GLOBAL CARBON COUNCIL

Driving Climate Actions

Project Verification Report

V3.1 - 2020

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COVER PAGE Project Verification Report Form (PVR)	
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/wpcontent/uploads/2021/10/carbon-check-india-private-limitedccipl.pdf
Type of Accreditation	☐ Individual Track[1] ☒ CDM Accreditation (Active accreditation from United Nations Framework Convention on Climate Change valid till 14.06.2024 Ref. Number CDM-E-0052 https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0052) ☐ ISO 14065 Accreditation
Approved GCC Scopes and GHG Sectoral scopes for Project Verification	GHG Sectoral Scope: Scope 1 - Energy (renewable/non-renewable sources) GCC Scopes: Green House Gas (GHG# - ACC) Environmental No-harm (E+) Social No-harm (S+) Sustainable Development Goals (SDG+)
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	Title: 100 MW Bundled Solar Project_HPPPL Completion date: 02/01/2024 Version 3.1
Title of the project activity	100 MW Bundled Solar Project_HPPPL

[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.

Project submission reference no. (as provided by GCC Program during GSC)	S00803
Eligible GCC Project Type[2] as per the Project Standard (Tick applicable project type)	☒ **Type A:** ☐ Type A1 ☒ Type A2 Sub-type 1: This type includes existing operational projects, not submitted to any GHG Program, which have started operations after 1 January 2016 ☐ **Type B – De-registered CDM Projects:** ☐ Type B1 ☐ Type[3] B2
Date of completion of Local stakeholder consultation	13/06/2022
Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.	GSC was conducted between 05/01/2023 to19/01/2023 https://www.globalcarboncouncil.com/global-stakeholders-consultation/ No comments were received during the GSC period.
Name of Entity requesting verification service (can be Project Owners themselves or any Entity having authorization of Project Owners)	Manikaran Power Limited
Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)	NEELABHRA PAUL Contact details: 9599184354 Email ID: neel.paul@manikaranpowerltd.in Designation- President PIYUSH SHARMA Contact details: 8826966443 Email ID: Piyush.s@manikaranpowerltd.in Designation- Asst. General Manager–Business Development

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

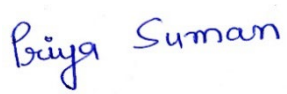
[3] GCC Project Verifier shall conduct Project Verification for all project types except B_2.

Country where project is located	India
GPS coordinates of the Project site(s)	10.142868° N, 77.708683° E 10°8’34.3248’’ N, 77°42’31.2588’’ E
Applied methodologies (approved methodologies of GCC or CDM can be used)	ACM0002: Grid-connected electricity generation from renewable sources - Version 20.0
GHG Sectoral scopes linked to the applied methodologies	GHG-SS # 1 - Energy (renewable / non-renewable sources)
Project Verification Criteria: Mandatory requirements to be assessed	☒ ISO 14064-2, 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 ☒ United Nations Sustainable Development Goals (Goal No 13- Climate Change)
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 100 MW Bundled Solar Project_HPPPL ☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version3.1, dated 02/01/2024) including the applicability of the approved methodology ACM0002: Grid-connected electricity generation from renewable sources - Version 20.0 and meets the methodology applicability conditions and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reductions estimates correctly and conservatively. ☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated 149,637 tCO_{2e} annually, 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 *[03]* SDGs, with the following[4] SDG certification label (**SDG⁺**): ☐ Bronze SDG Label ☒ Silver SDG Label ☐ Gold SDG Label ☐ Platinum SDG Label ☐ Diamond SDG Label ☒ The Project Activity complies with all the applicable GCC rules[5] and therefore recommends GCC Program to register the Project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	Version number 3.0 Date: 04/01/2024

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

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

Name of the authorised personnel of GCC Project Verifier and his/her signature with date	 Priya Suman, Compliance Officer

1. PROJECT VERIFICATION REPORT

Section A. Executive summary

The Project Activity entails the installation of a new 100 MW grid-connected solar power plant. M/s Solitaire BTN Solar Private Limited (Legal owner) implemented the 100 MW power plant in the Indian state of Tamil Nadu which was commissioned on two phases:

Phase	Installed capacity (MW)	Date of Commissioning	State	Purpose
Phase#1	50	20/02/2020	Tamil Nadu	PPA with TANGEDCO
Phase#2	50	08/02/2021	Tamil Nadu	PPA with TANGEDCO

The electricity produced by Project Activity is exported to the Indian national grid. Thus, the electricity produced by the Project Activity replaces an equivalent amount of fossil fuel consumption in existing/grid-connected power plants (mostly fossil fuel-based power plants) and/or new generation sources that may be added to the grid. The electricity generated from the solar power plant in the project activity will result in emission reduction of 149,637 tCO2e annually and 1,496,373 tCO2e of emissions over the crediting period of 10 years. The Location details of each project locations are below:

S. No	Physical Address	Capacity (MW)	Location		Date of Commissioning
			Coordinate (DMS)	Coordinate (DD)	
1.	GANGUVARPATTI, SURVEY NO. 2644,2652,2722, GANGUVARPATTI, Periyakulam Taluk, Theni District, Tamil Nadu, 625203	100MW (50 MW *2)	10.138056° N / 10°8’17’’ N	77.711667° E / 77°42’42’’ E	Phase #1 (50MW) 20/02/2020 Phase#2 (50 MW) 08/02/2021

The project also contributes to Environmental No-net-harm Label (E+), Social No-net-harm Label (S+), CORSIA requirements (C+) and 3 United Nations Sustainable Development Goals (SDG+) i.e., SDG 7,8,13. 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 and its intended generation of Approved Carbon Credits (ACCs).

Scope of Verification

The scope of the services provided by Carbon Check (India) Private Limited (CCIPL) for the project is to perform Project Verification of the concerned GCC Project Activity. The purpose of the verification is to compare the claims and assumptions made in the Project Submission Form (PSF) to the GCC criteria, which include, but are not limited to, GCC PS, GCC VS, applied CDM methodology, Tools, and other relevant rules and requirements established under the Program process. The verification scope is defined as a thorough independent and objective assessment of the project design, particularly the correct application of the methodology, the project baseline study, additionality justification, local stakeholder commenting process, environmental impacts, and monitoring plan, all of which are included in the PSF and other relevant supporting documents, to ensure that the GCC project activity meets all relevant and applicable GCC criteria.

Verification Process and Methodology

Strategic risk Analysis and delineation of the verification plan:
CCIPL employed the following verification (termed as “Project Verification” as per GCC) 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.

Conclusion: The evaluation of the PSF, supporting paperwork, and following follow-up actions (remote audit and interviews) provided CCIPL with enough evidence to determine compliance with the specified requirements. CCIPL believes that the project activity "100 MW Bundled Solar Project_HPPPL" as stated in the final PSF/01/, meets all relevant GCC requirements and has correctly implemented the CDM methodology ACM0002 v20.0 **/B07/** As a result, the initiative is being proposed to the GCC Steering Committee for registration.

Development of the Project Verification Plan:
The Audit Team formally documented its verification plan. The Project 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 the following:

- Project level of assurance (which is reasonable as per GCC requirements),
- Materiality threshold
- Standards of evaluation and reporting for the verification.

It also provides an outline of the Project 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 /01/ 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 the 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 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 signed between the GCC Project Verifier, CCIPL

and the Project Owner. 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 **/01/** 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 and their underlying formulae and calculations. This report contains the findings from the verification opinion on the proposed. Project will be provided once all the raised findings are successfully resolved by the project participant to confirm the program design in the documents is sound and reasonable and meets the stated requirements and identified criteria.

Conclusion
The CDM Methodology ACM0002 v20.0) /B02/ has been applied to the project. Carbon Check (India) Private Ltd. is able to conclude the verification with a positive opinion that the GCC Project Activity "100 MW Bundled Solar Project_HPPPL", as described in the PSF (Version 3.0, dated 13/12/2023) /01/, meets all applicable GCC rules and requirements, including those specified in the Project Standard /B01/, applied CDM methodology, tools and guidelines from GCC (please refer to Appendix 4 for the details of the raised findings). Carbon Check (India) Private Ltd. therefore will be able to recommend the project to the GCC for registration subject to closure of all the raised findings.

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	IR	Chaudhary	Aparna	CCIPL	X	X	X	X
2	Trainee Assessor	IR	KV	Kiran	CCIPL	X	X	X	X
3.	Financial Expert	IR	Dimri	Anubhav	CCIPL	X			X

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)
1.	Technical reviewer	IR	C	Indumathi	**CCIPL**
2.	Approver	IR	Suman	Priya	**CCIPL**

Section C. Means of Project Verification

C.1. Desk/document review

The verification was performed primarily as a document review of the initial PSF/01/ and revised final PSF /01/. The verification of information provided in the PSF was performed using the source of information provided by the project owner. 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: 13/02/2023				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	To check the facts and rectify concerns discovered during the document review, the project verification team conducted interviews with the project owner, plant in charge, and other stakeholders. Discussions and review of: • Project Design • Project Technology • Project boundary • Project ownership • CORSIA requirement • Applicability of methodology • Baseline Scenarios and alternatives • Project additionality • 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) • Emission reduction calculations	Tamil Nadu	13/02/2023	Aparna Chaudhary, Kiran KV

C.3. Interviews

No.	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	R	Sivasomy	Hindustan power/SBTN	13/02/2023	• Project ownership • Project design • Project implementation • Monitoring plan • Socio-economic impact • SDG aspects • Environmental management	Aparna Chaudhary, Kiran KV
2.		Suthan	SBTN	13/02/2023		Aparna Chaudhary, Kiran KV
3.	Nanasekar	A	Local Stakeholder	13/02/2023	• Local stakeholder consultation • Grievance mechanisms • LSC invitation processes • LSC participations	Aparna Chaudhary, Kiran KV
4.	Vijayan	M	Local Stakeholder	13/02/2023		Aparna Chaudhary, Kiran KV
5.	Nallu	K	Local Stakeholder	13/02/2023		Aparna Chaudhary, Kiran KV
6.	Chandrasekar	A	Local Stakeholder (Government official)	13/02/2023		
7.	Balchander	-	Local Stakeholder (Government official)	13/02/2023		
8.	Anand	S	Local Stakeholder (Government official)	13/02/2023		

C.4. Sampling approach

>> Not Applicable as this is a solar power project.

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	CL02		
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		CAR05	
- 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	CL04, CL05		
- Baseline scenario	A_1, A_2, B_1, B_2	CL06,		
- Demonstration of additionality including the Legal Requirements test	A_1, A_2, B_1, B_2	CL07, CL08, CL09, CL14	CAR06. CAR07, CAR08, CAR09, CAR12, CAR13	
- Estimation of emission reductions or net anthropogenic removals	A_1, A_2, B_1, B_2	CL10	CAR10	
- Monitoring plan	A_1, A_2, B_1, B_2	CL11, CL15		
Start date, crediting period and duration	A_1, A_2, B_1, B_2			
Environmental impacts	A_1, A_2, B_1, B_2			
Local stakeholder consultation	A_1, A_2, B_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	CL03		
Global stakeholder consultation	A_1, A_2, B_1			
Others (Template)	A_1, A_2, B_1, B_2		CAR01, CAR02, CAR03, CAR04,	
Others (Supporting Documents)	A_1, A_2, B_1, B_2	CL01,		
VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E^+)	A_1, A_2, B_1	CL12		
Social Safeguards (S^+)	A_1, A_2, B_1	CL12		
Sustainable development Goals (SDG^+)	A_1, A_2, B_1	CL12,CL13	CAR11	
Authorization on Double Counting from Host Country (only for CORSIA)	A_1, A_2, B_1			
CORSIA Eligibility (C^+)				
Total	27	14	13	

Section D. Project Verification findings

D.1. Identification and eligibility of project type

Means of Project Verification	Desk Review and Interviews
Findings	No findings raised
Conclusion	The Verification team reviewed the PSF /01-b/ and confirms that the Project Owner determines the type of proposed GCC project activity as Type A2. Such project activity shall have the start date of operations after 1 January 2016. The sub-type 1 under type A2 has been defined for the project activity. This This type includes existing operational projects, not submitted to any GHG Program, which have started operations after 1 January 2016. The proposed project activity has started its operations on 21/03/2020 (date of commissioning) /09/, its start date of crediting period is 21/03/2020. The initial submission to the GCC program has been done on 22/06/2022 and the GSC period was from 05/01/2023 to 19/01/2023. This complies with the requirement of §11 of the

	GCC Project Standard (version 03.1) /B02/ and § 25 (b) of GCC Project Verification Standard (version 03.1) /B03/ and § 3(c) of GCC clarification no.1 (version 1.3)./B11/

D.2. General description of project activity

Means of Project Verification	Desk Review and Interviews
Findings	CL02 was raised and closed successfully.
Conclusion	The description of the project activity contained in the PSF /01/ can be considered transparent, detailed and provides a clear overview of the project. The project activity entails the installation of a new grid-connected 100 MW Solar Project_HPPPL. The project activity is a solar power project being implemented by M/s Solitaire BTN Solar Private Limited (Legal owner). The electricity generated by Project Activity is exported to the Indian grid. During assessment, the project verification team observed that the project installation was complete, and the project installation was carried out in accordance with the PSF/01/ The GPS coordinates of the project site are given in of this report. Latitude and Longitude of the physical site of the project activity has been included appropriately in the PSF which was found consistent based on the data collected during on-site visit. The project activity aims to harness solar energy through installation of Solar PV with total installed capacity of 100 MW. The estimated annual average electricity generation by the project activity is 160,646 MWh/year /01/ During the 25 years lifetime, the project is expected to generate electricity and feed to the connected national electricity grid of India, GHG free electricity with GHG emission reduction of 1,496,373tCO_2e over 10-year period of project activity with an average of 149,637 tCO_2e GHG emission reduction per year. As stated in the PSF /01-b/, the project activity also voluntarily contributes to Environmental No-net-harm Label (E+), Social No-net-harm Label (S+) and 3 United Nations Sustainable Development Goals (SDG+). As per the PSF /01/, start date of the Project Activity is 21/03/2020. The same is in accordance with requirements of §38 of Project Standard (version 03.1) /B02/. Crediting period is a fixed crediting period for the Project Activity, from 20/02/2020 to 19/02/2030 i.e., of 10 years. This is cross checked by PSF /01/ and confirms the requirement of §39 and §40 of Project Standard Version 3.1 /B02/. The Project Activity is described as Type A2 Project activity and has applied ACM0002 V20.0 methodology. /B07/ CCIPL confirms that the description of the proposed Project Activity in the PSF is accurate and complete, and it provides an understanding of the Project Activity. Prior to beginning this verification, the verification team visited the GCC website and conducted secondary research (internet) to identify if the project was part of any other GHG Program. It was confirmed that the project owners involved had not submitted the proposal to any other GHG programme other than the GCC.

