic cards etc.) and accordingly frame the detailed monitoring approach with reference disposal in line with applicable regulations viz. SPCB authorized vendor as well as quantity of waste generated/ disposed. iv. E-waste is governed by E-waste (Management and Handling) Rules and has a compliance obligation. PO to justify the basis for scoring the aforementioned parameter in the PSF. v. PO has indicated the use of Ground water for cleaning of PV Modules. However, the PSF does not mention about the waste that is being generated, its treatment and disposal and its environmental impacts. The section on the “Environment-water” therefore to be completed appropriately. vi. Scored parameters such as “Occupational health hazards”/ “Improving/ deteriorating working conditions” / etc.” make generic statements such as “reduces the chance to happen accidents ….”, “the people from local communities would have to work somewhere with fatiguing work conditions” – please be project activity specific with respect to description of impact, the monitoring approach and parameters as well as conclusion leading to the parameter being scored. vii. The following parameters: 1. “Replacing fossil fuels with renewable sources of energy” and “CO2 emissions”; 2. “specialized training / education to local personnel” and “Project related knowledge dissemination effective or not”; 3. “Occupational health hazards” and “Reducing / increasing accidents /Incident s/fatality” are scored +1 based on the same theory / justification. PO to justify the scoring the said parameters. viii. PO is requested to justify as to how the trainings conducted for parameters “specialized trainings/ education to local personnel” and “Project related knowledge dissemination effective or not” are different from those mandated under legal/regulatory requirements for the sector. ix. Child Labour prohibition and Minimum Wage are governed by their respective acts in place in India and have a compliance obligation. PO to justify the basis for scoring the aforementioned parameters in the PSF.				

x. PO also needs to demonstrate that under “Social safeguards” impacts created are additional to compliance obligation under CSR commitments.
xi. In accordance with paragraph 22(b) of Project Sustainability Standard version 3.0, PO to ensure that all linkages between chosen SDGs and E+/S+ parameters are reflected for eg. Goal 1.1 and parameter “poverty elevation SW03”.

Project Owner’s response	**Date:** 19/06/2023

i. The appropriate use of “Not Applicable”, “No Action Required” etc. and accordingly appropriate KPI for each of the identified harmless and harmful Environmental and Social Safeguards along with proper reference for relevant applicable legislation has been made.
ii. The fact that projects are already established and are in operation, the parameters scored like targeted CO2 emission reductions, minimum number of people employed targeted for imparting training are quantified below for the project scenario.
iii. With reference to solid waste, only solid waste from E-waste is considered in the project scenario. The E-waste (for e.g. Solar PV modules, inverter, cables, electronic cards etc.) is classified as Solid waste and the detailed monitoring approach along with KPI is clearly defined.
iv. E-waste is governed by E-waste (Management and Handling) Rules and PO, in conformity with it, has Scored this parameter, as per the latest GCC Environmental standard. The quantity of waste is monitored and is in line with the regulations.
v. The water required for cleaning of modules is negligible and gets evaporated. Hence, no waste is generated and we have not considered any score in the PSF
vi. PO feels that scored parameters such as “Occupational health hazards”/ “Improving/ deteriorating working conditions” / etc.” are not project activity specific. With respect to description of impact, the monitoring approach is not appropriate and hence those are not considered for scoring.
vii. Parameters scored +1 with same theory with respect to others parameters that are scored are ignored. Only one parameter for a theory is considered.
viii. PO has considered extra training conducted for parameters “specialized trainings/ education to local personnel” and “Project related knowledge dissemination effective or not” that are different from those mandated under legal/regulatory requirements for the sector.
ix. Child Labour prohibition and Minimum Wage are governed by their respective acts in India and have a compliance obligation. So PO will not take score for the aforementioned parameters in the PSF.
x. PO confirms that welfare activities done are additional to CSR commitments.
xi. In accordance with paragraph 22(b) of Project Sustainability Standard version 3.0, PO ensures that all linkages between chosen SDGs and E+/S+ parameters are reflected in the PSF

Documentation provided by Project Owner

Revised PSF
Photographs of Welfare Activities
Training Records
E-waste Excel Sheet
CSR and EHS/Sustainability Policy

Project verifier assessment	**Date:** 07/07/2023

i. The table in section E has been uniformly completed with appropriate use of “Not Applicable”, “No Action Required” etc. However, KPI / Performance indicator for monitoring the impact for each of the identified Environmental and Social Safeguards along with proper reference for relevant applicable legislation such as Air (Prevention & Control of Pollution) Act 1981 etc. has not been done. **The finding remains open.**
ii. The table in section E.1 as well as E.2 has not been appropriately completed. The monitoring parameter is to be aligned with monitoring approach, explanation for justification as well as direct performance indicator to measure the impact. **The finding remains open.**
iii. It is acceptable that No Plastic waste is generated at the Project Activity site. However, PO to justify the absence of Hazardous waste such as transformer oil as well as Waste from End of Life Products i.e. damaged or defunct Solar PV modules.

Furthermore, for solid waste from E-waste PO to elaborate in the PSF as to what is being

classified as e-waste and accordingly frame the detailed monitoring approach with reference disposal in line with all applicable regulations.

From 2023 onwards Management of solar PV modules shall be in accordance with the e-waste management rules, 2022 notified on 2/11/2022. PO to address future compliance with the same.

The finding remains open.

iv. The justification for scoring of the Parameter "Solid waste Pollution from E-wastes" in accordance with E-waste (Management and Handling) Rules is acceptable to the verification team. However, PO to address the finding in point (iii) above.

v. Justification provided by the PO for no wastewater being generated in the process of cleaning PV Modules is acceptable to the verification team. However, PO to provide approval for use of Ground water for the said purpose in accordance with Permission for abstraction of Ground water under Environmental (Protection) Act 1986. **The finding remains open.**

vi. Description of impact, the monitoring approach and parameters as well as conclusion leading to the parameter being scored / not scored to be project activity specific without the use of generic / ambiguous statements. **The finding remains open.**

vii. The justification provided by the PO w.r.t. only one parameter being scored for each theory is acceptable to the verification team. However, the same is not evident for the parameters "Replacing fossil fuels with renewable sources of energy" and "CO2 emissions". Furthermore, the parameters "Occupational health hazards" and ""Project related knowledge dissemination effective or not" are now not scored, but the 'explanation of conclusion' is not appropriately addressed. **The finding remains open.**

viii. PO is requested to elaborate on the "extra trainings" mentioned in the justification provided with the provision of examples of training provided. Furthermore, PO to also clarify if these are in addition to sector specific requirements mandated by CEA, SERC regulations etc.

Also, the parameter "Project related knowledge dissemination effective or not" is stated to be "Not Applicable" in the revised PSF. **The finding remains open.**

ix. The PO has not raised claims against the parameters "Exploitation of Child labour" and "Minimum wage protection" in section E.2 of the revised PSF. The same is acceptable to the verification team and therefore, the finding is closed.

x. CSR policy, dt. 18/01/2022 submitted by the PO mentions "Education, Healthcare, Rural Development, Livelihood Enhancement and Environment" as the focus areas. PO to provide evidence, apart from photographs, to substantiate their claim for the parameter "Community and rural welfare (indigenous people and communities)". The evidence to be correlated to monitoring parameter which is "Allocation of funds" for welfare activities.

Furthermore, the said parameter is to be elaborated upon in section E.2. **The finding remains open.**

xi. All linkages between chosen SDGs and E+/S+ parameters are now reflected in the revised PSF. The finding is therefore closed.

xii. The parameter "Sources of income generation increased / reduced", has a positive impact in the conclusion but has not been scored. Providing jobs for people, infrastructure development is not sufficient to score/ conclude. Objective procedures shall be included to track changes in income/income sources status pre- and post-project.

Similarly, the parameter "Poverty alleviation (more people above poverty level)", has a Positive impact in conclusion but has not been scored.

PO to address such claims / conclusions and complete the table appropriately.

xiii. For parameter “Reducing accidents”, “Data Source” is wrongly provided, as data source should be training attendance sheet/training records. Also examples of training to be included in parameter for transparency purpose as project is already operational.

Furthermore, procedures for monitoring and reporting of accidents and their resolution shall be included in the PSF.

Project Owner’s response	**Date:** 08/09/2023

i. Social Safeguards along with proper reference for relevant applicable legislation is provided in the revised PSF. ‘Harmful’, ‘Harmless’, ‘Not applicable’ and ‘No action required’ response have been suggested by the format itself. However, monitoring parameter, if scored, has been duly indicated

ii. Table E.1 and E.2 have been revised. Wherever credit is claimed, monitoring parameter has been aligned with monitoring approach, direct performance indicator for measurement has been given along with explanation.

iii. The revised PSF elaborates what is classified as e-waste and hazardous waste, monitoring approach and disposal along with the governing regulations

There is a probability of project generating E-wastes (spares of SCADA system and inverters). It will be Collected and disposed properly through authorized vendors and comply with the rules of E Waste disposal guidelines. Solid waste(E waste) quantity (in kgs/tons/numbers) reused/recycled/refubrished or disposed per year Monitored through records maintained or form 2 of waste management.

The PO will comply with from 2023 onwards Management of solar PV modules as per e-waste management rules, 2022 notified on 2/11/2022.

iv. The finding in point iii above is addressed in the response made for iii above.

v. The applications made for usage of ground water made with relevant authority is attached

vi. The impact, monitoring approach and parameters as well as conclusion leading to the parameter being scored / not scored have been incorporated for all parameters in sec. E.1 & E.2

vii. This project activity replaces fossil fuels with solar energy, which is a renewable energy source, for the generation of electricity. The Project activity thus Supply energy to the fossilfuel dominated grid using Renewable Source of energy

Project Activity generates Electricity from renewable source. Hence no CO_2 emissions from the project activity.

In the absence of project , fossil fuel based power plants will be used, which produce more Co_2 emissions to generate electricity.

Occupational health hazards- Like in any project, physical stress is the only occupational health hazard. PP confirms that the project will provide good working environment to employees so that they are not exposed to any occupational health hazards.