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

D.3.1 Application of methodology and standardized baselines

Means of Project Verification	Desk Review and Interviews
Findings	CAR 05 was raised and closed successfully
Conclusion	The GCC approved consolidated methodology applied is ACM0002 V20.0 /B07/. It is applicable to Grid-connected electricity generation from renewable sources.

Applicability of the methodology will be confirmed by means of interviews with the PO representatives and document review. The applied methodology version of the baseline and monitoring methodology /B07/ 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.

S.N.	Applicability Condition of applied methodology ACM0002, Version 20.0	POjustification	Project Verifierassessment
1	The methodology **ACM0002, Version 20.0** is applicable to the project activity under the following conditions: **Condition para 3:** This methodology is applicable to grid-connected renewable energy power generation project activities that: • Install a Greenfield power plant. • Involve a capacity addition to (an) existing plant(s); • Involve a retrofit of (an) existing operating plants/units; • Involve a rehabilitation of (an) existing plant(s)/unit(s); or • Involve a replacement of (an) existing plant(s)/unit(s).	The project activity involves a new installation of a Solar power generation plant. Hence the methodology is applicable to the project activity.	According to section of the PSF version 2.0/01/ the project involves installation of new greenfield plant at the project location (Tamil Nadu, India) of 100 MW. The project verification team approved the renewable energy project that generates 160,646 MWh/year/01/, that otherwise would have been generated by use of fossil fuel. The generated electricity is transferred to Indian Grid. The project site was visited by the project verification team member and confirmed the same. The project is installation of 100 MW Solar power project for the purpose of producing electricity and connecting it to Indian National Grid. There is no domestic use of electricity by the project as evidenced from the onsite visit. Based on the above, it can be taken as Utility scale power plant.

	2	**Condition para 4(a):** The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit	The project activity is a Solar power generation plant and hence meets the applicability condition.	The project activity involves installation of solar photovoltaic cells as technology to generate electricity and supply it to the national grid. This was verified through the site visit, PPA/06/. Hence, the criterion under the methodology is fulfilled by this project.
	3	**Condition para 4(b):** In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	The project activity is a new project installation and hence this condition does not apply.	On the basis of on site visit and document review the verification team confirmed that the project activity is installation of new solar plant and not retrofitting or rehabilitation in existing plants.

		4	**Condition para 5:** In case of hydro power plants, one of the following conditions shall apply: a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m^2; or c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m^2; or d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using	The project activity is NOT a hydro power project. Hence the condition does not apply.	On the basis of on site visit and document review the verification team confirms that the project is not a hydro power project, it is a solar plant project

		equation (7), is lower than or equal to 4 W/m^2, all of the following conditions shall apply: i. The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4W/m^2; ii. Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; iii. Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m^2 shall be: a) Lower than or equal to 15 MW; and b) Less than 10 per cent of the total installed capacity of integrated hydro		

		power project.		
	5	**Condition para 6:** In the case of integrated hydro power projects, project proponent shall: a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of	The project activity is NOT a hydro power project. Hence the condition does not apply.	On the basis of on site visit and document review the verification team confirms that the project is not a hydro power project, it is a solar plant project

		water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity.		
	6	**Condition para 7:** The methodology is not applicable to: a) Project activities that involve switching from fossil fuels to renewable energy	The project activity is neither a fossil fuel switch project nor a biomass fired power plant. Hence the condition does not apply	The verification team confirms that the project is installation of solar plant at the project location not a switch from fossil fuel or biomass. Hence this condition is not applicable.

	sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site. b) Biomass fired power plants/units.		
7	**Condition para 8:** In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	The project activity is a new project installation. Hence the condition does not apply.	As the Project activity is a greenfield solar power installation project and does not involve any rehabilitations, retrofit, replacements or capacity additions. Hence this condition is not applicable.

S no	Tool	Justification in the PSF	Project Verifier Assessment
01	**TOOL01:** Tool for the demonstration and assessment of additionality; Version 7.0.0, Paragraph 8 states "Project activities that apply this tool in context of approved consolidated methodology ACM0002, only need to identify that there is at least	Refer to section B.5 of PSF for details where additionality of the project activity is demonstrated using TOOL1.	This tool was mentioned in the applied methodology document and is thus applicable in this project. PO has proved the fulfilment of the tool's eligibility criteria via project activities in section

		one credible and feasible alternative that would be more attractive than the proposed project activity. “		B.5 of the PSF /01-b/. The PO conducted a step-by-step detailed analysis under tool 01 /B04/ to demonstrate additionality. This has been adequately stated in section B.5 of the PSF and has been determined to be acceptable and correct.
		TOOL07: Tool to calculate the emission factor for an electricity system; Version 7.0 “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).	Since this project activity is grid connected and the emission factor is estimated using this tool (under section B.4) for calculating of the baseline emission. Hence this tool is applicable.	the project verification team observed from the document review and on site visit that the project is a grid connected greenfield solar plant, so the baseline emission operation are from the operation of a grid connected power plant. PO has obtained the value of the Combined Margin CO2 Emission Factor for grid-connected power generation in year y from the Central Electricity Authority (CEA), Government of India's Baseline CO2 Emission Database, Version 17.0, October 2021
		TOOL24. Common practice: Version 3.1 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	Project activity applies “Tool for the demonstration and assessment of additionality”. Please refer to section B.5 of PSF for details.	The applicability criterion is met as the project activity applies the methodological tool “Tool for the demonstration and assessment of additionality.”

		methodologies that use the common practice test for the demonstration of additionality.		
		TOOL27. Investment analysis: Version 11.0 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.	As "Tool for the demonstration and assessment of additionality" is applied, TOOL27 is also applicable and complied with for investment analysis for the demonstration of additionality. Please refer to section B.5 of PSF for details.	The applicability criterion is met as the project uses the methodological tool "Tool for the demonstration and assessment of additionality."

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

Means of Project Verification	Desk Review and Interviews
Findings	No findings has been raised
Conclusion	Since the approach's applicability was determined to be met, additional elaboration of the methodology was not required. Thus, the verification team confirms that each of the applicability condition listed in the selected methodology i.e. ACM0002 V20.0 /06/ and tools (Tool 01, 07, 24 & 27) and the other relevant information given in the PSF have been evaluated critically.

D.3.3 Project boundary, sources and GHGs

Means of Project Verification	Desk Review and Interviews
Findings	CL04, CL05 was raised and closed successfully
Conclusion	As per §20 of the applied methodology ACM0002 V20.0, "The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the project power plant is connected to."/06/. The components of the project boundary mentioned in the PSF were found to be in compliance with para 20 of the applied methodology/06/. The verification team conducted a desk assessment of the accomplished project to ensure that the project boundary was appropriate. The verification team determined

	that the project boundaries encompassed all GHG sources needed by the methodology. It was determined that no emission sources associated with project activity will cause any variation from the methodology's applicability or the accuracy of the emission reductions. In section B.3 of the PSF /001-b/, project boundary has been adequately stated in figure and table. Hence, the project boundary includes power plant and the other power plants which connected to the related electricity system and the National Electricity grid of India.

D.3.4 Baseline scenario

Means of Project Verification	Desk Review and Interviews
Findings	CL 06 was raised and closed successfully
Conclusion	The paragraph 22 of the applied methodology (ACM0002 V20.0) prescribes a standardized baseline scenario for all greenfield projects, "If the project activity is the installation of a Greenfield power plant, the baseline scenario generation sources, as reflected in the combined margin (CM) calculations described in " The baseline scenario has been adequately stated as: The baseline scenario is 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, as reflected in the combined margin (CM) calculations described in "TOOL 07: Tool to calculate the emission factor for an electricity system". /B04/ **Combined margin CO_2 emission factor for the project electricity system in year y ($EF_{grid,CM,Y}$) –** The value has been calculated from the CEA database version 17 of India. https://cea.nic.in/cdm-co2-baseline-database/?lang=en The value is calculated as per the TOOL 07: "Tool to calculate the emission factor for an electricity system" (Version 07.0). This was found in accordance with the methodology. CCPIL project verification team was able to verify all the documented evidence listed above during the GCC Project verification process and can confirm that: • All the assumptions and data used by the project participants are listed in the PSF, including their references and sources. • All documentation used /06/ /08/ are relevant for establishing the baseline scenario and correctly quoted and interpreted in the PSF; • Relevant national and/or sectoral policies and circumstances are considered and listed in the PSF /01-b/. The approved baseline methodology ACM0002, Version 20.0, has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed GCC project activity. (Subjected to closure of finding)

D.3.5 Demonstration of additionality

Means of Project Verification	Desk Review and Interviews
Findings	CL07, CL08, CL09, CL14, CAR06, CAR07, CAR08, CAR09, CAR12, and CAR13 was raised and closed successfully
Conclusion	Project Participant has described the Demonstration of additionality according to the GCC Project Standard Version 03.1. As per the applied methodology, under the Project Specific Additionality para 17 "Under the project-specific additionality approach, the additionality of GCC projects

	shall be determined by Project Owner using the CDM Tool: “Tool for Demonstration and Assessment of Additionality”.” The verification team has revied the PSF and accepts that the project demonstrates additionality as per the applied tool and methodology respectively. In section B.5 of the PSF, two components are applied for the demonstration of additionality. (i) A Legal Requirement Test; The project activity is a Type A project and requires undergoing a Legal Requirement Test. However, the projects as in the project activity are not mandated by law or regulations and are entirely a voluntary action. The project is additional as per paragraph 46 of GCC Project Standard V3.1. (ii) An Additionality Test either based on a Positive List test or a projects-specific additionality test: The project activity does not fulfill the criteria of positive list as provided in CDM Tool 32: “Methodological Tool – Positive List of Technologies” and hence additionality of the project activity is demonstrated through a project specific additionality test. The tool provides a step-wise approach to demonstrate and assess the additionality of a project. These steps are: **(a) Step 0 Demonstration whether the proposed project activity is the first-of-its-kind;** The project activity is a large-scale Solar power project in India. This is not the first such project to be installed in the country or in the state and therefore project activity does not meet this criterion. **(b) Step 1 Identification of alternatives to the project activity;** Sub-step 1a: Define alternatives to the project activity The alternatives to the proposed project activity are either project being undertaken without being registered as a GCC project activity or continuation of the current situation and no project activity is undertaken. Therefore, continuation of the current situation (i.e., electricity generation in the grid) and the project being undertaken without being registered as a GCC project activity are the likely alternatives to the project activity as well as the baseline scenario as per the applied methodology/B02/ Sub-step 1b: Consistency with mandatory laws and regulations Installation of large-scale Solar power project is consistent with mandatory laws and regulations of India. Also, continuation of current situation is consistent with national laws and regulations. **Step 2: Investment analysis** The alternative to the proposed project activity is a continuation of current situation that does not entail any investments. This is demonstrated in following sections as per “Investment Analysis” (Version 11.0). The date of submission of bid to TANGEDCO is considered as the investment decision date/07/. This was a key decision stage for the project proponent to start the project implementation despite inherent financial barriers. 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, equity IRR has been considered an appropriate financial indicator which will be tested against an appropriate benchmark cost of equity.
As per “Investment Analysis” (Version 12.0), default value for cost of equity for different category of projects (that includes renewable energy projects) in different countries is provided. This value is in real terms and hence should be inflation adjusted to convert into nominal cost of equity.
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 manner:
Nominal Benchmark = {(1+Real Benchmark) * (1+Inflation rate)} – 1

Default Value for cost of equity as per latest version of Investment Analysis Tool publicly available at the time of Investment Decision:
Table under investment analysis specifies default value of expected return on equity in real terms
for Energy Industries (Group 1) in India = 9.77% . According to Reserve Bank of India (RBI), inflation forecasted for a period of 10 years published on dated 07/06/2017 by RBI and was available at the time of investment decision is 4.36%. (https://rbi.org.in/Scripts/PublicationsView.aspx?id=17616)
So, nominal cost of equity or Benchmark value = (1+9.77%) *(1+4.36%)-1 = 14.56%.

Sub-step 2c: Calculation and comparison of financial indicators
GCC project activity has a less favourable Equity IRR than the benchmark, and hence the GCC project activity cannot be considered as financially attractive.
Scenario 1:
The key data parameters used to calculate Equity IRR are tabulated below:

Details of the project		**Source**
State where the project is situated	Tamil Nadu	As per the PPA and crosschecked during site visit
Total Capacity in AC (MW)	100.0	As per the PPA
Expected Date of Commissioning	25/09/2019	As per PPA, clause 14
Life of the plant (Yrs.)	25	As per CERC order, Annexure 5 A
Generation of electricity		
PLF	19.73%	Conservative value among CERC order and DPR
Annual generation (MWh)	172,842	Calculated Value
Tariff rate at the decision making (INR/kWh)	3.47	As per the PPA
Annual degradation from 2nd year onwards (%)	0.70%	As per manufacturer specification

Operation and maintenance cost and Insurance			
O & M Expenses (INR Mn.)	70.00	Based on CERC order, Annexure 5A
Escalation in the operational expenses (%)	5.72%	As per CERC order, Annexure 5 A
O & M Expenses (INR Mn.)	70.00	Based on CERC order, Annexure 5A
Escalation in the operational expenses (%)	5.72%	As per CERC order, Annexure 5 A
Financial parameters		
TOTAL COST (INR Mn.)	5,300.20	As per the CERC order
Equity Investment (INR Mn.)	1,590.06	Calculated Value
Loan Amount (INR Mn.)	3,710.14	Calculated Value
Term loan		
Equity (%)	30.00%	CERC order
Loan Amount (INR Mn.)	3,710.14	Calculated Value
Interest rate (%)	12.76%	As per CERC order, Annexure 5 A
Loan Tenure (Qtr.)	48	As per CERC order, Annexure 5 A
Moratorium Period (Qtr.)	-	As per CERC order, Annexure 5 A
Repayment Period (Qtr.)	48	Calculated Value
Repayment instalments value (INR Mn.)	77.295	Calculated Value
1st instalment from (Qtr. end)	31/12/2019	Considered from the next Quarter End
Working Capital		
No. of Days Receivables		
O&M Expenses (Days)		
Interest on Working Capital Debt		
Book Depreciation (SLM Method)		
Land Cost (INR Mn.)	250.00	As per CERC Order Dt: 31.03.2015; Pg 09
Gross Depreciable Value (INR Mn.)	5,050.20	Calculated Value

Salvage Value (%)	10.00%	As per page 17 of CERC order
Salvage value (INR Mn.)	505.02	Calculated Value
Net Depreciable Value (INR Mn.)	4,545.18	Calculated Value
Residual Value (INR Mn.)	755.02	Calculated Value
IT Depreciation		
IT Depreciation Rate (%)	80.00%	As Per Income Tax, Depreciation rates for power generating units
Income Tax		
Financial Year	**FY 2018-19**	
Financial Year	FY 2016-17	
Income tax rate (%)	30.00%	Tax rates applicable to a domestic company
MAT (%)	18.50%	Tax rates applicable to a domestic company
Surcharge (%)	12.00%	Tax rates applicable to a domestic company
Financial Year	FY 2016-17	
Final Tax rates		
Income tax rate (%)	34.61%	Calculated Value
MAT (%)	21.34%	Calculated Value

Based on the above values, Equity IRR is calculated as 5.20% without the consideration of ACC revenue. This is compared with the benchmark value that is 14.56%.
PO has chosen 14/06/2017 as the date of investment which is the date of submission of bid for setting of power plants to TANGEDCO. VVB has cross checked the above-mentioned data with the provided document/07/ and confirm the validity of the provided date. VVB confirms that all the source of input values used in the IRR calculation were available on or before the date of investment decision therefore complying with para 10 of Tool 27 version 11/B04/. The input values provided in the PSF/01-b/ and IRR sheet/03-b/ has been cross checked with its respective sources/05/06/07/16/ and is found to be consistent and valid.
As evident, Equity IRR is less than benchmark value and making the project activity financially unviable.

Sensitivity Analysis:
Because the project activity's financial performance is dependent on several crucial parameters, this section does a sensitivity analysis to ensure that the financial performance is resilient to moderately favourable fluctuations in the essential assumptions.
Addressing section 7 of investment analysis, following parameters have been chosen to conduct
the sensitivity tests.
1. PLF
2. O&M Cost
3. Project Cost
4. Tariff Rate

The results of the sensitivity analysis are summarized below:

Sensitivity Analysis	Equity IRR			
Variation %	**-10%**	**Normal**	**10%**	**% Change required to reach the Benchmark**
PLF	2.64%	5.20%	8.04%	29.10%
O&M	5.80%	5.20%	4.58%	-158.00%
Project Cost	7.63%	5.20%	3.40%	-26.96%
Tariff Rate	2.64%	5.20%	8.04%	29.10%

The results of sensitivity analysis /03-b/ show that even with a variation of ±10% in tariff, PLF, project cost, and O&M cost, return on equity is significantly lower than the benchmark. And it is evident from the results given above; the project remains additional even under the most favourable conditions.

Scenario 2:
The DPR was prepared after the investment decision date (23/05/2018) , and therefore investment analysis was performed by PO considering the values of the input parameters available at the time of DPR preparation also. Accordingly the IRR value for the project is obtained as 8.59% against the benchmark IRR value of 14.60%. All the input parameters sourced form the DPR were checked. The benchmark IRR is calculated based on the default value available in tool 27 and the inflation rate available at the time of DPR preparation.

The result of the sensitivity analysis of the IRR calculated based on the values of the input parameters available at the time of DPR preparation is given below.

Sensitivity Analysis	Equity IRR			
Variation %	**-10%**	**Normal**	**10%**	**% Change required to reach the Benchmark**
PLF	5.77%	8.59%	12.03 %	**17.30%**
O&M	9.11%	8.59%	8.15%	**-131.00%**
Project Cost	11.81 %	8.59%	6.45%	**-17.15%**
Tariff Rate	5.77%	8.59%	12.03 %	**17.30%**

The IRR calculated for the project activity is not likely to be escalated with the change in PLF, O&M cost, project cost and tariff rate as PO has used the most conservative value and therefore the project is deemed additional.

All the parameters subjected to the sensitivity analysis have been compared with respect to actuals and both the project scenarios as mentioned below with the conclusion.

Description	Scenario 1	Scenario 2	Actual Scenario	Conclusion

	PLF	172,960 MWh	172,960 MWh	169,014.90 MWh	The actual realized PLF is thus, lower than that considered in either of the two scenarios, which is conservative and the same has been cross verified from the DPR page 62. And the CERC order and the conservative value among both has been chosen.	
	O&M Cost	INR 70.00 million	INR 50.00 million	INR 30.00 million	For both scenarios the actual O&M cost is less than the value that has been anticipated in Investment analysis but as per the sensitivity analysis for IRR to breach the benchmark value, the O&M cost should be less than 100% of the cost that has been assumed, which is not realistic. Both the values has been cross verified from the DPR and the CERC order Annexure 5A	
	Project Cost	INR 5300.20 million	INR 4875.90 million	INR 4875.90 million	The actual project cost for scenario 1 is ~10% lower than the anticipated cost (as per CERC order). As per sensitivity analysis conducted, the IRR will breach the benchmark once the project cost reduces by > 26.96%. Thus, the project remains additional.	

Tariff Rate	Rs. 3.47/unit	Rs. 3.47/unit	Rs. 3.47/unit	The tariff used in both scenarios is same and is fixed for 25 years. Hence it is unlikely that there would be any changes in the tariff.

Step 3: Barrier analysis
As per Tool for demonstration and assessment of additionality" (Version 07.0.0), Step 2 or Step 3 or both can be used to demonstrate additionality of the project activity. In this case, Step 3 is not being used for the purpose.

Step 4: Common practice analysis
As per para 57 of Tool for demonstration and assessment of additionality" (Version 07.0.0), Step 2 analysis shall be complemented with an analysis of extent to which the proposed project type (e.g., technology or practice) has already diffused in the relevant sector and region. This test is a credibility check to complement the investment analysis (Step 2).

Sub-step 4a: The proposed CDM project activity(ies) applies measure(s) that are listed in the definitions section above-
The project activity meets the following criteria for TOOL24 Common Practice; Version 03.1.
• Applicable geographical area: The state of Tamil Nadu has been considered as the geographical area. In India even though there is one national grid, but states have their own RE policies. Besides, solar insolation and other geographic conditions change from state to state which might make a state more or less favourable than others for project implementation. Hence, a comparable area would be the state and not the host country.

• Output: It is the electricity generated by the project activity.

• Technology: Large scale solar power based on PV is the applicable technology.

Now, step wise approach as suggested in the tool is applied to the project activity:

Step 1: Calculate applicable capacity or output range as +/-50% of the total design capacity or output of the proposed project activity.
The installed capacity of the project is 100 MW hence the applicable output range is from 50 MW to 150 MW.

Step 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;
(b) The projects apply the same measure as the proposed project activity;
(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
(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
(e) The capacity or output of the projects is within the applicable capacity or output range calculated 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. Following large scale solar power projects in the state of Tamil Nadu are considered for analysis because: (a) These fall in the applicable geographical location i.e., state of Tamil Nadu in India (b) These apply the same measure i.e., utility scale Solar power generation (c) These use the same source of input energy i.e., Solar energy (d) These produce the same goods/services i.e., electricity supplied to the connected grid (e) The capacity of these projects is in the range as defined in Step 1 i.e., 50 MW to 150 MW (f) These projects started commercial operation before the start date of proposed project activity i.e., 21/03/2020. . Step 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. So, Nall = 4 As identified in Step 2, there are no projects which are evaluated in this step. A total of 79 solar projects under Preferential Tariff Scheme have been registered in the applicable geographical area, out of which 10 projects fall within the applicable capacity range. From these 10 projects, 6 projects are already registered in various GHG programs, and the remaining 4 projects differs from this project based on - “Investment climate on the date of Investment Decision” as per para 12(d) of CDM TOOL-24 version 03.1, because the projects registered before 31st March 2016 were eligible for tariff of Rs.7.01 per MWh which is more than two times than the tariff of this project. So, number of similar projects identified are zero Step 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 as Ndiff. All projects identified above are different in technology based on the para 12 (d) of the Tool 24. Common Practice as the projects registered before 31st March 2016 were eligible for tariff of Rs.7.01 per MWh which is more than two times the tariff of this project. The same has been verified by cross checking the footnote 43 by checking the commissioning dates of the projects. Hence, Ndiff = 4 Step 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. Hence, F = 1-(4/4) = 0 And Nall – Ndiff = 0 Since F is not greater that 0.2 and Nall – Ndiff = 0 which is not greater than 3, hence project activity is not a common practice in the region.

D.3.6 Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	Desk Review and Interview
Findings	CL10, and CAR 10 was raised and closed successfully
Conclusion	**Baseline Emission** According to ACM0002 v20.0 methodology, emission reductions related to project activities is estimated as follows: ERy = BEy − PEy −LEy where ERy= emission reductions in year y (tCO_2/yr) BEy= baseline emissions in year y (tCO_2/yr) PEy= project emissions in year y (tCO_2/yr) LEy= leakage emissions in year y (tCO_2/yr) As the project activity is a solar project, there is no leakage emissions from the project activity. Hence, LEy = 0 The baseline emissions are to be calculated as follows: $BEy = EG_{PJ,Y} X EF_{grid,CM,y}$ Where BEy= Baseline emissions in year y (tCO_2/yr) $EG_{PJ,Y}$ = Quantity of net electricity generation that is produced and fed into the grid or supplied to recipient captive user replacing grid power as a result of the implementation of the GCC project activity in project year y in a greenfield project activity (MWh/yr) $EF_{grid,CM,Y}$= Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO_2/MWh) Therefore, the baseline emission annually is: BEy = 1,606,463 MWh * 0.9315 tCO_2e/MWh = 1,496,373tCO_2e/year **Project Emission** Since the project activity is a solar power project with no direct GHG emissions during its operations, the project emissions are zero. Therefore, PEy = 0 **Leakage Emission** No leakage is applicable for the project under ACM0002 v20.0 methodology. Therefore, LEy = 0 **Emission Reductions** Based on the data above, the emission reduction value is: ERy = BEy − PEy −LEy ERy = BEy =1,496,373tCO_2e/year

D.3.7 Monitoring plan

Means of Project Verification	Desk Review and Interview
Findings	CL11 and CL15 was raised and closed successfully
Conclusion	The monitoring plan for the project activity is provided in PSF based on the approved monitoring methodology. The monitoring plan is being correctly applied to the project activity and is in compliance with the requirements of the applied methodology. Ex-ante parameter are given below as per the section B.6.2 of the PSF.

Parameter	Value	Unit	Source	Assessment
$EF_{grid,OM,y}$	0.9524	tCO_2e/MWh	CO_2 Emission Database, Version 17.0, October 2021 published by Central Electricity Authority (CEA), Government of India.	The verification team has crosschecked the CO_2 Emission Database, Version 17.0, October 2021 published by Central Electricity Authority (CEA), Government of India. For verifying $EF_{grid,OM,y}$ value and have found it consistent
$EF_{grid,BM,y}$	0.8687	tCO_2e/MWh	CO2 Emission Database, Version 17.0, October 2021 published by Central Electricity Authority (CEA), Government of India.	The verification team has crosschecked the CO_2 Emission Database, Version 17.0, October 2021 published by Central Electricity Authority (CEA), Government of India. For verifying $EF_{grid,BM,y}$ value and have found it consistent
$EF_{grid,CM,y}$	0.9315	tCO_2e/MWh	CO2 Emission Database, Version 17.0, October 2021 published by Central Electricity Authority (CEA), Government of India.	The value is calculated considering 75% operating margin and 25% build margin as per the “tool to calculate the emission factor for an electricity system” Version 07.0.0 /B04/.