Project-related knowledge dissemination effective or not - Project provides job-related training and thereby impart knowledge to existing employees and new recruits. Training on operation & maintenance of solar modules, occupational safety like fire safety, first aid, emergency procedures, risk assessment, accident reporting procedure welfare activities like, safe use of workplace tools, machinery, equipment etc.

viii. Examples of training to be provided have been elaborated. As could be seen, these are in addition to specific requirements mandated by CEA, SERC regulations etc

X. PO now doesn't claim for the welfare activities and claims for the health services for which monitoring parameter can be justified and same is elaborated in the PSF

Xii. Though the project contributes positively to income generation and infrastructure development, it is difficult to monitor and measure these objectively. Parameters are not scored, where the monitoring and performance measurement does not lend itself to objective measurement. However, job creation has been scored as it lends itself to monitoring and measurement. In the revised PSF, conclusion is provided for each parameter irrespective whether it is scored or not and the table has been completed appropriately

Xiii. For parameter "Reducing accidents", information on trainings is mentioned. The monitoring KPI is clearly mentioned and monitored through records

Documentation provided by Project Owner

Project verifier assessment	**Date:** 29/09/2023

i. It has been observed by the verification team that, the tables in section E have been uniformly completed, however for some parameters, such as Hazardous waste, End of life equipment and several others, PO is required to justify how no environmental impact is anticipated. Hence the finding **remains opened.**

ii. PO has aligned the monitoring parameter with monitoring approach as well as explanation for justification which is deemed acceptable by the verification team. Hence the finding is closed.

iii. PO has elaborated in the revised PSF what is being classified as e-waste and accordingly framed the detailed monitoring approach with reference disposal in line with all applicable regulations.

Nevertheless, PO has not provided justification for the absence of Hazardous waste such as transformer oil as well as Waste from End-of-Life Products i.e., damaged, or defunct Solar PV modules. Hence the finding **remains opened.**

iv. The finding in point (iii) in relation to justification for scoring of the Parameter "Solid waste Pollution from E-wastes" has been addressed by the PO in the revised PSF which is deemed acceptable by the verification team. Hence the finding is closed.

v. PO has provided Application for Permission for usage of Ground water except for PA Manakondur by M/s Pennar Renewables Pvt. Ltd. Hence the finding **remains opened.**

vi. Description of impact and the monitoring approach for the parameters has been described. However, the conclusion of the parameter being scored is not clear and all the parameters are either scored +1 or 0. Please refer to paragraph 22 of the Environment and Social Safeguards Standard (v 3.0) where the criteria for scoring the parameters have been specified. PO is requested to revise section E accordingly. **Therefore, this finding remains open.**

vii. PO has justified the scoring for the parameters "Replacing fossil fuels with renewable sources of energy" and "CO2 emissions" and "Occupational health hazards" and ""Project related knowledge dissemination effective or not" in sections E.1 and E.2 which is acceptable to the verifier. Therefore, this finding is closed.

viii. PO has elaborated on the extra trainings which is deemed acceptable.

The parameter "Project related knowledge dissemination effective or not" is stated to be "Not Applicable". However, it is scored 0 in the revised PSF. Paragraph 22 (c) of the Environment and Social Safeguards Standard (v 3.0) states that *"If the environmental impact is positive with respect to the pre-project scenario or baseline scenario, but the impact cannot be or has not been measured and monitored or not demonstrated satisfactorily, a score of zero "0" shall be assigned to the aspect"*. PO to justify the non-applicability and scoring of the said parameter impact. **Therefore, this finding remains open.**

ix. PO has addressed appropriate conclusions for the parameters "Exploitation of Child labour" and "Minimum wage protection" in the revised PSF. Hence the finding is closed.

x. PO now doesn't claim for the community or rural welfare activities and claims for the health services for which monitoring parameter has been elaborated. This is acceptable to the verification team. Hence the finding is closed.

xi. Linkages has been established between all SDGs and E+/S+ parameters in sections B.7.1 and B.7.2. However, PO is required to justify the parameters that are chosen to monitor for SDGs (3, 4, 8, and 9) are done under legal requirements or not. PO is required to justify how the activities performed to claim the said goals are additional to these legal requirements. Hence the finding **remains opened.**

xii. PO has appropriately justified the scoring of the parameters which is acceptable to the verification team. Hence the finding is closed.

xiii. PO has included for parameter "Reducing accidents", training records in addition to monitoring the "Major Accidents/incidents per year". Also, the training method has been included in parameter for transparency purpose as project is already operational which is deemed acceptable by the verification team. Hence, the finding is closed.

Project Owner's response	**Date:** 07/10/2023

i.Parameters, such as Hazardous waste, End of life equipment and several others are explained in revised PSF.

iii.With respect to Hazardous waste, no quantity is generated as of now. So, PO states that as of now there are no contracts for E waste or hazardous waste. For future waste generation, PO stated the procedure followed by them for E waste and hazardous waste in the PSF. Hazardous waste such as transformer oil is changed after few years of operations as well as Waste from End-of-Life Products procedure is stated, majorly they are under manufactures scope.

V. During the implementation of the project, there are no mandatory regulations or guidelines for ground water usage/approval

vi. As per Environment and Social Safeguards Standard (v 3.0) scoring the parameters have been revised.

viii. The parameter "Project related knowledge dissemination effective or not" is now revised in the PSF**.**

xi. PO has demonstrated additionality for all claimed SDGs and most of the SDGs claimed are linked to E+/S+. Their monitoring is demonstrated. Claim for few SDGs are to be shown as they are yet to take place and can be demonstrated during issuance like SDG 4.

Documentation provided by Project Owner

Project verifier assessment	**Date:** 13/10/2023

i. PO has now provided more clarity on hazardous waste, end of life equipment etc. in section E of the revised PSF. Hence, the finding is closed.

iii. PO explained that since no quantity of hazardous waste is generated as of now, there are no contracts for E waste or hazardous waste. For future waste generation, PO stated the procedure followed by them for E waste and hazardous waste in the PSF. Hazardous waste such as transformer oil is changed after few years of operations as well as waste from end-of life products procedure is stated. This is deemed reasonable and acceptable. Hence, the finding is closed.

v. At the time of implementation of the project, there was no mandatory regulations or guidelines for ground water usage, which is deemed acceptable to the validation team based on their online research. Hence, the finding is closed.

vi. PO as revised the scoring of the parameters and these are now in accordance with the Environment and Social Safeguards Standard (v 3.0). Hence, the finding is closed.

viii. PO has revised the parameter appropriately. The finding is closed.

xi. PO has explained that all SDG claimed are not done under any legal requirements and additional. In the absence of activities claimed under SDGs, the plant will be operational. In the absence of PA or baseline scenario these activities claimed under SDGs couldn't have taken place. This is deemed acceptable. Hence the finding is closed.

CL ID	09	**Section no.**	D.12	**Date:** 19/01/2023

Description of CL
In section F: Sustainable Development Goals of the PSF: i. For SDG Goals that are scored, indicators, project activity specific description, specific targets, justification for positive effect as well as specific monitoring approach and parameters need to be mentioned. As the project activity is operational since 2016, the indicators and monitoring needs to be substantiated with actual credible evidence. ii. Goal 1.1 states "Eradicate extreme poverty for all locally employed people". Please justify the same. How does the PO ensure locally employed are extremely poor, is there a baseline being referred to, does the PO have specific hiring guidelines etc. iii. PO is required to justify the suitability of the following indicators scored considering Nature of Project activity and Baseline indicator: a. Indicator 3.8.1 "Coverage of essential health services" Also, Goal 3.8 states "ensure financial risk protection", how does the PO define this and what measures are taken to ensure fulfilment. Financial Risk protection is covered under UN SDG indicator 3.8.2. b. Indicator 4.4.1 "Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill" c. Indicator 8.8.1 "Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status" iv. PO needs to justify the suitability of Goal 9 target and performance indicator chosen for the project activity considering: a. Nature of project activity b. Baseline indicator for target c. Impact of parameter considered for this indicator is already covered under goal 7 & 13
Project Owner's response **Date:** 19/06/2023
i. For SDG Goals that are scored, indicators, project activity specific description, specific targets, justification for positive effect as well as specific monitoring approach and parameters are substantiated with actual credible evidence. ii. PO finds that Goal 1.1 cannot be monitored as stated and don't wish to claim it. iii. Indicator 3.8.1 "Coverage of essential health services" is applicable to this project activity as the PO provides the same to their employees within the project activity. Relevant record are being enclosed PO considers indicator 3.8.1, while indicator 3.8.2 "ensure financial risk protection" is not considered For SDG 4, the Indicator 4.4.1 "Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill" is modified to "Number of persons trained" who are locals and contribute to skill development. Indicator 8.8.1 "Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status" is applicable as the project is a solar generation plant there are chances of minor and major injuries/accidents to occur and the same are recorded and maintained in the EHS formats iv. PO finds that Goal 7 is claimed for same monitoring parameter as of goal 9, so goal 7 is claimed dropping 9.
Documentation provided by Project Owner