Parameters that will be monitored (ex-post) (Mention under section B.7.1 of the PSF are:

Parameter	Value	Unit	Source
$EG_{PJ,y}$	160,646	MWh/yr	Electricity meter readings/JMR monthly reports issued by the

				TANGEDCO (Govt of Tamilnadu) The energy meter installed in the site has a calibration frequency of once in 5 years the same will be monitored during the monitoring of the project and will be verified by the verification team as the time of emission reduction verification.	
	Employment Generation (SDG 8) S+	Direct Employment (Male) – 20 (Ex Ante Estimates only) Direct Employment (Female) - 0 Direct Employment (People with disability) - 0	Number	This parameter will be shall be verified by crosschecking the payroll records that will be maintained by the project owner throughout the the project.	
	Emission reductions achieved per year (SDG 13)	149,637	tCO2/year	Emission reduction calculator Records of all the values used to calculate the parameter value will be maintained and shall be shared by the verification team at the time of emission reduction verification of the project.	
	Quality of employment (SHS 02) S+	These values will be identified during the emission reduction verification of the project.	Number of trainings imparted (Technical / Non-Technical (EHS or OH&S)	Training records (Technical, Non-technical (EHS or OH&S)) will be maintained by the project owners and shall be shared by the verification team .	
	CO2 emissions reductions per year (EA03)	--	tCO2/year	The parameter will be monitored as it is involved in the	

				Environmental safeguard EA03
	ENR07- Replacing fossil fuels with renewable sources of energy	--	MWh	PO has opted for the E+ parameter EN07, therefore the monitoring is mandatory
	Long-term jobs (> 1 year) created (SJ01)	—	Long term employment	The employment records will be made available during emission reduction verification
	Short-term jobs (< 1 year) created (SJ02)	—	Short term employment	The employment records will be made available during emission reduction verification
	Reducing / increasing accidents /Incidents/ fatality (SHS03)	—	Number of workplace accidents recorded after providing training	Records of workplace accidents will be provided during emission reduction verification
	Job related training imparted or not (SE01)	—	Total number of technical trainings imparted to local employee during monitoring period	Training records will be made available during the emission reduction verification
	Hazardous waste stored and/or disposed (tons) (EL02)	—	Hazardous waste storage and disposal records	Hazardous waste storage and disposal records will be made available during the emission reduction verification.
	Quantity of E- waste generated (tons) (EL04)	—	Quantity of E-waste generated (tons	Records of generated E waste will be provided during emission reduction verification
	In summary, the parameters to be monitored have been presented correctly according to requirements and are considered in accordance with the applied methodology /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	Desk Review and Interview
Findings	No findings has been raised
Conclusion	The start date of the project activity is 20/02/2020 which was verified from Commissioning certificate for the first phase of the project. Therefore, this has been accepted as the date when the project started generating emission reductions. A crediting period of a maximum length of 10 years has been selected by PO. The start date of the crediting period is stated as 20/02/2020, which is appropriate as per paragraph 40(b) of the Project Standard. The lifetime of project activity is expected to be 25 years which is verified from the commissioning certificate/08/ The verification team concludes that the duration of the proposed project activity is in conformance with the requirements of §39 and §40 of GCC Project Standard, version 03.1 /02/

D.5. Environmental impacts

Means of Project Verification	Desk Review and Interview
Findings	No findings has been raised
Conclusion	The guidelines on Environmental Impact Assessment have been published by Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006. Further amendments to the notification were completed on 14/01-b/2018. As the solar energy projects are not listed in any of the categories in the Schedule, the project is considered environmentally safe and, as per Indian regulations, no EIA is required. However, an Environmental and Social Impact Assessment was carried out by a third party, EQMS Global Private Limited India, and all suggested mitigation measures, control technologies, and safeguards identified in the report. As per the verification team, there were no negative environmental impacts found in the analysis during the project activity. The project does not have any trans boundary environmental implications.

D.6. Local stakeholder consultation

Means of Project Verification	Desk Review and Interview
Findings	No findings has been raised
Conclusion	A Local Stakeholder Meetings was conducted for the project activity on following dates:

Location	Local Stakeholder Meeting date	Mode of invitation
GANGUVARPATTI, SURVEY NO. 2644,2652,2722, GANGUVARPATTI, Periyakulam Taluk, Theni District, Tamil Nadu, 625203	13/06/2022	Invitation was published in local newspaper dated 05/06/2022

The consultation was performed to meet the requirement of the GCC since there are no Host country requirements to conduct consultation for such projects.
The verification team confirms that the local stakeholder consultation process was performed by the project owner before the submission of the project activity for global stakeholder consultation.

	The objective of the local stakeholder consultation carried out to comply with GCC requirements and identify the comments/concerns that might be required to be addressed by PO. The stakeholder consultation responses were received by the assessment team. The verification team confirmed by review of the stakeholder responses that the summary of stakeholders' comments reported in PSF was accurate. There was no negative feedback received. The agenda of meeting and feedback taken from the stakeholders confirms that the environment and social impacts analysis results were also shared and discussed with local stakeholders along with SD goals achieved by PA. The same is also confirmed during on-site interview carried out with local stakeholder.

D.7. Approval and Authorization- Host Country Clearance

Means of Project Verification	Desk Review and Interview
Findings	No findings has been raised
Conclusion	The verification team confirms that no HC approval is required by the CORSIA labelled project activity till 31/12/2020, and the HCA will be required during the first or subsequent verification

D.8. Project Owner- Identification and communication

Means of Project Verification	Desk Review and Interview
Findings	CL03 was raised and closed successfully
Conclusion	The information and contact details of the representation of the project owner and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF which was checked and verified by the verification team from Authorization letter signed by the project owner. All information was consistent between these documents:

Project Owner name (as per LON/LOA)	Manikaran Power Limited
Country	India
Address	301, 3rd Floor, D-21, Corporate Park, Sector-21, Dwarka, New Delhi 110077
Telephone	+(91) 9599184354
Fax	+91-3340610166
E-mail	neel.paul@manikaranpowerltd.in
Website	http://www.manikaranpowerltd.in/
Contact person	Neelabhra Paul

Project Owner name (as per LON/LOA)	Manikaran Power Limited
Country	India
Address	301, 3rd Floor, D-21, Corporate Park, Sector-21, Dwarka, New Delhi 110077
Telephone	(+91) 8826966443
Fax	+91-3340610166
E-mail	piyush.s@manikaranpowerltd.in
Website	http://www.manikaranpowerltd.in/
Contact person	Neelabhra Paul

	This is in compliance with the Para 10 (i) of the Project Standard Version 3.1. The information and contact details of the representation of the project owner and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF which was checked and verified by the verification team from Authorization letter signed by the project owners. All information was consistent between these documents.

D.9. Global stakeholder consultation

Means of Project Verification	Desk Review and Interview
Findings	No findings has been raised
Conclusion	The PSF was made available through the dedicated interface on the GCC website. The duration of the period for submission of comments for the global stakeholder consultation was from 5/01/2023 to19/01/2023 There were no comments received during this period. The PSF had been made public for receiving stakeholder feedback and no comments were raised during the GSC process.

D.10. Environmental Safeguards (E+)

Means of Project Verification	Desk Review and Interview
Findings	CL12 was raised and closed successfully
Conclusion	Project owner has chosen to apply for the Environmental safeguards certification label thereby complying with the para 14(c-iii) of GCC project standard version 3.1. VVB has performed independent assessment of the environmental safeguard as per the GCC verification standard version 3.1 and Environmental and social safeguards standard version 3.0. The complete assessment of the environmental safeguard's parameter is provided in Appendix 05 provided in this report.

D.11. Social Safeguards (S+)

Means of Project Verification	Desk Review and Interview
Findings	CL12 was raised and closed successfully
Conclusion	Project owner has chosen to apply for the Environmental safeguards certification label thereby complying with the para 14(c-iv) of GCC project standard version 3.1. VVB has performed independent assessment of the environmental safeguard as per the GCC verification standard version 3.1 and Environmental and social safeguards standard version 3.0. The complete assessment of the environmental safeguard's parameter is provided in Appendix 06 provided in this report.

D.12. Sustainable development Goals (SDG+)

Means of Project Verification	Desk Review and Interview
Findings	CL12, CL13, and CAR11 has been raised
Conclusion	The Project Owner has provided complete information in the PSF to demonstrate that the chosen SDG goals positively contribute to the UN SDGs as required by paragraph 19, 20 and 21 of Project Sustainability Standard v.3.1 /B01-5/. Based on the documentation review, the verification team can confirm that Project Activity is likely to contribute to the 5 United Nations Sustainable Development Goals (7, 8 and 13) and would have a positive impact, hence, is eligible to achieve

	additional SDG+ (Silver) certifications. The complete assessment of the Sustainable Development Goals is provided in Appendix 07 provided in this report.

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

Means of Project Verification	Desk Review and Interview
Findings	No findings has been raised
Conclusion	A declaration under section A.5 of the PSF has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 20/02/2020 to 19/02/2030. The project owner has clarified the intent of use of carbon credits for CORSIA hence no double counting will take place.

D.14. CORSIA Eligibility (C+)

Means of Project Verification	Desk Review and Interview
Findings	No findings has been raised
Conclusion	The project activity meets the CORSIA Eligibility since the crediting period is after 07/04/2018 and the project is applying for registration under GCC which is one of the approved programmes for eligibility. It was also confirmed that the project activity does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes. The Project Activity does not cause any net harm to the environment and/or society and therefore achieves Environmental No net-harm Label (E+) and Social No-net-harm Label (S+) as per the Environmental and Social Safeguards Standard also make contributions for achieving United Nations Sustainability Development Goals (SDGs) to achieving at least three SDGs as per Project Sustainability Standard to achieve SDG+ Label. The project activity meets the CORSIA Label (C+) eligibility: a) The Project Activity complies with all the requirements for the Emission Unit Criteria of CORSIA. b) A written attestation from the host country's national focal point on double counting is not required for Emission units till 31st December 2020; c) The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 21-23, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project. The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard and will achieve Environmental No-net-harm Label (E+), Social No-net-harm Label (S+) for this project activity The Project Activity is likely to contribute to the achievement of United Nations Sustainable Development Goals (SDGs), complies with the Project Sustainability Standard and will achieve UN SDG Certification Labels (Silver SDG+ Label) for this project activity.

Section E. Internal quality control

After the completion of the project verification team's assessment, all relevant material is submitted to a trained, independent technical reviewer as part of the CCIPL internal quality control system. The final project verification report is reviewed by a technical reviewer team. The Technical reviewer team's opinions are taken into account and incorporated into the final project verification report. The technical reviewer team determines if all reporting criteria have been met and whether all issues raised by the project verification team have been satisfactorily resolved with justification. The technical review process may also raise difficulties in this regard, which are then remedied to the satisfaction of the technical reviewer by the project verification team. The technical reviewer team either accepts or rejects the project verification team's report. After all issues have been resolved, the final project verification report is given to the quality manager for evaluation and then to the director for approval. Before being presented to the project owner, the Final Verification report was subjected to a technical and quality review. The technical review was carried out by a competent technical reviewer in accordance with CCIPL's qualification plan for GCC verification.

Section F. Project Verification opinion

CCIPL was contracted by Manikaran Power Limited for project verification of the project activity “100 MW Solar Project_HPPPL” in India. The project verification was performed based on rules and requirements defined by GCC for the project activity. The project activity is a solar power project, which results in reductions of CO_2e emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario and the emission reductions attributable to the project are, hence, additional to any that would occur in the absence of the project activity. The project correctly applies the approved baseline and monitoring ACM0002 V20.0, Version 20.0 and is assessed against latest valid PS, VS and Environment and Social Safeguards Standard, Project-Sustainability-Standard and/or other applicable GCC/CDM Decisions/Tools/Guidance/Forms.
The project activity is likely to achieve the anticipated emission reductions stated in the PSF provided the underlying assumptions do not change. The expected emission reductions (annual average) from the project activity are estimated to be 149,637 tCO_2e/year over the 10 years crediting period starting from 20/03/2020. CCIPL has informed the project owners of the project verification outcome through the draft project verification report and final project verification report. The final project verification report contains the information with regard to fulfillment of the requirements for project verification, as appropriate.

CCIPL applied the following verification process and methodology using a competent verification team;

- The desk review of documents and evidence submitted by the project owner in context of the reference GCC rules and guidelines issued,
- Undertaking/conducting site visit, interview, or interactions with the representative of the project owner reporting audit findings with respect to clarifications and non-conformities and the closure of the findings, as appropriate.
- Preparing a draft verification opinion based on the auditing findings and conclusions
- Technical review of the draft project verification opinion along with other documents as appropriate by an independent competent technical review team.
- Finalization of the project verification opinion (this report) Carbon Check (India) Private Limited (CCIPL) has verified and hereby certifies that the GCC project activity “100 MW Solar Project_HPPPL”. has correctly described the Project Activity in the Project Submission Form (version 3.0, dated 13/12/2023) including the applicability of the approved methodology ACM0002 V20.0, 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.
- Project activity is likely to generate GHG emission reductions amounting to the estimated 1,496,373 tCO_2e 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 therefore requests the GCC Program to register the Project Activity.
- Project activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and therefore requests the GCC Program

to register the Project Activity, which is likely to achieve the requirements of the Environmental No-net-harm Label (E+) and the Social No-net-harm Label (S+); and

- Project activity is likely to contribute to the achievement of United Nations Sustainable Development Goals (SDGs), comply with the Project Sustainability Standard, and contribute to achieving a total of 3 SDGs, which is likely to achieve the Silver SDG certification label (SDG+). The project is likely to contribute to CORSIA Eligible Emission Units and has CORSIA Label (C+) certification valid till 31 December 2020. A written attestation from the Host country on double counting is not required until 31 December 2020 and the project was found meeting the applicable requirements prescribed by ICAO.

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Methodology for SSC Projects
BE	Baseline Emission
BM	Build Margin
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Limited
CDM	Clean Development Mechanism
CH_4	Methane
CL	Clarification Request
CM	Combined Margin
CO_2	Carbon dioxide
CP	Crediting Period
DR	Desk Review
EIA	Environmental Impact Assessment
EPİAŞ	Enerji Piyasaları İşletme A.Ş.
ERVR	Emission Reduction Verification Report
ERVT	Emission Reduction Verification Team
FAR	Forward Action Request
GCC	Global Carbon Council
GHG	Green House Gas
GW	Giga Watt
GWh	Giga Watt hour
IPCC	Intergovernmental Panel on Climate Change
kW	Kilo Watt
KWh	Kilo Watt hour
LSC	Local Stakeholder Consultation Process
MoV	Means of Verification
MP	Monitoring Plan
MW	Mega Watt
MWh	Mega Watt hour
OM	Operating Margin
PSF	Project Submission Form
PE	Project Emission
PLF	Plant Load Factor
PMR	Project Monitoring Report
PO	Project Owner
PSF	Project Submission Form
RFR	Request for Registration
SDG	Sustainable Development Goal
tCO_2e	Tonnes of Carbon dioxide equivalent
TPH	Tonnes Per Hour
UNFCCC	United Nations Framework Convention on Climate Change
V	Version
VS	Verification Standard

Appendix 2. Competence of team members and technical reviewers

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Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Ms. Aparna Choudhary

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
☐ CCB Expert	☐ Legal Expert	☐ Financial Expert	☐ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	
☒ 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	☐ TA 16.1		

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022[1]	Annual revision
Jan 2023	Annual revision
Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

[1] Please refer to previous version of FM 7.9 for the revision history

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Anubhav Dimri

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
☒ CCB Expert	☐ Legal Expert	☒ Financial Expert	☒ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	

☒ Local Expert for India, RSA and Spanish speaking countries

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	☒ TA 16.1		

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022[1]	Annual revision
Jan 2023	Annual revision
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CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

[1] Please refer to previous version of FM 7.9 for the revision history

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Kiran KV

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
☐ CCB Expert	☐ Legal Expert	☐ Financial Expert	☐ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	
☒ 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	☐ TA 16.1		

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022	Initial Adoption
Jan 2023	Annual revision
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CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

[1] Please refer to previous version of FM 7.9 for the revision history

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Ms. Indumathi C

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
☐ CCB Expert	☐ Legal Expert	☒ Financial Expert	☐ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	
☒ Local Expert for India and Sri Lanka			

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	☐ TA 16.1		

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022[1]	Annual revision
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Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

[1] Please refer to previous version of FM 7.9 for the revision history

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
/01/	PO	PSF a. Initial version b. Final version	b. Version 3.1 dated 02/01/2024	PO
/02/	PO	ER sheet a. corresponding to /01-a/ b. Corresponding to /01-b/	b. Version 02 dated 06/12/2023	PO
/03/	PO	IRR sheet a. Corresponding to /01-a/ b. Corresponding to /01-b/	b. Version 3.1 dated 20/12/2023	PO
/04/	PO	Common practice analysis sheet		PO
/05/	Solitaire BTN Solar Private Limited	Detailed project report	January 2017	PO
/06/	TANGEDCO	Power Purchase agreement a. Original b. Amended	a. 28/09/2017 b. 29/06/2019	PO
/07/	Solitaire BTN Solar Private Limited	Letter of Intend submitted to TANGEDCO	04/09/2017	PO
/01-b/	TANGEDCO	Commissioning certificate a. 50 MW b. 50 MW	23/12/2017	PO
/09/		EPC agreement	27/11/2018	
/10/		O & M agreement	10/01/2019	PO
/11/		Loan agreement	02/05/2017	PO
/12/		Letter of Authorization submitted to GCC	27/05/2022	PO
/13/		Local stakeholder consultation documents		
/14/		Single line diagram		
/15/		Ground water extraction permit		
/16/		Solar panel product specification		
/17/	CERC	•	CERC tariff order 2016-17	Oder Dated 29/04/2016
/18/	RERC	•	RERC tariff order dated 25.05.2016	Dated 25/05/2016
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 Project-Sustainability-Standard, version 3.1	-	Others

B02	UNFCCC	CDM Methodology: ACM0002 version 21.0	-	Others
B03	GCC	PSF template version 4.0	-	Others
B04	UNFCCC	1. TOOL07: Tool to calculate the emission factor for an electricity system, version 7.0 2. TOOL24: Common practice, version 3.1 TOOL27: Investment analysis, version 11.0		Others

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

Table 1. CLs from this Project Verification

CL ID	01	**Section no.**	Supporting documents	**Date:** 21/03/2023
Description of CL				
Project owner is requested to provide the following to the VVB. *1. Letter of authorization* *2. declaration on double counting* *3. The stakeholder consultation report and the attendance sheet is requested to be provided.*				
Project Owner's response				**Date:** 08/01-b/2023
The requested documents have been added. Please refer to the link shared below:				
Documentation provided by Project Owner				
https://www.dropbox.com/scl/fo/8n2jgvfrogfto2rwfqzdg/h?rlkey=y5h33i89lkob1qicpx9ar07ki&dl=0				
GCC Project Verifier assessment				**Date:** 25/09/2023
1. PO has provided the LOA which is found to be in compliance with the GCC requirements. 2. The declaration has been provided in the signed PSF already 3. The file "Tamil Nadu_MoM"/xx/ provided by PO contains all the necessary evidence of the local stakeholder consultation. CL is closed				

CL ID	02	**Section no.**	Cover page	**Date:** 21/03/2023
Description of CL				
Project owner is requested to clarify why the standard on avoidance of double counting is not checked under "GCC rules and requirements" in the PSF cover page				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to page 6 of the PSF				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
PSF cover page has been updated. CL is closed.				

CL ID	03	**Section no.**	A.4	**Date:** 21/03/2023
Description of CL				
As per the commissioning certificate, Power purchase agreement and other documents such as EPC agreement, O&M Contracts, the project owner identified to be Solitare BTN Solar Private Limited while in the PSF, the project owner is provided as "Manikaran Power Limited". Project owner is requested to provide a clarification on the same				
Project Owner's response				**Date:** 08/01-b/2023
As evident from the commissioning certificates, power purchase agreement and purchase orders M/s Solitaire BTN Solar Private Limited is the Legal Owner of the project and they have authorized Manikaran Power Limited to act as the Project Owner on their behalf for this project and the same can be concluded from the Letter of Authorization that has been submitted to GCC.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023

It has been observed that the name of the project owner has been stated in the LOA/xx provided to VVB. M/s Solitaire BTN Solar Private Limited is the legal owner of the project activity while Manikaran Power Limited has been represented as the project owner and focal point of the project activity by Solitaire BTN Solar Private Limited. CL is closed.

CL ID	04	**Section no.**	B.3	**Date:** 21/03/2023
Description of CL				
As per the para 20 of the applied methodology, *The spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that the CDM project power plant is connected to.* *And as per the Tool 07, the project electricity system is defined as "spatial extent of the power plants that are physically connected through transmission and distribution lines to the project activity (e.g. the renewable power plant location or the consumers where electricity is being saved) and that are covered by either single or layered dispatch area"* *Moreover, Under the step 1 of the section B.4. the electricity system identified is unified Indian grid.* *However, in the section B.3 of the PSF, the physical boundary of the project is defined and the state of Tamil Nadu. Project owner is requested to provide a clarification on this discrepancy*				
Project Owner's response				**Date:** 08/01-b/2023
The project boundary has been updated and now the project boundary is being considered as India because the project exports power to singular unified national Grid of India. Please refer to section B.3 on page number 22 of PSF, same information has been added to section A.1 on page number 12 of PSF.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
It has been observed that PO has revised the project boundary mentioned in te section B.3 of PSF and has chosen India as the project boundary which is in line with para 20 of the applied methodology. CL is closed.				

CL ID	05	**Section no.**	B.6.1	**Date:** 21/03/2023
Description of CL				
Under step 4 of section B.6.1, The option chosen to calculate the build margin emission factor is requested to be added as per the tool 07 para 47. *Moreover, the calculation under step 6 is requested to be added as given in the para 85 of tool 07* *Project owner is also requested to provide the reference to the source document for the value provided for OM, BM, and CM in the table in page no 22 of PSF.*				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to page 37 of the PSF under section B.6.1. Option A has been selected as the required disaggregated data is available in India. *Step 6 has been revised as per the para 85 of the Tool 07, please refer to page 38 of PSF.* *Please refer to footnote 32 for the source document used in the calculation of Grid emission factor.*				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023

It has been observed that PO has clearly stated that Option A of step 4 in calculating the emission factor. The calculation as per the step 6 of tool 07 has also been provided. It has been observed that PO has used the CEA database version 17 for the emission factor calculation. However, the latest available version is version 18.0 which is published in December 2022. PO is requested to provide the values based on the latest available data. CL is open,
Project Owner's response **Date:** 13/12/2023
The grid emission factor has been revised as per version 18.0 of CEA database. The ER sheet and PSF have been revised accordingly.
Documentation provided by Project Owner
Ex-Ante ER_Calculator v3.0 13122023 CCIPL 1452 HPPPL 100MW version 3.0 13122023 TC
GCC Project Verifier assessment **Date:** 22/12/2023
It has been observed that PO has used the latest available source (CEA database version 18.0 for the calculation of grid emission factor. CL is closed

CL ID	06	**Section no.**	B.5	**Date:** 21/03/2023
Description of CL				
The heading, step 1 is requested to be mentioned above the sub step 1 a in section B.5 of PSF				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to section B.5 of PSF on the page 27				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
PSF has been revised and the step number has been provided. CL is closed.				

CL ID	07	**Section no.**	B.5	**Date:** 21/03/2023
Description of CL				
Project owner is requested to clarify how the following rules and regulations has been complied with since they are applicable for solar PV power projects as mentioned in the 'clarification on applicability of EIA notification 2006 on solar PV power projects" *1. Hazardous and other waste (Management and transboundary movement) rules 2016* *2. Water (prevention and control of pollution) Act, 1974* *The same has to be added in the sub step 1b, of section B.5* *Moreover the outcome of sub step 1 b is also requested to be added*				
Project Owner's response				**Date:** 08/01-b/2023
Please refer to section E.1 where detailed analysis of Environmental safeguards has been conducted. *The PSF has been revised, please refer to section B.5, the outcomes of step 1b has been added and relevant national laws and regulations pertaining to generation of energy has been added.*				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023

It has been observed that the applicable laws mentioned above are added in sub step 1 b, section B.5 of PSF. The outcome of sub step 1 b of section B.5 of PSF has also been added. The following E+ parameters has been added in section E.1, to comply with the mentioned regulations. Solid waste pollution from hazardous waste Water consumption from ground and other sources Generation of wastewater Wastewater discharge without/with insufficient treatment Pollution of surface, ground and/or bodies of water Discharge of harmful chemicals like marine pollutants/toxic chemics. CL is closed.

CL ID	08	**Section no.**	B.5	**Date:** 21/03/2023
Description of CL				
*In page no 24 of PSF, project owner has mentioned that "The key data parameters used to calculate **Equity IRR** are tabulated below:" while in the first para under sub step 2b it is mentioned that **project IRR** is considered. The discrepancy is requested to be clarified.*				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to section B.5 sub step 2b.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
The Equity IRR has been chosen as the financial indicator for the investment analysis of the project which is funded through equity and debt, which has been stated in the PSF under step 2b of investment analysis CL is closed.				

CL ID	09	**Section no.**	B.6.4	**Date:** 21/03/2023
Description of CL				
Project owner is requested to clarify why the Net electricity generation and baseline emissions for the year 1 is not consistent with the rest of the years, though the date since the commissioning of the second unit has been considered as the start date of the crediting period.				
Project Owner's response				**Date:** 08/01-b/2023
The proposed project was commissioned phase wise and the 1st phase was commissioned nearly one year before the second phase, that's why the value of electricity generation is not consistent with rest of the years. The start date of the crediting period is considered as the date of commissioning of first phase of project and not the commissioning of later phase. *The ER sheet has been revised and a deration factor has been included in the Electricity generation. Please refer to revised ER sheet "ER_Calculator_TN_v2".*				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC and ER_Calculator_TN_v2".				
GCC Project Verifier assessment				**Date:** 25/09/2023
It has been observed that the ER sheet tab "Values", the electricity generation of 100 MW is given, However, since the solar plant was operationalized in two phases i.e., in February 2020 and 2021 respectively, PO is requested to provide the annual generation based on the two phases separately. PO is also requested to clarify the basis of the calculation. The same details are requested to be provided in section A.1, A.3, B.5 (step 2c) of PSF. CL is open.				
Project Owner's response				**Date:** 13/12/2023

The ER calculations in year 1 have been revised according to the phase 1 and phase 2 installed capacities and date of commissioning in first year of monitoring period. From the second year onward the ex-ante ERs projected, correspond to total installed capacity of the project. Section A.1 already specifies the phase 1 and phase 2 capacity and corresponding commissioning date under the project. In section B.5 the additionality has been discussed for combined capacity of 100 MW based on the investment decision and DPR of the project.
Documentation provided by Project Owner
Ex-Ante ER_Calculator v3.0 13122023 CCIPL 1452 HPPPL 100MW version 3.0 13122023 TC
GCC Project Verifier assessment **Date:** 22/12/2023
It has been observed that PO has provided the estimated emission reduction according to the different time period of commissioning of the project activity. CL is closed

CL ID	10	**Section no.**	B.7.1	**Date:** 21/03/2023
Description of CL				
Project owner is requested to provide the relevant regulatory document to prove the calibration frequency of 5 years. *Moreover the calibration dates are requested to be added under the parameter $EG_{PJ,Y}$ in section B.7.1 of PSF.*				
Project Owner's response				**Date:** 08/01-b/2023
Please refer to the document "CEA Installation & Operation Meters 2006" para 18, that has been shared on the link provided below: *https://www.dropbox.com/scl/fo/8n2jgvfrogfto2rwfqzdg/h?rlkey=y5h33i89lkob1qicpx9ar07ki&dl=0* *The calibration dates shall be provided once the meters get re-calibrated.*				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
The validity of calibration frequency of electricity meters (5 years) has been confirmed through the review of the document CEA installation and operation meters 2006/xx/. CLis closed.				

CL ID	11	**Section no.**	E,F	**Date:** 21/03/2023
Description of CL				
Project owner is requested to provide the evidence for all the applicable SDG's, E+ and S+ parameters				
Project Owner's response				**Date:** 08/01/2023
The relevant documents shall be provided to the verifier during verification.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
In section E.1, PO has opted to chose the parameters, Solid waste pollution from hazardous waste, Solid waste pollution from E waste, and solid waste pollution from End of life products/equipment. The description of impact of the opted indicators are as follows, Solid waste pollution from hazardous waste: Improper disposal of solid waste generated due to end of life of products or damaged products (solar PV module etc.) may lead to soil contamination. So, the generated waste shall be stored separately and shall be managed in compliance with applicable laws. Solid waste pollution from E waste E- waste generation from the Solar Power Project in terms of damaged solar panels, electronic equipment				

wires and computer auxiliary etc.

solid waste pollution from End of life products/equipment
In the absence of the project activity no Solid waste Pollution from end-of-life products/ equipment will be generated. Project activity may result in the E-waste from the panels and other electronic products at the end of its lifetime.

1. It can be observed that damaged /end of life products have been provided as the description of all 3 indicators and the performance indicator for monitoring of impacts for the later 2 indicators are given as "Quantity of waste discarded at the end of lifetime will be monitored and recorded". PO is requested to clarify how the same performance indicator is applicable for 2 E+ indicators and the description is same for all the above mentioned E+ indicators.

For the E+ indicator, Water Consumption from ground and other sources (EW02), PO has stated that "*Ground water will be consumed for the cleaning of PV modules. Project is not expected to impact the existing usage pattern. Project owner also obtained the required permissions for the use of groundwater as per the local rules and regulations*" and is identified as harmless in the risk assessment. PO is requested to provide the copy of the local rules and regulations and clarify how it has been confirmed that the risk is harmless. PO is requested to comply with the para 13.d(II) of GCC environmental and social safeguard standard version 3.0

In section E.2, for the S+ indicator "Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04) (human rights)", PO is requested to provide appropriate performance indicator for monitoring of impact.