Project verifier assessment	**Date:** 07/07/2023
i. For SDG Goals that are scored, Project Level indicators, Targets / Actions, Contribution to UN SDG as well as Monitoring are not adequately elaborated upon. Refer paragraph 22 of Project-Sustainability-Standard, version 3.0. Kindly review this SDG in totality and update accordingly. **The finding remains open.** ii. The PO has withdrawn its claim against UN SGD Goal 1. The same is acceptable to the verification team and therefore the finding is closed. iii. For the SDG Goals 3, 4 as well as 8. Project level Actions & Indicators are not directly linked with UN SDG targets and indicators. PO is required to justify the suitability of the same. Confirming that the Project Owner can claim a lower SDG label, in case the project is not able to demonstrate impact on specific SDG goals or data or the information provided is inadequate or incomplete. **The finding remains open.** iv. The PO has withdrawn its claim against UN SGD Goal 9. The same is acceptable to the verification team and therefore the finding is closed.	
Project Owner's response	**Date:** 08/09/2023
i. Sec. F. SDG goals has been corrected in respect of SDG goals that are scored. The revision incorporates project level indicators, targets/actions, contribution to UN SDG as well as monitoring. ii. Closed iii. In the revised PSF, the project level actions and indicators have been directly linked to UN SDG targets and indicators. iv. Closed. PO now claims SDG 9 and its monitoring and impacts are elaborated in the PSF	
Documentation provided by Project Owner	
Project verifier assessment	**Date:** 29/09/2023
i. PO has reviewed and updated SDG Goals that are scored, Project level indicators, Targets / Actions, Contribution to UN SDG as well as Monitoring in the revised PSF. However, according to paragraph 23 Project Sustainability Standard (v3.1), "*Confirming to legal / regulatory requirement for continuation of business will not qualify as positive impacts on SDGs for the project activity as they are mandatory to continue operations of the unit.*" PO must ensure that the impacts created by the project are positive for claiming the said SDGs and define project level indicators, Targets / Actions, Contribution to UN SDG accordingly. Hence, the finding **remains opened.** ii. Closed. iii. PO has revised the project level actions and indicators by directly linking them to the UN SDG targets and indicators which is acceptable to the verification team. However, PO is required to demonstrate the additionality of all SDGs claimed. Hence, the finding **remains opened.** iv. PO has selected SDG indicator 9.2.2 "Manufacturing employment as a proportion of total employment" and the project contribution for the same is stated as employment generation. According to the meta data of the said indicator, this indicator presents the share of manufacturing employment in total employment. PO is requested to clarify how the project contribution aligns with the selected UN indicator. Hence, the finding **remains opened.**	
Project Owner's response	**Date:** 07/10/2023
i. All claimed SDGs are not done under legal requirements and are additional which are other than business as usual. Even in the absence of activities claimed under SDGs, the plant will be operational. In the absence of PA or baseline scenario these activities claimed under SDGs couldn't have taken place as there is no incentive for implementation of such activities. ii. Closed iii. PO has demonstrated additionality for all claimed SDGs and most of the SDGs claimed are linked to E+/S+. Their monitoring is demonstrated. Claim for few SDGs are to be shown as they are yet to take place and can be demonstrated during issuance like SDG 4. iv. For SDG 9, the project level SDG is defined as per UN SDG and KPI is defined as per Project level SDG.	

Documentation provided by Project Owner
Project verifier assessment **Date:** 13/10/2023
i. PO has explained that all SDG claimed are not done under any legal requirements and additional. In the absence of activities claimed under SDGs, the plant will be operational. In the absence of PA or baseline scenario these activities claimed under SDGs couldn't have taken place. This is deemed acceptable. Hence the finding is closed. iii. Explanation provided with response to finding i. The finding is closed. iv. PO has explained that the project level KPI is aligned with the UN SDG indicator. Hence, the finding is closed.

CL ID	10	**Section no.**	D.2	**Date:** 19/01/2023
Description of CL				
In Appendix 8 of the PSF, PO is requested to elaborated upon the analysis with regards to homogeneity of the Bundle in accordance with GCC Clarification No. 1				
Project Owner's response				**Date:** 19/06/2023
In Appendix 8 of the PSF, PO has elaborated upon the analysis with regards to homogeneity of the Bundle in accordance with GCC Clarification No. 1				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023
The PO has provided a detailed Level 1 analysis of homogeneity of the Bundle in the revised PSF. However, Level 2 Analysis also needs to be elaborated upon in accordance with paragraph 10 of GCC Clarification No. 1, version 1.3 Furthermore, PO to also justify the appropriateness of IRR done at bundle level. The "Information Note on Non-Binding Examples of Bundling", Version 1.0 – 2022 can be referred. **CL10 therefore remains open.**				
Project Owner's response				**Date:** 08/09/2023
Level 2 analysis is being elaborated as per the clarification 1 in the PSF				
Documentation provided by Project Owner				
Project verifier assessment				**Date:** 29/09/2023
PO is requested to demonstrate transparently level 1 and level 2 analysis of homogeneity of the bundle as per all requirements of GCC Clarification No. 1, version 1.3 (Please refer to Non-binding Examples of Bundling – v1.0). Hence, the finding remains opened.				
Project Owner's response				**Date:** 07/10/2023
level 1 and level 2 analysis of homogeneity of the bundle as per all requirements of GCC Clarification No. 1, version 1.3 is explained in Appendix 8.				
Documentation provided by Project Owner				
Project verifier assessment				**Date:** 13/10/2023
PO has explained in Appendix 8, the level 1 and level 2 analysis of homogeneity of the bundle as per all requirements of GCC Clarification No. 1, version 1.3. Hence, the finding is closed.				

Table 2. CARs from this Project Verification

CAR ID	01	**Section no.**	-	**Date:** 19/01/2023
Description of CAR				

PO shall clarify, on the cover page of the PSF, if the project activity has been issued with carbon credits or environmental attributes of compensating nature by any other GHG/ non-GHG program, either for compliance or voluntary purposes. Accordingly, PO is requested to select only the applicable option under **'Generic Requirements applicable to all Project Types'** under "Declaration by the Authorized Project Owner and focal point".
Project Owner's response **Date:** 19/06/2023
On the cover page, PO has selected only the applicable option "No outcomes (e.g. emission reductions, environmental attributes) generated by the Project Activity under GCC will be claimed as carbon credits or environmental attributes under any other GHG/non-GHG program, either for compliance or voluntary purposes, during the entire GCC crediting period " under **'Generic Requirements applicable to all Project Types'** under "Declaration by the Authorized Project Owner and focal point".
Documentation provided by Project Owner
Revised PSF Version 1.1
Project verifier assessment **Date:** 07/07/2023
The "Declaration by the Authorized Project Owner and focal point" now clearly indicates that the outcomes generated by the project activity under GCC will not be claimed as carbon credits or other environmental attributes under any other GHG/ non-GHG program during the entire GCC crediting period. The Cover page of the revised PSF is found to be correct and appropriate. Hence the finding is closed.

CAR ID	02	**Section no.**	D.2	**Date:** 19/01/2023
Description of CAR				
The following was not captured in section A of the PSF as per the 'Instructions for completing the PSF': i. Summary of Project boundary, technologies/measures employed in section A.1. ii. Detailed physical address of M/s Pennar Renewables Pvt. Ltd. at Manakondur to be provided under section A.2 iii. List of facilities, systems and equipment to be elaborated upon under section A.3 e.g. number of modules involved etc. iv. Details and Arrangement of Metering/ monitoring equipment for evacuation of electricity to the substation in section A.3. v. Short summary of facilities, systems and equipment in the baseline scenario in section A.3. vi. Description as to how the electricity is generated and exported to grid along with details of voltage levels at switchyard and grid station in section A.3.				
Project Owner's response				**Date:** 19/06/2023
The following information has been updated in section A of the PSF i. Summary of Project boundary, technologies/measures employed is provided in section A.1. ii. Map clearly identifying the project activities under section A.2. is provided iii. List of facilities, systems and equipment elaborated under section A.3 e.g. number of modules involved etc. iv. Details and Arrangement of Metering/ monitoring equipment for evacuation of electricity to the substation is given in section A.3. v. Description as to how the electricity is generated and exported to grid along with details of voltage levels at switchyard and grid station is explained in section A.3.				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023

i. Summary of Project boundary is not adequately elaborated upon. Furthermore, revised PSF does not mention summary of technologies/measures employed under section A.1. ii. No response provided for the finding raised. Detailed physical address for all PA's to be provided under section A.2 iii. List of facilities, systems and equipment has not been elaborated upon under section A.3 of the revised PSF . iv. Details and Arrangement of Metering/ monitoring equipment for evacuation of electricity to the substation have not been provided in section A.3. v. No response provided for the finding raised. vi. Description as to how the electricity is generated and exported to grid along with details of voltage levels at switchyard and grid station has not been provided in section A.3. vii. From the PPAs submitted, it is understood that the PA was allotted though a State Government Competitive Bidding Process. No such information has been provided in the PSF. Furthermore, no details of the parties involved in the PPA as well as change in legal ownership of the PA has been provided in the PSF. viii. The average generation value to be provided in section A.1 along with source. ix. PO to correct the subscript errors throughout the PSF. Hence, **CAR 02 remains open**.
Project Owner's response **Date:** 08/09/2023
i. Summary of Project boundary is adequately elaborated upon. Furthermore, revised PSF does not mention summary of technologies/measures employed under section A.1 ii. Detailed physical address for all PA's to be provided under section A.2 iii. List of facilities, systems and equipment has been elaborated upon under section A.3 of the revised PSF . iv. Details and Arrangement of Metering/ monitoring equipment for evacuation of electricity to the substation have not been provided in section A.3. v. Short summary of facilities, systems and equipment in the baseline scenario in section A.3.. vi. Description as to how the electricity is generated and exported to grid along with details of voltage levels at switchyard and grid station has been provided in section A.3. vii. The project activities allotted to the project owner through State Government Competitive Bidding Process is mentioned in the PSF. Parties involved in PPA and change in legal ownership of the project activity is specified at Sec-A1. Letter of Authorization is also attached.F. viii. The average generation value is provided in section A.1 along with source. ix. PO corrected the subscript errors throughout the PSF.
Documentation provided by Project Owner
Project verifier assessment **Date:** 29/09/2023

i. PO has revised the summary of the project boundary and has elaborated a summary of technologies/measures employed under section A.1. Hence the finding is closed. ii. PO has provided detailed physical address for all PA's. Hence the finding is closed. iii. The list of facilities, systems and equipment has been elaborated upon by the PO under section A.3 of the revised PSF which is acceptable by the verification team. Hence the finding is closed. iv. The details on the type and number of modules installed have been inserted into the revised PSF by the PO which is deemed acceptable by the project verifier. Hence the finding is closed. v. PO has provided information as to how electricity is generated and exported to grid along with details of voltage levels at switchyard and grid station which is acceptable by the verification team. Hence the finding is closed. vi. PO has provided description as to how the electricity is generated and exported to grid along with details of voltage levels at switchyard and grid station which is acceptable by the verification team. Hence the finding is closed. vii. In the revised PSF, PO has provided information about the allotment of the PA through a State Government Competitive Bidding Process as well as details of the parties involved in the PPA which is acceptable by the verification team. However, no information has been provided about the change in legal ownership of the PA has been provided in section A.1 of the PSF. Hence the finding remains opened. viii. The average generation value to be provided in section A.1 along with source. Hence the finding remains opened. ix. PO has corrected the subscript errors throughout the revised PSF. Hence the finding is closed.
Project Owner's response **Date:** 07/10/2023
vii. The change in legal ownership of the PA has been provided in section A.1 of the PSF viii. The average generation value to be provided in section A.1 along with source
Documentation provided by Project Owner
Project verifier assessment **Date:** 13/10/2023
vii. PO has provided the change in legal ownership of the PA in section A.1 of the PSF. Hence, the finding is closed. viii. PO has provided the average generation value in section A.1 of the revised PSF along with source. Hence, the finding is closed.