In section E.2, the performance indicator chose for S+ "Occupational health hazards (SHS02)", and "Reducing / increasing accidents/Incidents/fatality (SHS03)" is found to be same and therefore is requested to be revised. Also, there is no valid performance indicator provided for S+ indicator, "Specialized training / education to local personnel (SE01)" , and therefore is requested to be provided.

Project Owner's response	**Date:** 08/01-b/2023

The PSF has been revised to include the following:

1. Management of Solid waste from Hazardous waste / E-water/end of life waste has been added under monitoring parameter tables EL02, EL03 and EL04 of the revised PSF. Generated waste will be channelized through authorized channels (authorized scrap-dealers/ dismantlers/ recyclers etc.).
2. SJ 04 has been revised accordingly, refer data / parameter table 2 on page 43, wherein the number of female employees are being monitored.
3. SHS 03 has been revised accordingly, refer data / parameter table 4, on page 4 wherein the workplace accidents are to be monitored

Documentation provided by Project Owner

CCIPL 1452 HPPPL 100MW version 3.0 13122023 TC

GCC Project Verifier assessment	**Date:** 22/12/2023

It has been observed that PO has provided the scoring of EL04 as the description of the parameter is already covered under EL02 and EL03.

However, PO has not provided justification for the above comment "For the E+ indicator, Water Consumption from ground and other sources (EW02), PO has stated that
"*Ground water will be consumed for the cleaning of PV modules. Project is not expected to impact the existing usage pattern. Project owner also obtained the required permissions for the use of groundwater as per the local rules and regulations*" and is defined as harmless in the risk assessment. PO is requested to provide the copy of the local rules and regulations and clarify how it has been confirmed that the risk is harmless. PO is requested to comply with the para 13.d(II) of GCC environmental and social safeguard standard version 3.0". PO is requested to provide the same.

PO has not provided any reference to the social safeguard indicator in the data/parameter table 2, PO is requested to provide the same.

Po has not provided any reference to the social safeguard indicator in the data/parameter table 4. PO is requested to provide the same. Also to be noted that the data/parameter table for SHS03 is already provided in the section B.7.1 CL is open
Project Owner's response **Date**: 28/12/2023
EW02- This parameter has been assessed as Harmless because necessary permissions have already been taken by the authorities regarding the usage of ground water, wherein the daily water usage limit is set in accordance with the local laws. Moreover, this certificate is valid only for one year and needs to be revalidated every year. Please refer to the No Objection Certificates for three consecutive years that are shared along with supporting documents. Data/ Parameter Table 02- The PSF has been revised. The social safeguard indicator is added, which is (SJ03) as it aligns with the targeted SDG 8 and accounts the total employment that is being generated during a particular Monitoring period. Data/ Parameter Table 04- The PSF has been revised. The social safeguard indicator is added, which is (SHS 02) as it aligns with the parameter that is being recorded in table 4 and accounts the total number of trainings (Technical / Non-Technical (EHS or OH&S) being imparted to employees during a particular Monitoring period. SHS 03 is a slightly different parameter and accounts the number of workplace accident that happened after imparting trainings.
GCC Project Verifier assessment **Date:** 29/12/2023
Based on the assessment of the supporting document provided, VVB concludes that the groundwater consumptions of the project facility is permitted by the local authority and a non objection certificate has been issued to M/s. Solitaire BTN Solar Private limited. Data/parameter table 02 and 04 has been revised to provided reference to its respective Social safeguard standard and SDGs. CL is closed

CL ID	12	**Section no.**		**Date:** 21/03/2023
Description of CL				
In section F of PSF, 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:** 08/01-b/2023
The PSF has been revised, now the PO is not claiming contributions for SDG 9.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
The justification is deemed to be acceptable. CL is closed.				

CL ID	13	**Section no.**	B.5	**Date:** 25/09/2023
Description of CL				
In the IRR sheet, the PLF value of 19.73% has been considered for the entire lifespan, while in the DPR, PLF for each year has been provided with different values. PO is requested to clarify the inconsistency of PLF between DPR and IRR. Also the table 1 of DPR mentions a PLF of 18.97%, and while it is given as 19.73% in the PSF and ER sheet. PO is therefore requested to clarify the inconsistency of PLF between DPR and PSF/ER sheet.				
Project Owner's response				**Date:** 13/12/2023

The 19.73% is the P90 year 1 PLF value (refer table 15 on page 62 of the DPR) for the project which is the highest of all PLF values mentioned in the DPR (under P90 scenario). Please refer to the P&L stats in the IA sheets wherein it has been clearly demonstrated that the annual electricity production is reducing due to the deration factor of PV modules and is not constant throughout the lifetime of project.
Documentation provided by Project Owner
CCIPL 1452 HPPPL 100MW version 3.0 13122023 TC
GCC Project Verifier assessment **Date:** 29/12/2023
The justification provided by PO is deemed to be acceptable. CL is closed.

CL ID	14	**Section no.**	B.7.1	**Date:** 25/09/2023
Description of CL				
In section B.7.1, Data and parameter table EG_{PJY}, PO has mentioned that "*The above is as per the requirements set out by the PPA between DISCOM and PO. Should there be any change in the above monitoring process, it should not be construed as a deviation / change from registered PSF and JMR process is outside the control of PO.*" PO is requested to clarify, in such conditions, how the monitoring procedures can be carried out in compliance with the registered PSF.				
Project Owner's response				**Date:** 13/12/2023
The text cited by the VVB pertains to additional comment under monitoring Data/ parameter table 1 on page 43-44 of PSF. This has been specified in conjugation with the additional comment which pertains to procedure of taking JMR (joint meter readings) between PO and TNEB and has been added to provide additional clarity on the process of data recording. In case the JMR procedure is changed by TNEB, the PO shall be obligated to follow the same. This shall not affect the monitoring procedure for the given parameter which refers to the measurement of net electricity generated and supplied by the project to the grid via energy meters of accuracy class 0.2s continuously.				
Documentation provided by Project Owner				
CCIPL 1452 HPPPL 100MW version 3.0 13122023 TC				
GCC Project Verifier assessment				**Date:** 29/12/2023
The justification provided by PO is deemed to be acceptable to VVB. CL is closed				

Table 2. CARs from this Project Verification

CAR ID	01	**Section no.**	A.1	**Date:** 21/03/2023
Description of CAR				
The Sustainable development goals expected to be achieved through the project activity is requested to mention in the section A.1 of the PSF along with a description on how the Project Activity contributes to sustainable development. This is as per the requirement of GCC PSF template v.4.0				
Project Owner's response				**Date:** 08/01/2023

The PSF has been revised, please refer to section A.1: *The project is expected to contribute to three SDGs which are **SDG 7, 8, and 13**.* *The project activity will contribute to sustainable development in the host country in Social, Economic and Environmental aspects as explained below:* ***Social and Economic well-being (SDG 8)*** *The Project Activity will result in creating job opportunities on temporary and permanent basis during construction and operation phase of the project. As applicable, if more than one equally competent candidates are found, preference will be provided to local people for employment.* ***Environmental well-being (SDG 7 and SDG 13)*** *The Project Activity utilizes renewable energy for generating electricity which otherwise would have been generated through alternate fuel (most likely - fossil fuel) based power plants, contributing to reduction in specific emissions (emissions /unit of energy generated) including GHG.*
Documentation provided by Project Owner
Revised PSF_SBTN_100 MW_version 2_TC
GCC Project Verifier assessment **Date:** 25/09/2023
Po has provided the expected SDG contributions in section A.1 of PSF. CAR is closed

CAR ID	02	**Section no.**	A.3	**Date:** 21/03/2023
Description of CAR				
Project owner is requested to add the single line diagram of the solar power plant with the location of the revenue meters in the section A.3 of the PSF. *Moreover, a short summary of facilities, systems and equipment in the baseline scenario as established in section B.4 is requested to be provided in this section. Please refer to the project submission report filling guideline for more information.*				
Project Owner's response				**Date:** 08/01-b/2023
Please refer to the link shared below for the SLDs- *https://www.dropbox.com/scl/fo/8n2jgvfrogfto2rwfqzdg/h?rlkey=y5h33i89lkob1qicpx9ar07ki&dl=0* *Section B.3 of PSF provides a schematic diagram of the project technology. Section B.4 of the revised PSF has 4 of the PSF has been revised as per the applied methodology ACM 0002 and documentary evidence have also been added in the same section that confirms that baseline scenario.*				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
It has been observed that the section B.4 of PSF has been filled as per the PSF template guidelines. CAR is closed				

CAR ID	03	**Section no.**	A.6	**Date:** 21/03/2023
Description of CAR				
Project owner is requested to add a brief summary of environmental and social no net harm expected to achieve through this project activity under the additional CORSIA criteria in section A.6 of the PSF. *Moreover, Project owner is requested to add a brief summary of SDGs expected to achieve through the project activity.* *Project owner is also requested to justify how the project meets all the requirement of the CORSIA Eligible Emissions Units required for GCC projects and does not fall under the excluded unit types, methodologies, program elements, and/or procedural classes.*				
Project Owner's response				**Date:** 08/01-b/2023

Please refer to the section E of the PSF where detailed analysis for E+ and S+ rating of project has been justified and for SDG+ label, please refer to section F of the PSF. *Since the proposed project does not include ACCs issued to nuclear energy, HFC-23 abatement, Reducing Emissions from Deforestation and Degradation (REDD), Afforestation & Reforestation (A&R), and Carbon Capture & Storage (CCS) projects under GCC. Hence the project is eligible under CORSIA Eligible Emissions Units required for GCC projects.*
Documentation provided by Project Owner
Revised PSF_SBTN_100 MW_version 2_TC
GCC Project Verifier assessment **Date:** 25/09/2023
It has been observed that PSF has been revised with required information as per the PSF template guideline. CAR is closed.

CAR ID	04	**Section no.**	B.2	**Date:** 21/03/2023
Description of CAR				
The applicability and justification as per the para 4, 5, and 6 of Tool 7 is also requested to be added in the section B.2 of the PSF				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to section B.2. of the PSF.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
It has been observed that PO has provided the applicability condition and its justification for the tool 07. CAR is closed.				

CAR ID	05	**Section no.**	B.2	**Date:** 21/03/2023
Description of CAR				
The typo under the justification provided for applicability of tool 07 in section B.2 is requested to be corrected				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to section B.2. of the PSF.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
The typo error has been corrected. CAR is closed.				

CAR ID	06	**Section no.**	B.5	**Date:** 21/03/2023
Description of CAR				
Project owner is requested to provide a detailed demonstration of all the possible alternative scenarios as mentioned in the para 20, Tool 01 under the sub step 1 a of the section B.5 *The outcome of step 1a is also requested to be added.*				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to section B.5, step 1.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				

GCC Project Verifier assessment	**Date:** 25/09/2023
It has been observed that the alternative scenario as given in para 20(b) of tool 01 is not included in the step 1 of additionality demonstration. PO is requested to include the same and also the outcome is requested to be revised accordingly. Thus, finding is open.	
Project Owner's response	**Date:** 13/12/2023
As per para 08 of Tool 01, "Project activities that apply this tool in context of approved consolidated methodology ACM0002, only need to identify that there is at least one credible and feasible alternative that would be more attractive than the proposed project activity". Further, as per the applied methodology, ACM 0002 version 20.0; para 22, if project activity is installation of a Greenfield power plant, the baseline scenario (Alternative-1) is electricity delivered to the grid by the project activity which would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources. Thus, credible and feasible alternative to the proposed project activity were considered as: 1. The continuation of the current practice, i.e. to equivalent power generation in the regional / national grid. 2. The proposed project activity undertaken without being registered as a GCC project activity. Further, although determination of other credible alternatives is not required as per aforesaid, the PO draws attention to other options. As the proposed project generates renewable electricity, hence equitable alternatives to the project were deemed as alternatives to the proposed project can be other means of generating renewable electricity i.e. hydro or wind projects. Hydro and wind projects are not deemed credible alternatives as the project region does not have natural resource availability of project scale to implement such projects.	
Documentation provided by Project Owner	
GCC Project Verifier assessment	**Date:** 22/12/2023
The alternatives has been provided By Po appropriately in the PSF CAR is closed	

CAR ID	07	**Section no.**	B.5	**Date:** 21/03/2023
Description of CAR				
Under the step 2 of the section B.5, Project owner is requested to justify how the proposed project activity is not the most economically or financially attractive or not economically and financially feasible , without the revenue from the sale of certified CERs.				
Project Owner's response				**Date:** 08/01-b/2023
This has been already justified in Step 2-c, where it is demonstrated that the equity IRR for the proposed project is less than benchmark value, i.e., Benchmark Cost of Equity. Hence the project is not financially viable, without the revenue from the sales of ACCs.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
The justification has been provided by PO in the PSF. CAR is closed.				

CAR ID	08	**Section no.**	B.5	**Date:** 21/03/2023
Description of CAR				
The sub step 2d is requested to be mentioned under the step 2 of section B.5 *And the outcome of step 2 c is also requested to be added*				
Project Owner's response				**Date:** 08/01-b/2023

The PSF has been revised, the outcome of step 2c and 2d have been added in the PSF.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
Sub step 2d of step of additionality demonstration has been added in PSF. CAR is closed				

CAR ID	09	**Section no.**	B.5	**Date:** 21/03/2023
Description of CAR				
It has been observed under the sub step 4 a of section B.5 that it is mentioned "step wise approach as suggested in the tool is applied to the project activity". PO is requested to add which tool has been applied.				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to section B.5 (b) Additionality Assessment.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
The reference of the applied Tool has been provided in PSF. CAR is closed				

CAR ID	10	**Section no.**	B.6.2	**Date:** 21/03/2023
Description of CAR				
The date/parameter in the parameter table 3 of the section B.6.2 is requested to be revised as it has been observed that $EF_{grid,BM,y}$ is found to be repeating.				
Project Owner's response				**Date:** 08/01-b/2023
The PSF has been revised, please refer to section B.6.2 Data/ Parameter 03.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
PSF has been revised accordingly. CAR is closed.				