CAR ID	03	**Section no.**	D.3.1	**Date:** 19/01/2023
Description of CAR				
i. The PO is required to include reference of GCC Clarification No.1 under section B.1 ii. Applicability conditions of the 'Tool to calculate the emission factor for an electricity system, Version 07.0 (Tool 07)' have not been included for justification in section B.2 of the PSF. iii. All applicability conditions mentioned under section 2.2 of "Tool 24 - Common Practice Version 3.1" and section 2.1 of "Tool 27 - Investment analysis, Version 11.0" have not been included for justification in section B.2.				
Project Owner's response				**Date:** 19/06/2023
i. The PO has included reference of GCC Clarification No.1 under section B.1 ii. Justification for Tool - 07 applied is included under section B.2. iii. Justification for Tool - 27 applied is included under section B.2				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023

i. The reference to GCC Clarification No.1, version 1.3 has been included under section B.1 of the revised PSF. Finding is therefore closed. ii. All applicability conditions but applicability condition 06 pertaining to CO_2 emission factor of biofuels of the 'Tool to calculate the emission factor for an electricity system, Version 07.0 (Tool 07)'was referred. **Hence, finding remains Open.** iii. All applicability conditions mentioned under section 2.2 of "Tool 24 - Common Practice Version 3.1" and section 2.1 of "Tool 27 - Investment analysis, Version 11.0" have now been included for justification in section B.2 of the revised PSF. The same are found to be appropriate and acceptable to the verification team and hence the findings is closed.
Project Owner's response **Date:** 08/09/2023
ii.Applicability condition 06 pertaining to CO_2 emission factor of biofuels is corrected. (No bio fuels are used by the project activity)
Documentation provided by Project Owner
Project verifier assessment **Date:** 29/09/2023
ii. PO states that, under the tool 7, the value applied to the CO_2 emission factor of biofuels is zero due to no biofuel used in the project which is deemed acceptable by the project verifier hence the finding is closed.

CAR ID	04	**Section no.**	D.3.3	**Date:** 19/01/2023
Description of CAR				
PO is required to describe the project boundary in section B.3 of the PSF.				
Project Owner's response				**Date:** 19/06/2023
the project boundary is described in section B.3 of the PSF				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023
The project boundary in section B.3 is to be elaborated upon in accordance with the applied methodology. **CAR 04 remains Open.**				
Project Owner's response				**Date:** DD/MM/YYYY
The project boundary in section B.3 is elaborated in accordance with the applied methodology. The table "Emission sources included in or excluded from the Project Boundary" under section B.3 is corrected.				
Documentation provided by Project Owner				
Project verifier assessment				**Date:** 29/09/2023
PO has elaborated the project boundary in accordance with the applied methodology. Hence the finding is closed.				

CAR ID	05	**Section no.**	D.3.4	**Date:** 19/01/2023
Description of CAR				
Under section B.4 of the PSF: i. PO is required to provide and explain all data used to establish the baseline scenario viz. parameters, data sources along with relevant references. ii. PO is also required to describe how the relevant national and/or sectoral policies, regulations and circumstances are taken into account.				
Project Owner's response				**Date:** 19/06/2023
i. All data used to establish the baseline scenario viz. parameters, data sources along with relevant references have been provided ii. PO has described the relevant national and/or sectoral policies, regulations and circumstances taken into account.				

Documentation provided by Project Owner	
Revised PSF Version 1.1	
Project verifier assessment	**Date:** 07/07/2023
i. The PSF is appropriately revised to include the data used to establish the baseline scenario along with relevant references. The baseline emission factor parameters are based on the latest available database published by the Central Electricity Authority (CEA), Government of India. Version 17.0 was applicable was the time of PSF submission to GCC. The same is found to be appropriate and acceptable to the verification team and therefore the finding is closed. ii. No description as to how the relevant national and/or sectoral policies, regulations and circumstances are taken into account has been provided in the revised PSF. **Finding remains open.**	
Project Owner's response	**Date:** 08/09/2023
ii. While the relevant national and/or sectoral policies, regulations are explained under Legal requirement test, how the relevant national and/or sectoral policies, regulations and circumstances are taken into account has been elaborated and co-related with other relevant sections in sub-step 1(b) (consistency with mandatory laws and regulations) of sec. B.5.	
Documentation provided by Project Owner	
Revised PSF Ver 1.2	
Project verifier assessment	**Date:** 29/09/2023
ii. PO has provided in the revised PSF, the description as to how the relevant national and/or sectoral policies, regulations and circumstances are considered which is deemed acceptable by the verification team. Hence the finding is closed.	

CAR ID	06	**Section no.**	D.3.5	**Date:** 19/01/2023
Description of CAR				
Under Section B.5 of the PSF: i. The Legal Requirement Test to demonstrate additionality is required to be elaborated upon supported with details and documentary evidence. ii. In accordance with para 20 of clarification 1, "The common practice shall be ascertained for each bundle or activity depending upon the level for which additionality is defined." As additionality is defined at the activity level, common practice will be defined at the same level (each activity). iii. Common Practice analysis step 2(a), identifies "the states of Telangana in India" as the applicable geographical area". Justification for the specific selection as against the rest of the host country in accordance with Paragraph 9 of applied Tool 24 is not provided.				
Project Owner's response				**Date:** 19/06/2023
i. The Legal Requirement Test to demonstrate additionality is elaborated upon supported with details and documentary evidence. ii. In accordance with para 20 of clarification 1, common practice and additionality are ascertained at the same level (i.e., for bundle level). For Common Practice analysis step 2(a), justification for selected geographical area is in accordance with Paragraph 9 of applied Tool 24 and the same is explained in PSF.				
Documentation provided by Project Owner				
Revised PSF Version 1.1 *Plantwise Details of All India Renewable Energy Projects-Reg dt. 20/03/2020 published by CEA, Ministry of Power, Govt. of India.*				
Project verifier assessment				**Date:** 07/07/2023

i. The Legal Requirement Test to demonstrate additionality is not elaborated upon supported with details and documentary evidence. **The finding therefore remains open.** ii. As observed from the PPAs submitted, the Project Owner at the time of Investment decision were M/s New Ear Enviro Ventures (Karimnagar) Pvt. Ltd. (PAs at Ellanthakunta and Manakondur) and M/s Karvy Solar Power Limited for PA at Sangareddy. In view of the same, PO to justify as to how the Additionality is determined at Bundle level. PO is requested to revisit para 20 of clarification 1. Furthermore, PO to provide documentary evidence mentioned for chosen cut-off date for common practice analysis. PO to also provide functional web-links in the footnotes. **The finding therefore remains open.** iii. Justification for the specific selection of a state as against the rest of the host country is now provided in the revised PSF. The same is acceptable to the verification team and hence the finding is closed.
Project Owner's response **Date:** 08/09/2023
i.. The Legal Requirement Test to demonstrate additionality is elaborated with supporting details in sec B.5. in the revised PSF. The section has been clearly marked for easy identification ii. PO mentioned the relevance of chosen cut-off date for common practice analysis. Documents considered for common practice analysis is attached
Documentation provided by Project Owner
Project verifier assessment **Date:** 29/09/2023
i. PO has elaborated the Legal Requirement Test to demonstrate additionality. Hence the finding is closed. ii. PO is required to elaborated on how the Additionality is determined at Bundle level (Common Practice Analysis for all 3 PAs in the bundle as well as documentary evidence for same. PO is equally required to provide functional web-links in the footnotes. **Hence finding remains opened.**
Project Owner's response **Date:** 07/10/2023
ii. PO elaborated on how the Additionality is determined at Bundle level (Common Practice Analysis for all 3 PAs in the bundle in Appendix 8
Documentation provided by Project Owner
Project verifier assessment **Date:** 13/10/2023
ii. PO has elaborated, in Appendix 8, on the common practice analysis for all three project activities to determine additionality at bundle level, which is in line with GCC Clarifications No.01 (V1.3 – 2022). Hence, the finding is closed.

CAR ID	07	**Section no.**	D.3.1, D.3.6, D.3.7	**Date:** 19/01/2023
Description of CAR				
Under Section B.6 of the PSF: i. In accordance with paragraph 14 of the 'Tool to calculate the emission factor for an electricity system, Version 07.0 (Tool 07)', PO is required to explain how the steps involved in calculation of baseline emission factor are applied along with justification for choices and relevant references in section B.6.1. ii. The calculation method for parameter "$EF_{grid,OM,y}$" is not provided in section B.6.2. iii. The calculation method mentioned for parameter "$EF_{grid,BM,y}$" is incorrect under section B.6.2. iv. Reference has been made to "CO_2 Emission Database, Version 16.0, March 2021 published by CEA, however the latest available version is 17, October 2021.				
Project Owner's response **Date:** 19/06/2023				
i. PO has explained the steps involved in calculation of baseline emission factor applied along with justification for choices and relevant references in section B.6.1. ii. The calculation method for parameter "$EF_{grid,OM,y}$" is provided in section B.6.2. *iii.* The calculation method mentioned for parameter "$EF_{grid,BM,y}$" is corrected under section B.6.2. *iv.* the latest available version is 17, October 2021 is corrected in PSF				
Documentation provided by Project Owner				
Revised PSF Version 1.1				

Project verifier assessment	**Date:** 07/07/2023
Section B.6.1 of the revised PSF appropriately explains the steps involved in calculation of baseline emission factor along with justification for choices and relevant references. The same is in accordance with Tool 07 applied. Furthermore, the latest available version of "CO_2 Emission Database" i.e. Version 17.0, published by CEA, has been appropriately used throughout the revised PSF. The calculation methods for the parameters fixed ex-ante i.e. "$EF_{grid,OM,y}$" and "$EF_{grid,BM,y}$" have been provided and the same are in accordance with the applied tool i.e. Tool 07. The corrections made in section B.6.1 and B.6.2 of the revised PSF are found to be acceptable to the verification team and hence the finding is closed.	

CAR ID	08	**Section no.**	D.3.6	**Date:** 19/01/2023
Description of CAR				
In section B.6.3, the PO is required to provide a transparent calculation of baseline emission, emission reductions expected during the crediting period.				
Project Owner's response				**Date:** 19/06/2023
In section B.6.3, the PO provided a transparent calculation of baseline emission, emission reductions expected during the crediting period.				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023
Revised PSF now provides a transparent calculation of annual emission reductions expected during the 10-year crediting period of the project activity. Calculations for baseline, project as well as leakage emissions are appropriately depicted under section B.6.3. Furthermore, the emission reductions expected during the entire crediting period are mentioned under section B.6.4. The same is found to be appropriate and hence the finding is closed.				

CAR ID	09	**Section no.**	D.6	**Date:** 19/01/2023
Description of CAR				
In section G of the PSF, it is not clear whether the SDG impacts of project were discussed during LSC meeting.				
Project Owner's response				**Date:** 19/06/2023
In section G of the PSF, discussion about SDG impacts of project were discussed during LSC meeting is mentioned				
Documentation provided by Project Owner				
Revised PSF Version 1.1				
Project verifier assessment				**Date:** 07/07/2023
SGD impacts of the project discussed during the LSC meetings are to be elaborated upon in section G of the PSF in addition to details about No net harm to Environment (E+) as well as No net harm to the Society (S+) discussed as neither section G.1 / G.2 provide details about the same. Summary of comments provided revolves mainly around employment and welfare. **The finding therefore remains open.**				
Project Owner's response				**Date:** 08/09/2023
Section G has been revised by including the details of how the project activity contributes to E+/S+/UN SDG goals. Summary of comments not only includes employment and welfare, but also about the impact of the project activity on the climatic condition. The question on welfare raised by the stakeholders is in fact all inclusive in as much as it includes jobs, training, medical facilities, water supply, power, etc. That is why, the project representative had requested the shareholders to present their requirements to the site-in-charge through the village representative, so that the activities could be taken up based on the priority and fund availability				
Documentation provided by Project Owner				
Revised PSF Ver. 1.2.				
Project verifier assessment				**Date:** 29/09/2023

PO has explained that during local stakeholder consultation, the advantages of the project including economic development (job opportunities), welfare, clean energy (electricity generation through renewable source), and emission reductions were discussed with the stakeholders which covers No net Harm to Environment/Society and SDG impacts. This is deemed acceptable to the project verification team. Therefore, the finding is closed.

Table 3. FARs from this Project Verification

FAR ID	01	**Section no.**	D.7, D.13, D.14	**Date:** 19/01/2023
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 Owner's response				**Date:** DD/MM/YYYY
-				
Documentation provided by Project Owner				
-				
GCC Project Verifier assessment				**Date:** DD/MM/YYYY
-				

Appendix 5. Environmental safeguard assessment

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**										**Project Owner's Conclusion**		**GCC Verifier's Conclusion**	
		Description of Impact *(both positive and negative)*	**Legal requirement / Limit**	**Do-No-Harm Risk Assessment**			**Risk Mitigation Action Plans**		**Do-No-Harm Residual Risk Assessment**			**Self-Declaration**		**3rd Party Audit**	
				Not Applicable *(No actions required)*	**Harmless** *(No actions required)*	**Harmful** *(Actions required)*	**Operational Controls**	**Program of Risk Management Actions**	**Re-evaluate Risks**	**Monitoring**		**Explanation of Conclusion**	**The Project Activity will not cause any harm**	**Verification Process**	**Will the Project Activity cause any harm?**
Environmental impacts on the identified categories[8] indicated below.	*Indicators for environmental impacts*	*Describe anticipated environmental impacts, both positive and negative from all sources (stationary and mobile), that may result from the Project Activity, within and outside the project boundary, over which the Project Owner(s) has control, and beyond what would reasonably be expected to occur in the absence of the Project Activity.*	*Describe the applicable national regulatory requirements /legal 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** (No actions required)*	*If environmental impacts are anticipated, but are expected to be in compliance with applicable national regulatory requirements/ below the legal limits, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as **Harmless** (No actions required)*	*If environmental impacts are anticipated that will not be in compliance with the applicable national regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-safe) and shall be indicated as **Harmful** (Actions required).*	*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**.*	*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 the risk of impacts that have been identified as **Harmful**.*	*Re-evaluate risks after Risk Mitigation Action Plans have been developed (refer to previous two columns) for impacts that have been identified as Harmful. Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as **Harmless** (No actions required)*	*Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as Harmful and described in the PSF (refer to Table 3).*		*Describe how the Project Owner has concluded that the Project Activity is likely to achieve the identified Risk Mitigation Action Plan targets for managing risks to levels that are unlikely to cause any harm.*	*Confirm that the Project Activity risks of negative environmental impacts are expected to be managed to levels that are unlikely to cause any harm (Mark +1 for **Yes** or and -1 for **No**)*	*Describe how the GCC Verifier has assessed that the Project Activity has adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm*	*Confirm whether the Project Activity is expected to manage risks of negative environmental impacts to levels that are unlikely to cause any harm (Mark +1 for **Yes** or and -1 for **No**)*
Environmental Safeguards															
Environment - *Air*	*SO_x emissions*	The project activity does not cause SOx emissions. The project	National Ambient Air Quality Standards as notified by CPCB	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required		The Project proponent confirms that the project activity will	0	The project activity will not cause SOx emissions	0

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

		activity avoids SOx emissions that would have been generated by the similar activity in the baseline, where the fuel used are fossil fuels.									not cause SOx emissions			
	NO_x emissions	The project activity does not cause NOx emissions. The project activity avoids NOx emissions that would have been generated by the similar activity in the baseline, where the fuel used are fossil fuels.	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	The Project proponent confirms that the project activity will not cause NOx emissions.	0	The project activity will not cause NOx emissions.	0
	CO_2 emissions	Project Activity generates Electricity from renewable source. Hence no CO2 emissions from the project activity. In the absence of project , fossil fuel based	National Ambient Air Quality Standards as notified by CPCB.		Harmless		Not Applicable	Not Applicable	Not Applicable	Emission reductions in tCO_2e per year monitored through ER sheet on a monthly basis using the emission factor	Project owner concludes that, the project does not generate CO2 as the power is generated using renewable energy CO_2Emission reduction will be measured based on the	+1	The CO2 emission reduction is validated from the ER calculation sheet /02/ and found appropriate	+1

		power plants will be used, which produce more Co_2 emissions to generate electricity.									electricity generated using the emission reduction factor			
	CO emissions	The project activity does not generate any CO emissions within or outside the project boundary. In the absence of project activity, there is a possibility of CO emissions.	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO concludes that, no SPM emissions produced from the Project activity during Operational phase. Negligible amount of emissions during construction.	0	No SPM emissions produced from the Project activity during Operational phase. Negligible amount of emissions during construction	0
	Suspended particulate matter (SPM) emissions	Executed Project activity does not produce any SPM emissions except during construction	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO concludes that, no SPM emissions produced from the Project activity during Operational phase. Negligible amount of emissions during construction.	0	No SPM emissions produced from the Project activity during Operational phase. Negligible amount of emissions during construction	0
	Fly ash emissions	Fly ash emissions	National Ambient Air	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO confirms that, in the	0	In the baseline	0

		are not produced from this project activity either within or outside the project boundary. In the absence of project activity, conventional power plant produce Fly ash emissions	Quality Standards as notified by CPCB.								baseline scenario (grid) some of the fossil fuel power plants produce Fly ash emissions, on which data is not available.		scenario (grid) some of the fossil fuel power plants produce Fly ash emissions, on which data is not available.	
	Non-Methane Volatile Organic Compounds (NMVOCs)	the solar plant does not cause any NMVOC emission	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO confirms that the project activity does not emit any NMVOCs and solar energy projects have been classified as white category. An acknowledgement from MOEF for White Category industry is enclosed	0	The project activity does not emit any NMVOCs and solar energy projects have been classified as white category. An acknowledgement from MOEF for White Category industry is enclosed	0
	Odor emissions	The project does not emit any odor.	National Ambient Air Quality Standards as notified by CPCB.	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO confirms that the project activity does not emit any odor.		The project activity does not emit any odor.	
	Noise Pollution	The project does not produce any noise.	Noise (Regulation and control Rules 2000 amended in 2010)	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO confirms that the project activity does not produce any noise.		The project activity does not produce any noise.	
	Solid waste Pollution	No plastic waste is	Plastic Waste	Not applicable			Not applicable	Not applicable	Not applicable	No action required	The project does not		The project does not	