CAR ID	11	**Section no.**		**Date:** 21/03/2023
Description of CAR				
The table in section F is requested to be revised as per the latest GCC project sustainability standard v.3.1. Moreover, Project owner is requested to the latest GCC project sustainability standard v 3.1 and make necessary changes wherever applicable				
Project Owner's response				**Date:** 08/01-b/2023
Section F has been updated in the PSF as per the sustainability standard v. 3.0, because this version was the latest version available when the project was submitted to Global Stakeholder Consultation.				
Documentation provided by Project Owner				
Revised PSF_SBTN_100 MW_version 2_TC				
GCC Project Verifier assessment				**Date:** 25/09/2023
Justification is deemed to be acceptable. CAR is closed.				

CAR ID	12	**Section no.**	B.5	**Date:** 25/09/2023
Description of CL				

1. Referring to para 10 of tool 27, “Input values used in all investment analysis shall be valid and applicable at the time of the investment decision taken by the project participant.” Under step 2 of investment analysis on section B.5 of PSF, PO has mentioned that 27/11/2018 as the start date of the project activity, while in section C.1, the start date is given as 20/02/2020. PO is requested to clarify the discrepancy in the PSF. PO is requested to mention the exact investment decision date in this section of PSF. Moreover, it has been observed that LOI was signed on 29/01-b/2017, PPA was signed on 28/09/2017, and EPC was signed on 27/11/2018, therefore PO is requested to clarify how 27/11/2018 can be considered as the date of investment decision. PO is requested to clarify how the input values considered in the investment analysis was available during the investment decision date. 2. Under the sub step 2 b of investment analysis, PO is requested to state the equity IRR chose is post tax or pre tax. 3. In the table provided for “The key parameters used to calculate Equity IRR”, PO has mentioned that the commissioning date is 29-Sep-19, which is inconsistent with the actual commissioning date. PO is requested to provide the commissioning date of each phase separately, with their respective capacity. 4. In the table “The key parameters used to calculate Equity IRR”, PO is requested to provide the page number of the reference document to their respective values. 5. PO is requested to clarify why transmission & wheeling loss has been provided as zero in the investment analysis and IRR sheet.
Project Owner’s response **Date:** 14/12/2023
1) The typo has been corrected in section B.5 of the PSF. The date mentioned in the section B.5 of the PSF is the investment decision date which is the date of the signing of the EPC contracts between the contractor and Project Owner. This date marks the point of commitment to develop the project. The letter of intent can be or cannot be an investment decision date for any project, similarly the PPAs can also be transferred. For this project the date on which the EPC contracts were signed is selected as the Investment Decision date as only on this date the real commitment of funds for the development of project occurred. Also, the parent company (acting as a lender in this project) accepted the proposal of project owner to develop the project. 2) The benchmark chosen is a post-tax equity IRR, PSF has been revised. 3) This date is the expected commissioning date for the proposed project during the investment decision and is sourced from the DPR. 4) The IRR sheet has been revised. **5)** The transmission and wheeling losses are accounted as zero because there was no anticipated loss during the transmission, which is a conservative approach. **Also, the P90, P75 and P50 values (Yield prediction) is calculated taking into account all the possible losses that can occur in a electricity system. Hence it is already accounted in CUF/ PLF.**
Documentation provided by Project Owner
IA_Scenario1 and CCIPL 1452 HPPPL 100MW version 3.0 13122023 TC
GCC Project Verifier assessment **Date:** 22/12/2023

1) The justification provided by PO for the selection of investment decision data is not appropriate as per para 10 of Tool 27 version 11.0. Investment decision date is the date in which all the assumptions are made. Since the project activity is a bidding project and the project owner has the consent to participate in the bid, hence the date of EPC contract as a date of investment decision date is not appropriate. EPC contract is the recurring event of bidding process, therefore PO should demonstrate the investment decision date available at the time of Bidding. PO is requested to provide the most plausible investment decision date and the input parameter available at this date
2) Po has mentioned that the applied benchmark is post tax equity IRR.
3) The date of DPR is not mentioned anywhere in the DPR. Therefore DPR cannot be considered as the source of input parameters. PO is requested to clarify the authenticity of the publication date of the DPR.
4) The required reference has been given in the IRR sheet.
5) Response provided by PO is deemed to be acceptable.

CAR is open.

Project Owner's response	Date: 28/12/2023

1) The Investment decision date for the proposed project activity has been revised. The date of submission of bid for setting up the solar power plants to TANGEDCO is selected as the Investment Decision date, which marks the earliest date of PO commitment to develop the project.
3) The date of DPR is added to the section B.5 of the PSF in the chronology of events. Please also refer to the supporting document (e-mail screenshot) to confirm the date of DPR.

GCC Project Verifier assessment	**Date:** 29/12/2023

1) Based on the information provided in the LOA provided by PO, VVB confirms that the date of bidding was on 14/06/2017, which is considered as the date of investment decision and PSF has been revised accordingly.

3) PO has provided the date of DPR as 23/05/2018. PO has shared the email screenshot of the PDR to prove the date of DPR.

CAR is closed

CAR ID	13	**Section no.**	B.5	**Date:** 25/09/2023

Description of CL

Referring to para 9 of Tool 24: Common practice, "*Applicable geographical area - should be the entire host country. If the project participants opt to limit the applicable geographical area to a specific geographical area (such as province, region, etc.) within the host country, then they shall provide justification on the essential distinction between the identified specific geographical area and rest of the host country*"

For the demonstration of common practice analysis, PO has chosen Tamil Nadu as the applicable geographical area. PO is requested to provide appropriate justification in the PSF for choosing Tamil Nadu as the applicable geographical area for common practice analysis while India has been identified as the project boundary in section B.3 of PSF.

Project Owner's response	**Date:** 13/12/2023

The project boundary has been kept as India only for the purpose of inclusion of single unified national grid in the project boundary as the baseline emission source. Page 33 of the PSF provides the justification for same as follows:

In India even though there is one national grid, but states have their own RE policies. Besides, solar insolation and other geographic conditions change from state to state which might make a state more or less favourable than others for project implementation. Hence, a comparable area would be the state and not the host country.

Documentation provided by Project Owner

CCIPL 1452 HPPPL 100MW version 3.0 13122023 TC

GCC Project Verifier assessment	**Date:** 22/12/2023

The provided justification is acceptable to VVB.

CAR is closed

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

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**								**Project Owner's Conclusion**		**GCC Project Verifier's Conclusion** **(to be included in Project Verification Report only)**
		Description of Impact *(positive or negative)*	**Legal/ voluntary corporate requirement / regulatory/ voluntary corporate threshold Limits**	**Do-No-Harm Risk Assessment (choose which ever is applicable)**			**Risk Mitigation Action Plans for aspects marked as Harmful**		**Performance indicator for monitoring of impact**	***Ex-ante* scoring of environmental impact**	***Explanation of the Conclusion***	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational Controls**	**Program of Risk Management Actions**	**Monitoring parameter and frequency of monitoring**	**Ex- Ante scoring of the environmental impact (as per scoring matrix Appendix-02)**	**Ex- Ante description and justification/ explanation of the scoring of the environmental impact**	**Verification Process**
Environmental Aspects on the identified categories[6] indicated below.	*Indicators for environmental impacts*	*Describe and identify anticipated and actual significant environmental impacts, both positive and negative from all sources (stationary and mobile) during normal and abnormal/emergency conditions, that may result from the construction and operations of the Project Activity, within and outside the project boundary, over which the Project Owner(s) has/have control.*	*Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified risks of environmental impacts.*	*If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If environmental impacts exist, but are expected to be in compliance with applicable national regulatory /stricter voluntary corporate requirements and will be within legal/ voluntary corporate limits by way*	*If negative environmental impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-*	*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* ***'Harmfu'l*** *at least to a level that is in compliance with applicable*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well including the data source.*	*-1* *0* *+1*	*Confirm the score of environmental impact of the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.*	*Describe how the GCC Verifier has assessed that the impact of the Project Activity against the particular aspect and in case of "harmful impacts" how has the project adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net*

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

					of plant design and operating principles, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as ***Harmless*** */If the project has an positive impact on the environment mark it as "harmless" as well.*	*safe) and shall be indicated as* ***Harmful***	*legal/regulator requirements or industry best practice or stricter voluntary corporate requirements*	*identified as* ***Harmful****.*				*positive impacts of the project with respect to the most likely baseline alternative.* *.*
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 13 (e) (ii)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 22*		*Paragraph 24 and Paragraph 26 (a) (i)*
Environment - *Air*	*SO_x emissions (EA01)*	*In India, majority of electricity is obtained from thermal power plants using coal, which is around 75% of the total power generation*[7]*, since the electricity generated using coal is emission intensive and there is a production of fly ash (SPM) and other gaseous pollutants. The project activity* ***will reduce the emissions when compared with the baseline****, but this impact is not rated positive because the PO has opted not to*	NAAQS, 2019	Not Applicable	-	-	-	-	-	0	Not Applicable	

[7] https://coal.nic.in/en/major-statistics/generation-of-thermal-power-from-raw-coal

		quantify this impact										
	NO_x emissions (EA02)	*In India, majority of electricity is obtained from thermal power plants using coal, which is around 75% of the total power generation, since the electricity generated using coal is emission intensive and there is a production of fly ash (SPM) and other gaseous pollutants. The project activity* ***will reduce the emissions when compared with the baseline****, but this impact is not rated positive because the PO has opted not to quantify this impact*	NAAQS, 2019	Not Applicable	-	-	-	-	-	0	Not Applicable	
	CO_2 emissions (EA03)	*The project is expected to reduce CO2 emissions w.r.t. the baseline scenario of generation of equivalent amount of power in grid connected power plan*	-	-	Harmless- The overall impact is positive with respect to the baseline alternative	-	-	-	GHG emission reduction (tonnes of CO2e / Yr.) The parameter will be monitored on monthly basis	+1	The overall impact is positive with respect to the baseline and hence the impact is harmless because the proposed project will reduce the CO_2 emission, the same can be confirmed from Grid Emission Factor	Project activity, generates and supplies the electricity to the Indian national grid/06/08/ thereby reducing the reliance of the fossil fuel powered power plants and results in reduced CO_2 emissions. Thus, the score +1 provided for this environmental safeguard parameter is deemed to be acceptable to VVB. The monitoring procedure for electricity generation and

												the calibration procedure of the measuring equipment is provided in section B.7.1 of PSF. The emission factor used for the calculation of emission reduction has been cross checked against the source/17/ and is deemed to be acceptable
	CO emissions (EA04)	-	-	Not Applicable	-	-	-	-	-	-	-	
	Suspended particulate matter (SPM) emissions (EA05)	*In India, majority of electricity is obtained from thermal power plants using coal, which is around 75% of the total power generation, since the electricity generated using coal is emission intensive and there is a production of fly ash (SPM) and other gaseous pollutants. The project activity* ***will reduce the emissions when compared with the baseline****, but this impact is not rated positive because the PO has opted not to quantify this impact*	NAAQS, 2019	Not Applicable	-	-	-	-	-	0	Not Applicable	
	Fly ash generation (EA06)	*In India, majority of electricity is obtained from thermal power plants using coal, which is around 75% of the total power generation,*	-	Not Applicable	-	-	-	-	-	0	Not Applicable	

		*since the electricity generated using coal is emission intensive and there is a production of fly ash (SPM) and other gaseous pollutants. The project activity **will reduce the emissions when compared with the baseline**, but this impact is not rated positive because the PO has opted not to quantify this impact*										
	Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)	-	-	Not Applicable	-	-	-	-	-	-	-	
	Odor (EA08)	-	-	Not Applicable	-	-	-	-	-	-	-	
	Noise Pollution (EA09)	-	NAAQS, 2019	Not Applicable	-	-	-	-	-	-	-	
	Others (EA10)	-	-	-	-	-	-	-	-	-	-	
	Add more rows if required and corresponding notation with EA as prefix)	-	-	-	-	-	-	-	-	-	-	
Environment - *Land*	*Solid waste Pollution from Plastics (EL-01)*	-	-	Not Applicable	-	-	-	-	-	-	-	
	Solid waste Pollution from Hazardous wastes (EL02)	*Improper disposal of solid waste generated due to end of life of products or damaged products (solar PV module etc.) may lead to*	Hazardous waste management and Handling Rules	-	-	Harmful- Improper disposal of solid waste generated due to end of life of products	Recording all electrical & electronics waste of projects sites	Project owner is responsible to maintain records and filling of records as per	Quantity of damaged modules and leaking batteries shall be maintained	+1	The impact is unlikely to cause any harm because the generated solid waste shall be	Through on-site visit and interview, VVB has observed that there is a potential for the generation of hazardous in the

		soil contamination. So, the generated waste shall be stored separately and shall be managed in compliance with applicable laws.				(solar PV module etc.) may lead to soil contamination.		applicable law			channelized through authorized channels (authorized scrap-dealers/ dismantlers/ recyclers etc.). The practice will be in line with legal requirements / standard industry practices.	project site. The monitoring procedure for this parameter is provided in the PSF along with the disposal mechanisms. The monitoring procedure of this parameter is provided in section B.7.1 of PSF. Therefore the+1 scoring provided by PO is deemed to be acceptable to VVB.
	Solid waste Pollution from Bio-medical wastes (EL03)	-	-	Not Applicable	-	-	-	-	-	-	-	
	Solid waste Pollution from E-wastes (EL04)	*E- waste generation from the Solar Power Project in terms of damaged solar panels, electronic equipment wires and computer auxiliary etc.*	E-Waste Management Rules, 2018	-	-	Harmful- The lifetime of the project activity is 25 years. Project Owner will dispose the E- waste to the licensed vendors/manufacturers at the end of life of products/equipment's in compliance to the E-waste Management rules.	Records all electrical & electronics waste of projects sites	Project owner is responsible to maintain records and filling of records as per applicable law	Quantity of waste discarded at the end of lifetime will be monitored and recorded	+1	The impact is unlikely to cause any harm because the generated solid waste shall be channelized through authorized channels (authorized scrap-dealers/ dismantlers/ recyclers etc.). The practice will be in line with legal requirements / standard industry practices.	Through on-site visit and interview, VVB has observed that there is a potential for the generation of E-waste in the project site. The monitoring procedure for this parameter is provided in the PSF along with the disposal mechanisms. The monitoring procedure of this parameter is provided in section B.7.1 of PSF. Therefore the+1 scoring provided by PO is deemed to be acceptable to VVB.
	Solid waste Pollution from Batteries (EL05)	*No battery waste is anticipated throughout the*	-	Not Applicable	-	-	-	-	-	0	The impact is unlikely to cause any harm	