Environment - *Land*	*from Plastics*	generated by the project activity	(Management and Handling) Rules, 2016								generate any plastic waste. Thus PO concludes that the there is no solid waste pollution from plastics		generate any plastic waste. Thus the project verifier concludes that the there is no solid waste pollution from plastics	
	Solid waste Pollution from Hazardous wastes	There is no possibility of waste generation from hazardous wastes on year to year basis. Even otherwise if any waste is generated at site, PO has a standard procedure for disposal of such waste. Whenever such waste is generated, the same is stored at designated place at site and disposed off through approved PCB vendors.	Harzardous and other Wastes(Management and Transboundary Movement) Rules, 2016	Not applicable			Not applicable	Not applicable	Not applicable	No action required	The project does not generate any hazardous waste. on year to year basis. Even otherwise if any waste is generated at site, PO has a standard procedure for disposal of such waste. Whenever such waste is generated, the same is stored at designated place at site and disposed off through approved PCB vendors on yearly basis. Thus doesn't harm environmen.		The project does not generate any hazardous waste. on year to year basis. Even otherwise if any waste is generated at site, PO has a standard procedure for disposal of such waste. Whenever such waste is generated, the same is stored at designated place at site and disposed off through approved PCB vendors on yearly basis. Thus doesn't harm environment. The project verifier confirmed this from interview with the site personnel	

												during the on-site visit.	
	Solid waste Pollution from Bio-medical wastes	No bio medical waste is generated by the project activity	Biomedical Waste Management Rules 2016Movement) Rules, 2016	Not applicable			Not applicable	Not applicable	Not applicable	No action required	Projct proponent confirms that the project activity does not generate any biomedical waste. Thus there is no solid waste pollution from biomedical wastes		The project activity does not generate any biomedical waste. Thus there is no solid waste pollution from biomedical wastes	
	Solid waste Pollution from E-wastes	There is a probability of project generatingE-wastes (spares of SCADA system and inverters)	E-waste (Management and Handling) Rules 2011		Harmless		It will be Collected stored at designated place and it is recycled/refubrished / reused /disposed properly through authorized vendors and comply with the rules of E Waste disposal guidelines	Not applicables	Not applicables	Solid waste(E waste) quantity (in kgs/ons/numbers) reused/recycled/refubrished or disposed per year Monitored through records maintained or form 2 of waste management	PO concludes that, the solid waste from E-wastes will be collected, segregated and reused/recycled/refurbished/ and disposed properly. Hence, E-waste will not cause any harm to environment	+1	The quantity of E-waste reused/recycled/refurbished/disposed of will be monitored per year by means of the records maintained on site. This was further confirmed by interviewing the monitoring personnel of the project activity during site visit.	+1
	Solid waste Pollution from Batteries	**The project activity will generate solid waste from batteries, at the end of life of batteries.**	Battery Waste Management rules-2016	Not Applicable			Used batteries will be returned to the battery manufacturers, who will recycle them-	Not Applicable	Not Applicable	No action required	PO concludes that the batteries will be returned to the manufactures as a part of Battery Management Rules.		The batteries will be returned to the manufactures as a part of Battery Management Rules. Hence, no	

												negative impact.	
	Solid waste Pollution from end of life products/ equipment	There is no possibility of waste generation from end of life products on year to year. Even otherwise if any waste is generated at site, PO has a standard procedure for disposal of such waste. Whenever such waste is generated, the same is stored at designated place at site and disposed off to approved PCB vendors.	Solid Waste Management Rules, 2016	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO concludes that the project will not generate any solid waste from end of life products / equipment during operational phase. on year to year basis. Even otherwise if any waste is generated at site, PO has a standard procedure for disposal of such waste. Whenever such waste is generated, the same is stored at designated place at site and disposed off to approved PCB vendors.		PO has a standard procedure for disposal of such waste. Whenever such waste is generated, the same is stored at designated place at site and disposed of to approved PCB vendors.	
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury)	The project does not use any chemicals (including pesticides, heavy metals ,lead, mercury)	Not applicable	Not applicable			Not applicable	Not applicable	Not applicable	No action required	PO confirms that the project will not generate any soil pollutant chemicals, including pesticides, heavy metals, lead and mercury		The project will not generate any soil pollutant chemicals, including pesticides, heavy metals, lead and mercury	

	land use change (change from cropland /forest land to project land) (EL08)	Project activity is established in non-crop land and non-forest land, so there is no change in land use.	The Telangana Agricultural Land (Conversion for Non Agricultural Purposes) Act, 2006	Not applicable			Not applicable	Not applicable	Not applicable	No action required	Project activity is located in non -crop/ non-forest area. Hence, the question of change in land use does not arise.		Project activity is located in non -crop/ non-forest area. Hence, the question of change in land use does not arise.	
Environment - *Water*	*Reliability/ accessibility of water supply*	Not Applicable	Not Applicable	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	Project activity does not require water except for drinking and sanitary purposes		Project activity does not require water except for drinking and sanitary purposes	
	Water Consumption from ground and other sources	Ground water will be utilised for cleaning of modules at the site.		Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO confirms that there is no major impact from the project activity, by water consumption from ground and other sources.		There is no major impact from the project activity, by water consumption from ground and other sources.	
	Generation of wastewater	Not Applicable	The Water (Prevention & Control of Pollution) Act, 1974	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	The project activity does not generate any wastewater, except water used for sanitary purposes, which is harmless.		The project activity does not generate any wastewater, except water used for sanitary purposes, which is harmless.	
	Wastewater discharge without/with insufficient treatment	Not Applicable	The Water (Prevention & Control of Pollution) Act, 1974	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	The project activity does not discharge any wastewater other than		The project activity does not discharge any wastewater other than	

											water used for sanitary purposes, which is harmless.		water used for sanitary purposes, which is harmless.	
	Pollution of Surface, Ground and/or Bodies of water	Not Applicable	The Water (Prevention & Control of Pollution) Act, 1974	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	The project activity does not pollute surface/ground and/or bodies of water.		The project activity does not pollute surface/ground and/or bodies of water.	
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	Not Applicable	The Water (Prevention & Control of Pollution) Act, 1974	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	The project activity does not discharge any harmful chemicals or toxic waste		The project activity does not discharge any harmful chemicals or toxic waste	
Environment – *Natural Resources*	*Conserving mineral resources*	The project activity generates electricity from renewable source i.e., using solar, so we conserve natural resources as, in the baseline scenario, electricity is generated by using fossil fuels.	Mines and Minerals (Development and Regulation) Amendment Act, 2015	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO concludes that, project activity does not use any mineral, ,as the electricity is generated based on renewable sources	0	The project activity does not use any mineral, ,as the electricity is generated based on renewable sources	0
	Protecting/ enhancing plant life	Not Applicable	There ae no regulations	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	Project activity is implemented in barren land. There were no trees at the time of implementation.		Project activity is implemented in barren land. There were no trees at the time of implementation.	

	Protecting/ enhancing species diversity	Not Applicable	Environment protection Act, 1986	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	Project activity is implemented in barren land, hence it does not impact on species diversity		Project activity is implemented in barren land, hence it does not impact on species diversity	
	Protecting/ enhancing forests	Not Applicable	The Forest (Conservation) Act, 1980 & 1981	Not Applicable			Not Applicable	Not Applicable	Not Applicable	No action required	PO confirms that the project will not use any natural resources in the projct activity		The project will not use any natural resources in the projct activity	
	Protecting/ enhancing other depletable natural resources	Not applicable	Mines and Minerals (Development and regulation) Act, 1957	Not applicable			Not applicable	Not applicable	Not applicable	No action required	As the project is a renewable energy project, it is already conserving energy, as in the absence of the project, energy would have been generated using fossil fuel.		Since the project is a renewable energy project, it is already conserving energy	
	Conserving energy	Not applicable	Energy Conservation Act, 2001	Not applicable			Not applicable	Not applicable	Not applicable	No action required	As the project is a renewable energy project, it is already conserving energy, as in the absence of the project, energy would have been generated using fossil fuel.		Since the project is a renewable energy project, it is already conserving energy	

	Replacing fossil fuels with renewable sources of energy	This project activity replace fossil fuels with solar energy, which is a renewable energy source for the generation of electricity.	There are no Regulations at present,		Harmless		Not applicable	Not applicable	Not applicable	Quantity of net electricity generated per year replacing fossils fuel., evidenced by Joint Meter Reading	Project proponent concludes that the Project activity will Supply Energy to the grid using Renewable Source of energy.	+1	The Project activity will Supply Energy to the grid using Renewable Source of energy. The monthly value of metered energy is the basis for PO to raise monthly invoices. Therefore, Net electricity supplied to the grid by the project activity can be cross checked with the JMR and monthly invoices raised.	+1
	Replacing ODS with non-ODS refrigerants	Not applicable	There are no regulation at present	Not applicable			Not applicable	Not applicable	Not applicable	No action required	As this is a renewable energy project replacement of ODS with non-ODS refrigerants does not arise		As this is a renewable energy project replacement of ODS with non-ODS refrigerants does not arise	
Note: If the score is: (a) zero or greater, the overall impact is neutral or positive and there is no net harm; and (b) less than zero, the overall impact is negative and there is net harm to Environment. Score is obtained after adding the individual scores in each of the rows in the last column of the above table.														
Net Score:			**+3**											
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. Social safeguard assessment

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**									**Project Owner's Conclusion**		**GCC Verifier's Conclusion**	
		Description of Impact (*both positive and negative*)	**Legal requirement /Limit**	**Do-No-Harm Risk Assessment**			**Risk Mitigation Action Plans**		**Do-No-Harm Residual Risk Assessment**		**Self-Declaration**		**3rd Party Audit**	
				Not Applicable (*No actions required*)	**Harmless** (*No actions required*)	**Harmful** (*Actions required*)	**Operational Controls**	**Program of Risk Management Actions**	**Re-evaluate Risks**	**Monitoring**	**Explanation of Conclusion**	**The Project Activity will not cause any harm**	**Verification Process**	**Will the Project Activity cause any harm?**
Social impacts on the identified categories[9] indicated below.	*Indicators for social impacts*	*Describe the impacts on society and stakeholders, both positive and negative, that may result from constructing and operating of the Project Activity.*	*Describe the applicable national regulatory requirements / legal limits 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** (No actions required)*	*If social impacts are anticipated, but are expected to be in compliance with applicable national regulatory requirements/ legal limits, then it the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as **Harmless** (No actions required)*	*If social impacts are anticipated that will not be in compliance with the applicable national regulatory requirements/ legal limits, then the Project Activity is likely to cause harm (may be unsafe) and shall be indicated as **Harmful** (Actions required).*	*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**.*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., construction of crèche for workers) that will be adopted to reduce the risk of impacts that have been identified as **Harmful**.*	*Re-evaluate risks after Risk Mitigation Actions plans have been developed (refer to previous two columns) for impacts that have been identified as Harmful. Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as **Harmless** (No actions required)*	*Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as Harmful and to be described in the PSF (refer to Table 3).*	*Describe how the Project Owner has concluded that the Project Activity is likely to achieve the identified Risk Mitigation Action Plan targets for managing risks to levels that are unlikely to cause any harm.*	*Confirm that the Project Activity risks of negative social impacts are expected to be managed to levels that are unlikely to cause any harm (Mark +1 for **Yes** or and -1 for **No**)*	*Describe how the GCC Verifier has assessed that the Project Activity has adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm*	*Confirm whether the Project Activity is expected to manage risks of negative environmental impacts to levels that are unlikely to cause any harm (Mark +1 for **Yes** or and -1 for **No**)*
Social Safeguards														

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

Social - *Jobs*	*Long-term jobs (> 1 year) created/ lost*	There is a positive impact of the project activity on the creation of long-term jobs during its operational time	There are no Regulations at present		Harmless		No action required	No applicable	No applicable	Number of persons employed(> 1 year) and monitored per year through employment records	Though there is no mandatory law, PO has an internal goal of improving the local economy by providing direct and indirect employment opportunities and Economic value addition.	+1	This was confirmed during interviews conducted on site and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.	+1
	New short-term jobs (< 1 year) created/ lost	There is a positive impact of the project activity on the creation of short-term jobs for local worker during its construction phase and operational phase.	There are no Regulations at present		Harmless		No action required	No applicable	No applicable	Number of persons employed(< 1 year) per year	Though there is no mandatory law, PO has an internal goal of improving the local economy by providing short term employment and employment and Economic value addition.	+1	This was confirmed during interviews conducted on site and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.	+1
	Sources of income generation increased / reduced	The project activity creates employment for people through infrastructure development in the nearby project	There are no Regulations at present	No applicable			No action required	No applicable	No applicable	No applicable	PO confirms that, the project activity will create jobs for people, through infrastructure development which will increase in	0	The project activity will create jobs for people, through infrastructure development which will increase in source of income.	0

		area,which will increase income of people.									source of income.		Hence, no negative impact.	
	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04) *(human rights)*	The project will provide employment to all without discrimination based on gender, ethnicity, religion, etc.	Article 16 of Constitution of India	Not applicable			No action required	Not applicable	Not applicable	Not applicable	As the constitution provides for equal opportunity to all in employment, PP confirms that the project will provide employment without discrimination..	0	As the constitution provides for equal opportunity to all in employment, the project will provide employment without discrimination.. Hence, no negative impact.	0
Social – *Health & Safety*	*Disease prevention*	There is no disease prevention through the project activity	The Factories Act, 1948	Not applicable			No action required	Not applicable	Not applicable	Not applicable	PO confirms that the project will maintain proper hygienic condition to protect the employees.		The project will maintain proper hygienic condition to protect the employees. Hence, no negative impact.	
	Occupational health hazards (SHS02)	Like in any project, physical stress is the only occupational health hazard	The Factories Act, 1948	Not applicable			No action required	Not applicable	Not applicable	Not applicable	PO confirms that the project will provide good working environment to employees so that they are not exposed to any occupational health hazards.		The project will provide good working environment to employees so that they are not exposed to any occupational health hazards. Hence, no negative impact.	

	Reducing / increasing accidents/Incidents/fatality (SHS03)	Project activity will strive to reduce the accidents during construction and operational phase by its EHS policy	There are no specific Regulations on this aspect		Harmless		As per the Factories Act, a written notice should be given to the Factories Inspector within 72 hours of the occurrence of accident and acknowledgement taken	Not applicable	Not applicable	Record of major Accidents/incidents rate in the year monitored through EHS records For this parameter trainings are also provided for which Training records are maintained.	PO has a strict EHS policy which aims to reduce accidents and ensure employee health and safety, Employees will be trained in operation and maintenance aspects of solar equipment and will be provided with necessary safety equipment to avoid accidents.	+1	PO has a strict EHS policy which aims to reduce accidents and ensure employee health and safety, Employees will be trained in operation and maintenance aspects of solar equipment and will be provided with necessary safety equipment to avoid accidents. This was confirmed during interviews conducted on site and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team	+1
	Reducing / increasing crime	The project doesn't reduce or increase the crime	Indian Penal Code deals with crime and punishment	Not applicable			No action required	Not applicable	Not applicable	Not applicable	Since the project activity will increase the sources of income of		Since the project activity will increase the sources of income of	

											the people and develop infrastructure in and around the area, crime rate will come down. No credit is claimed		the people and develop infrastructure in and around the area, crime rate will likely to come down.	
	Reducing / increasing food wastage	The project activity doesn't involve in reducing/ increasing food wastage	Food Waste (Reduction) Act, 2018	Not applicable			No action required	Not applicable	Not applicable	Not applicable	The project will provide suitable place for employees to store the lunch and dine to avoid any contamination and wastage. Food wastage is not anticipated.		The project will provide suitable place for employees to store the lunch and dine to avoid any contamination and wastage. Food wastage is not anticipated.	
	Reducing / increasing indoor air pollution	The project activity doesn't involve in reducing/increasing indoor air pollution	The Air (Prevention & Control of Pollution) Act, 1981	Not applicable			No action required	Not applicable	Not applicable	Not applicable	Project proponent confirms that the solar energy projects are installed in open and do not cause any air pollution.		The solar energy projects are installed in open and do not cause any air pollution.	
	Efficiency of health services	The project activity conducts medical camps, distribution of medicines and vaccines for the stakeholders which will contributes conductsto rural or community	There are no statutory regulations on efficiency of health services in India at present		Harmless		No action required	Not applicable	Not applicable	Number of health camps conducted. Vaccines distributed Medicine distributed These will be monitored once in three years	PO will conduct health camps for people in the nearby villages.	+1	PO will conduct health camps for people in the nearby villages. The means of monitoring was confirmed during interviews conducted on site and the	+1

		welfare in terms of efficiency of health services.											monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.	
	Sanitation and waste management	Not applicable	Hazardous and other Wastes (Management and Trans boundary movement) Amendment Rules, 2016	Not applicable			No action required	Not applicable	Not applicable	Not applicable				
Social - *Education*	*specialized training / education to local personnel (SE01)*	The PO will provide skill development training to local youths mainly on subjects relating to the project. This will have a positive impact on the project as it will create a reservoir of talents employable when need arises	There are no regulations at present		Harmless		Training will be provided to local youths to improve their skillset, on operation and maintenance of project;; Occupational safety First aid, accident reporting etc.	Not applicable	Not applicable	Number of persons trained over entire crediting period training attendance sheet	PO Confirms that, training will be provided to local youths to upgrade their skills.	+1	Training will be provided to local youths to upgrade their skills. The means of monitoring was confirmed during interviews conducted on site and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.	+1

	Educational services improved or not	The project activity under CSR program improves educational services as the requirement of nearby communities and fund availability	CSR policy of the company	Not applicable			No action required	Not applicable	Not applicable	Not applicable	PO will take initiative under CSR to improve educational services. to the local communities.	0	PO will take initiative as per their CSR requirement .	0
	Project-related knowledge dissemination effective or not	Project provides job-related training and thereby impart knowledge to existing employees and new recruits	HR policy of the company	Not applicable			Training operation & maintenance of WEGs, occupational safety, like fire safety, first aid, emergency procedures, risk assessment, accident reporting procedure welfare activities like, safe use of workplace tools, machinery, equipment etc.	Not applicable	Not applicable	Not applicable	PO confirms that job-related training will be provided to existing employees and new recruits to improve their knowledge base		Job-related training will be provided to existing employees and new recruits to improve their knowledge base.	
Social – *Welfare*	*Improving/ deteriorating working conditions*	Not applicable	EHS and HR policy of the company	Not applicable			No action required	Not applicable	Not applicable	Not applicable	Since the project has a good EHS and HR policy and offers good working environment, there will be no deterioration in working condition		Since the project has a good EHS and HR policy and offers good working environment, there will be no deterioration in working condition	

	Community and rural welfare	By initiating various programs, the project activity enables welfare of the rural community.	CSR policy of the company	Not applicable			No action required	Not applicable	Not applicable	Not applicable	PO confirms that, the project contributes towards welfare of the rural community. Welfare activities will be organized as per requirement of the community.	0	The project contributes towards welfare of the rural community. Welfare activities will be organized as per requirement of the community.	0
	Poverty alleviation (more people above poverty level)	By generating direct and indirect employment opportunities, the project activity contributes to the efforts of poverty alleviation.	There are no Regulations at present	Not Applicable			No action required	Not applicable	Not applicable	Not applicable	PP concludes that, the Poverty alleviation will occur due to providing direct and indirect employment opportunities.	0	The Poverty alleviation will occur due to providing direct and indirect employment opportunities.	0
	Improving / deteriorating wealth distribution/ generation of income and assets	Not Applicable as the project activity only increases the income sources but cannot predict improving/deteriorating wealth distribution/ generation of income and assets.	There are no regulations at present	Not applicable			No action required	Not applicable	Not applicable	Not applicable	Since the project is an equal opportunity employer, it will provide employment to all based on the need and suitability. This action will result in generation of income sources	0	Since the project is an equal opportunity employer, it will provide employment to all based on the need and suitability. This action will result in generation of income sources	0
	Increased or / deteriorating municipal revenues	Taxes payable by the company and the Professional		Not applicable			No action required	Not applicable	Not applicable	Not applicable	Project proponent confirms that the company has to pay	0	The company has to pay tax to concern local body	0

		Taxes payable by employees improves the amount of taxes paid but cannot predict increased/deteriorating municipal revenue									tax to concern local body and the employees have to pay professional tax, which will improve the revenue of municipal corporation. Moreover, the small shops coming up in nearby areas due to this project will also contribute to the revenue of municipal corporation		and the employees have to pay professional tax, which will improve the revenue of municipal corporation. Moreover, the small shops coming up in nearby areas due to this project will also contribute to the revenue of municipal corporation	
	Women's empowerment	Women are not employed at the project activity as it is located in a remote location.	There is no specific regulation requiring employment of women even in remote location at present	Not Applicable			No action required	Not applicable	Not applicable	Not applicable	PP concludes that women are not employed as the project as project is in a remote location.		Women are not employed as the project as project is in a remote location.	
	Reduced / increased traffic congestion	Not Applicable	Nil	Not applicable			No action required	Not applicable	Not applicable	Not applicable	Due to project activity traffic may increase in the area. However, since the project is located in a remote area, it will not create traffic congestion.		Due to project activity traffic may increase in the area. However, since the project is located in a remote area, it will not create traffic congestion.	
	Exploitation of Child labour	Project does not employ child labour as it is	The Child Labour (Prohibition and	Not applicable			No action required	Not applicable	Not applicable	Not applicable	PP confirms that the project will not employ child labour		The project will not employ child labour in any of the	

	(human rights) *(SW08)*	prohibited by law	Regulation) Act, 1986							in any of the project activity		project activity	
	Minimum wage protection *(human rights) (SW09)*	Employees are paid wages confirming to the Minimum Wages Act.	The Minimum Wages Act, 1948	Not applicable			No action required	Not applicable	Not applicable	Not applicable	Project proponent confirms that all the employees will be paid wages and salaries confirming to the rates stipulated for that category by the Act This was confirmed via interview with the PO representatives and some of the employees during the on-site visit.		All the employees will be paid wages and salaries confirming to the rates stipulated for that category by the Act This was confirmed via interview with the PO representatives and some of the employees during the on-site visit.	
	Abuse at work place.(with specific reference to women and people with special disabilities / challenges) *(human rights) (SW10)*	The extant laws prevent, prohibit and in case of occurrence redressal of any abuse of women, scheduled caste and tribe and differently abled employees at work	Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 The Rights of Persons with Disability Act, 2016	Not applicable			No action required	Not applicable	Not applicable	Not applicable	Project proponent confirms that while women are not employed in the project location, employees belonging to SC and ST and differently abled employees will be treated like any other employees.		While women are not employed in the project location, employees belonging to SC and ST and differently abled employees will be treated like any other employees. This was confirmed via interview with the PO representatives during the on-site visit	

	Avoidance of human trafficking and forced labour *(human rights)* *(SW12)*	IPC prohibits recruiting, transporting, harboring, transferring a person for exploitation and slavery,	Indian Penal Code, 1860	Not applicable			No action required	Not applicable	Not applicable	Not applicable	Project proponent confirms that the project does not employ or keep any person in employment against their will		The project does not employ or keep any person in employment against their will This was confirmed via interview with the PO representatives during the on-site visit	
	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs *(human rights)* *(CW13)*	Project activity is located in a non-forest, non-agricultural and non-human settlement area.	The Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013	Not applicable			No action required	Not applicable	Not applicable	Not applicable	The project is located in non-forest, non-agricultural and non-human settlement area and hence the question of forced eviction or displacement of people does not arise		The project is located in non-forest, non-agricultural and non-human settlement area and hence the question of forced eviction or displacement of people does not arise	
	Provisions of resettlement and human settlement displacement *(human rights)* *(CW14)*	Project activity is located in a non-human settlement area without necessitating any displacement.	The Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013	Not applicable			No action required	Not applicable	Not applicable	Not applicable	As the project is located in a non-human settlement area, the question of resettlement of people does not arise	0	As the project is located in a non-human settlement area, the question of resettlement of people does not arise	0
	Other social welfare issues	Not applicable	Not applicable	Not applicable			Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		Not applicable	
Note: If the score is: (a) zero or greater, the overall impact is neutral or positive and there is no net harm; and (b) less than zero, the overall impact is negative and there is net harm to society. Score is obtained after adding the individual scores in each of the rows in the last column of the above table.														

Net Score:	**+5**	
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. United Nations Sustainable Development Goals (SDG)

UN-level SDGs	**UN-level Target**	**Declared Country-level SDG**	**Defining Project-level SDGs**					**GCC Project Verifier's Conclusion**	
			Project-level SDGs	**Project-level Targets/ Actions**	**Project-level Indicators**	**Contribution of Project-level Actions to SDG Targets**	**Monitoring**	**Explanation of Conclusion**	**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 correspo-nding 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.* ***For guidance see:*** *Integrating the SDGs into Corporate Reporting- A Practical Guide: https://www.unglobalcompact.org/docs/publications/Practical_Guide_SDG_Reporting.pdf* *Case-study from Coca-Cola and other organizations to develop organization-wide SDGs (page 114): https://pub.iges.or.jp/pub/realising-transformative-potential-sdgs*	*Define project-level targets/actions, by suitably modifying and customizing UN/Country-level targets to the project scope. Define the target date by which the Project Activity is expected to achieve the project-level SDG target(s). Refer to the previous column for guidance*	*Define project-level indicators by suitably modifying and customizing UN/Country-level indicators to the project scope or creating a new indicator(s). Refer to the previous column for guidance*	*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 and is additional to what would have occurred in the absence of the Project Activity*	*Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG target and Indicator*	*Describe how the GCC Verifier has verified the claims that the Project Activity is likely to achieve the identified project-level SDG targets*	*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	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and //vaccines for all Indicators: 3.8.1	Yes	Achieve health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for the local stakeholders and employees.	Ensure health care services local stakeholders and employees by organising/conducting health related activities like medical camp. Clinical camp, distribution of medicines and vaccines, etc. Target is to organise/conduct atleast one health related activity in three years	Number of health related activities conducted for stakeholders per three years	Organizing Health camps, other health related activities periodically for stakeholders to increase efficiency of health services or Providing group health insurance to the employees Above actions result in a direct positive effect that contributes to achieving the defined project-level SDG targets	Monitored through welfare activity records Number of health related activities conducted for stakeholders per three years Records of group health insurance, health camps conducted and EHS training programs	The means of monitoring was confirmed during interviews conducted on site and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team	Yes
Goal 4. Ensure inclusive and equitable quality	4.4	Yes	Substantially increase the number of youth and adults who have relevant skills, including	To train the, local youth and adults with	Number of persons trained over	Empowereing local stakeholders	Monitored through records of	The means of monitoring was confirmed	Yes

education and promote lifelong learning opportunities for all	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship Indicators: 4.4.1		technical and vocational skills, for employment, decent jobs and entrepreneurship, from local stakeholders	relevant skills through trainings during the operational phases of the project for getting decent jobs and provide entrepreneurship opportunities. Target is to provide training to atleast three individual in two years.	the crediting period	with digital literacy and training on relevant technologies. This action contributes to achieving the defined project level SDG targets	trainings and workshops conducted, Number of persons trained over the crediting period.	during interviews conducted on site and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team	
Goal 5. Achieve gender equality and empower all women and girls	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 6. Ensure availability and sustainable management of water and sanitation for all	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.2 “By 2030, Increase substantially the share of	Yes	To increase the share of renewable energy in the National energy mix.	Targeted net electricity MWH supplied to the grid by the project activity in a year	Amount of energy supplied to Grid per year	The solar Power project contributes directly to achieving	The net electricity supplied to the grid by the project activity is	The monitoring parameter is recorded on monthly basis. The Joint Meter	Yes

	renewable energy in the global energy mix” Indicator 7.2.1.			throughout the crediting period.		theSDG target because the project activity delivers renewable energy, which would otherwise be generated by fossil fuel dominated grid connect power generating plants.	continuously monitored through energy meter and recorded in JMRs on monthly basis Amount of energy supplied to Grid per year	Readings (JMR) taken every month from the meter, in the presence of authorised official from state electricity board along with a representative of the project owner, gives the net value of electricity supplied by the project activity to the grid. The monthly value of metered energy is the basis for PO to raise monthly invoices. Therefore, Net electricity supplied to the grid by the project activity will be cross checked with the JMR and monthly invoices raised.	
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.8 Protect labour rights and promote safe and secure working environments for all workers,	Yes	Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, and those in precarious employment in the project activity.	Ensure to protect labour rights and have no occupational injuries. To achieve “0” (zero) major injuries	Number of accidents\incidents per year	By implementing strict EHS policy to protect labour rights and through safety trainings, and display of safety posters/guidelines at project sites.	Monitored through EHS/safety records maintained Fatal and non-fatal occupational injuries per year or	This was confirmed during interviews conducted on site and the monitoring practices followed by the project owner is appropriate in relation to the project	Yes

	including migrant workers, in particular women migrants, and those in precarious employment Indicators: 8.8.1					The above actions result in direct positive effects that contribute to project-level SDG .	Number of accidents\incidents per year	activity and its acceptable to the assessment team.	
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries	Yes	Promote inclusive and sustainable industrialization and significantly raise industry's share of employment by the project activity	Establishment of Project activity promotes sustainability (use of renewable energy) and also creates employment opportunities with target of 10 persons employed per year.	Number of persons employed per year	By providing employment opportunities to the eligible candidates for operations of the renewable energy related project activity. The above actions result in direct positive effects that contribute to project-level SDG.	Monitored through employment records maintained Number of persons employed per year.	This was confirmed during interviews conducted on site and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.	Yes

	Indicators: 9.2.2								
Goal 10. Reduce inequality within and among countries	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 12. Ensure sustainable consumption and production patterns	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 13. Take urgent action to combat climate change and its impacts	13.2 Integrate climate change measures into national policies, strategies and planning	Yes	To reduce GHG emissions	Reduce 52,089 (tCo_2/year) per annum through electricity generation from renewable energy.	Amount of emission reductions per year	The project activity utilises the renewable source of energy to produce electricity that would be produced fossil-fuel based plants, thus the project leads to reduction in GHG emissions will combat climate change and contribute to positive effect on the project-level SDG	Electricity produced by the renewable generating unit in records multiplied by an emission factor as recorded in ER sheet or this PSF Amount of emission reductions per year	The CO2 emission reduction is validated from the ER calculation sheet and found appropriate	Yes
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for	NA	NA	NA	NA	NA	NA	NA	NA	NA

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	NA	NA	NA	NA	NA	NA	NA	NA	NA
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	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	NA	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY	**Targeted**	**Likely to be Achieved**
Total Number of SDGs	**6**	**6**
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	**Diamond**	**Diamond**

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