		operation of the project									because the generated waste shall be generated only after the lifetime of batteries and that impact is already considered in solid waste pollution due to lifetime of product	
	Solid waste Pollution from end of life products/ equipment (EL06)	*In the absence of the project activity no Solid waste Pollution from end-of-life products/ equipment will be generated. Project activity may result in the E-waste from the panels and other electronic products at the end of its lifetime.*	E-Waste Management and Handling Rules, 2018	-	-	Harmful- The lifetime of the project activity is 25 years. Project Owner will dispose the E- waste to the licensed vendors/manufacturers at the end of life of products/equipment's in compliance to the E-waste Management rules.	Recording all electrical & electronics waste of projects sites	Project owner is responsible to maintain records and filling of records as per applicable law	Quantity of waste discarded at the end of lifetime will be monitored and recorded	0	The impact is unlikely to cause any harm because the generated solid waste shall be channelized through authorized channels (authorized scrap-dealers/ dismantlers/ recyclers etc.). The practice will be in line with legal requirements / standard industry practices. This parameter is not scored positive as its impact is already accounted in EL02 and EL04.	
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)	-	-	Not Applicable	-	-	-	-	-	-	-	

	land use change (change from cropland /forest land to project land) (EL08)	-	-	Not Applicable	-	-	-	-	-	-	-	
	Others (EL09)	-	-	-	-	-	-	-	-	-	-	
	Add more rows if required	-	-	-	-	-	-	-	-	-	-	
Environment - *Water*	*Reliability/ accessibility of water supply (EW01)*	-	-	Not Applicable	-	-	-	-	-	-	-	
	Water Consumption from ground and other sources (EW02)	*Ground water will be consumed only for cleaning of modules, but care shall be taken not to over utilize the resource*	-	-	Harmless – Ground water will be consumed for the cleaning of PV modules. Project is not expected to impact the existing usage pattern. Project owner also obtained the required permissions for the use of groundwater as per the local rules and regulations	-	-	-	No Action required	0	This parameter has been assessed as Harmless because necessary permissions have already been taken by the authorities regarding the usage of ground water, wherein the daily water usage limit is set in accordance with the local laws	
	Generation of wastewater (EW03)	*Not Applicable*	The Water (Prevention and Control of Pollution) Act, 1974	-	-	-	-	-	-	-	-	

	Wastewater discharge without/with insufficient treatment (EW04)	*The project does not cause any wastewater discharge without treatment*	The Water (Prevention and Control of Pollution) Act, 1974	-	-	-	-	-	-	-	-	
	Pollution of Surface, Ground and/or Bodies of water (EW05)	*The project do not lead to pollution of surface and groundwater and water bodies since it is a solar power plant*	The Water (Prevention and Control of Pollution) Act, 1974	-	-	-	-	-	-	-	-	
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	*The project is not anticipated to discharge any harmful chemical/ toxic waste*	-	Not Applicable	-	-	-	-	-	-	-	
	Others (EW07)	-	-	-	-	-	-	-	-	-	-	
	Add more rows if required	-	-	-	-	-	-	-	-	-	-	
Environment – *Natural Resources*	*Conserving mineral resources (ENR01)*	-	-	Not Applicable	-	-	-	-	-	-	-	
	Protecting/ enhancing plant life (ENR02)	-	-	Not Applicable	-	-	-	-	-	-	-	
	Protecting/ enhancing species diversity (ENR03)	-	-	Not Applicable	-	-	-	-	-	-	-	
	Protecting/ enhancing forests (ENR04)	-	-	Not Applicable	-	-	-	-	-	-	-	
	Protecting/ enhancing other depletable natural	*This is a renewable energy power project generating electricity through*	-	Not Applicable	-	-	-	-	-	-	-	

	resources (ENR05)	*the solar energy hence there is no negative impact*										
	Conserving energy (ENR06)	*There is no scope for energy conservation since it is a solar power plant generating and supplying electricity through the grid.* *Hence not applicable.*	-	Not Applicable	-	-	-	-	-	-	-	
	Replacing fossil fuels with renewable sources of energy (ENR07)	*The proposed project replaces fossil fuel with the renewable solar energy for the power generation by installing the solar power plant which would have been otherwise generated from the usage of fossil fue*	-	-	Harmless- The overall impact is positive compared to the baseline alternative	-	-	-	Considering the occurrence of emission reductions through the electricity generation form the Solar power project. This parameter will be monitored through the monthly Power generation from the proposed Solar Project. Monthly electricity generation will be monitored through the energy meters installed at the substation. Energy Generation reports will be provided for the verification of generation.	+1	The impact is unlikely to cause any harm.	The project activity which is the solar power plant that generated electricity from renewable replaces electricity generation from fossil fuel sources and therefore scored +1 which is deemed to be acceptable to VVB.
	Replacing ODS with non-ODS refrigerants (ENR08)	-	In India, there are no comprehensive regulations and standards about ODS & non ODS.	Not Applicable	-	-	-	-	-	-	-	
	Others (ENR09)	-	-	-	-	-	-	-	-	-	-	
	Add more rows if required	-	-	-	-	-	-	-	-	-	-	

Net Score:		**+4**
Project Owner's Conclusion in PSF:		The Project Owner confirms that the Project Activity will not cause any net harm to Environment.
GCC Project Verifier's Opinion:		The GCC Verifier certifies that the Project Activity [is not likely to cause any] or [is likely to cause] net harm to the environment...

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

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**							**Project Owner's Conclusion**		**GCC project Verifier's Conclusion** **(to be included in Project Verification Report only)**
		Description of Impact (*positive or negative*)	**Legal requirement /Limit, Corporate policies / Industry best practice**	**Do-No-Harm Risk Assessment** **(choose which ever is applicable)**			**Risk Mitigation Action Plans (for aspects marked as Harmful)**	**Performance indicator for monitoring of impact.**	**Ex-ante scoring of environmental impact**	**Explanation of the Conclusion**	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational / Management Controls**	**Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)**	**Ex- Ante scoring of social impact of the project**	**Ex- Ante description and justification/explanation of the scoring of social impact of the project**	**Verification Process** **Will the Project Activity cause any harm?**
Social Aspects[8] on the identified categories[9] indicated below.	*Indicators for social impacts*	*Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all source during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control*	*Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts*	*If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as **Not Applicable***	*If social impacts exist, but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is*	*If negative social impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits then the Project Activity is likely to cause harm and shall be indicated as **Harmful***	*Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as **Harmful**.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source*	*-1* *0* *+1*	*Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/regulatory limits (if any) including basis of conclusion*	*Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful aspects how has the project owner adopted Risk Mitigation Action / management actions plans and policies to mitigate the risks of negative social impacts to levels that are unlikely to cause any harm.*

[8] All the parameters that are rated positive in section E.2 are beyond the CSR requirements.

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

					*unlikely to cause any harm (is safe) and shall be indicated as **Harmless**), project having positive impact on society wrt. To the BAU / baseline scenario must also mark their aspect as **"harmless"***						*Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.*
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 23*		*Paragraph 24 and Paragraph 26 (a) (ii)*
Social - *Jobs*	*Long-term jobs (> 10 year) created/ lost (SJ01)*	*The project activity generates long term job opportunities during the operation the project activity.*	The project has ensured to meet the criteria and requirement defined in applicable Indian labor laws.	-	Harmless- As the impact is positive in nature	-	-	No. of long- term jobs to be monitored on an annual basis. Approximately 3-4 jobs are expected to be created	+1	The project is unlikely to cause any harm.	VVB during on-site visit and desk interviews has observed that the long-term job opportunities has been provided by the project activity during the operational phase. The monitoring procedure of this parameter is provided in section B.7.1 of PSF. Thus the +1 scoring provided by PO is deemed to be acceptable to VVB
	New short-term jobs (< 1 year) created/ lost (SJ02)	*Project has created short term job opportunity which is less than a year to the skilled and unskilled people in the project region during the construction of the*	The project has ensured to meet the criteria and requirement defined in applicable Indian labor laws.	-	Harmless- This is a positive impact	-	-	No. of short-term jobs to be monitored on an annual basis. Approximately 12-15 jobs are expected to be created	+1	The project is unlikely to cause any harm.	VVB during on-site visit and desk interviews has observed that the short-term job opportunities has been provided by the project activity during the operational phase. The monitoring

		project activity through contractor.									procedure of this parameter is provided in section B.7.1 of PSF. Thus the +1 scoring provided by PO is deemed to be acceptable to VVB
	Sources of income generation increased / reduced (SJ03)	*By creating additional employment and O&M services in the project region it creates additional sources of income for the people employed for the project activity.*	None	-	Harmless- This is a positive impact	-	-	Payroll Records	0	This parameter is not scored as its impact is already accounted in SJ01 and SJ02..	
	Avoiding discriminatio n when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04) *(human rights)*	*The Project activity is open to hire people from different race, gender, ethnics, religion, marginalized groups, people with disabilities*	There is no legal requirement from local authorities to create employment	Not applicable	Harmless	-	-	Since the Project activity is open to hire people from different race, gender, ethnics, religion, marginalized groups, people with disabilities. Hence it is rated positive.	+1	The employment generation is a direct indicator of the avoided discrimination	VVB during on-site visit and desk interviews has observed that the job opportunities has been provided without any discrimination by the project activity during the operational phase. The monitoring procedure of this parameter is provided in section B.7.1 of PSF. Thus the +1 scoring provided by PO is deemed to be acceptable to VVB
Social - *Health & Safety*	*Disease prevention (SHS01)*	-	-	Not Applicable	-	-	-	-	-	-	
	Occupational health hazards (SHS02)	*There is a possibility of physical hazards in project sites due to human intervention or technical failure or emergency*	EHS policy, OSHA and OHSAS	-	Harmless- By establishing EHS policy guidelines, and imparting periodic	-	Establishing EHS Guidelines Imparting Trainings, Keeping Sign boards	1. PPEs 2. Trainings to Employees	+1	By implementing Risk mitigation measures the project is unlikely to cause any harm	VVB during on-site visit and interviews has observed that regular training programs has been provided by the project activity during the operational phase.

					trainings and providing PPE kits to employees		Providing PPE Kits.				The monitoring procedure of this parameter is provided in section B.7.1 of PSF. Thus the +1 scoring provided by PO is deemed to be acceptable to VVB.
	Reducing / increasing accidents/Incidents/fatality (SHS03)	*There is a possibility of accidents in project sites due to human intervention or technical failure or emergency*	EHS policy and OHSAS	-	Harmless- By establishing SOPs, EHS policy guidelines, and imparting periodic trainings and providing PPE kits to employees	-	Establishing SOPs, EHS Guidelines Imparting Trainings, Keeping Sign boards Providing PPE Kits	1. PPEs 2.Trainings to Employees	0	The maintenance and servicing records also the number of safety and accident prevention training session conducted on site will be documented. The project owner will make sure that proper maintenance and servicing of equipment is conducted regularly also frequent safety training and PPE will be provided to personnel. This parameter is not scored as its impact is being accounted in SHS 03	
	Reducing / increasing crime (SHS04)	-	-	Not Applicable	-	-	-	-	-	-	
	Reducing / increasing food wastage (SHS05)	-	-	Not Applicable	-	-	-	-	-	-	
	Reducing / increasing indoor air pollution (SHS06)	*This is a renewable energy power generation project through solar energy. Hence there is no impact on indoor air pollution*	-	Not Applicable	-	-	-	-	-	-	
	Efficiency of health	-	-	Not Applicable	-	-	-	-	-	-	

	services (SHS07)										
	Sanitation and waste management (SHS08)	*Project will generate sanitation waste during construction and operation of the project*	As per Factories Act, Solid waste management rules	-	Harmless- The project will have proper sanitation facilities (during construction and operation phase as per factories act	-	-	-	0	The project is unlikely to cause any harm and is not rated positive because this is mandated by law	
	Other health and safety issues (SHS09)	-	-	-	-	-	-	-	-	-	
	Add more rows if required	-	-	-	-	-	-	-	-	-	
Social - *Education*	*Specialized training / education to local personnel (SE01)*	*The local employees (if employed) will receive on-the-job training[10] as per their training needs.* *It imparts a positive impact by helping employees in all-round development*	None	-	Harmless- It has a positive impact.	-	-	No of Trainings	+1	This has a positive impact.	VVB during on-site visit and interview has observed that regular training programs has been provided by the project activity during the operational phase. The monitoring procedure of this parameter is provided in section B.7.1 of PSF. Thus the +1 scoring provided by PO is deemed to be acceptable to VVB.
	Educational services	-	-	-	-	-	-	-	-	-	

[10] Some of the examples of technical trainings but are not limited to - HV electrical equipment maintenance, IV-curve testing and analysis of PV modules, training on electrical equipment thermography etc. Similarly non-technical trainings and general awareness trainings include but are not limited to- Training on EPRP &First Aid, Electrical safety, Snake bite awareness training etc.

	improved or not (SE02)										
	Project-related knowledge disseminatio n effective or not (SE03)	*The Project owner has conducted a Local Stakeholder Consultation in which project related information was disseminated to Local people.*	None	-	Harmless- As the local stakeholder consultation have already been conducted, so this parameter is not rated as positive	-	-	-	0	The project is unlikely to cause any harm	
	Other educational issues (SE03)	-	-	-	-	-	-	-	-	-	
	Add more rows if required (SE04)	-	-	-	-	-	-	-	-	-	
Social - *Welfare*	*Improving/ deteriorating working conditions (SW01)*	*Project Owner will create and maintain the healthy and working conditions and try to maintain the work life balance for all the employees working for the project*	None	-	Harmless- Project Owner ensures and maintains the HR policy to ensure that all the employees are provided with healthy and non-deterioratin g working conditions both at the corporate office and the project site as well.	-	Taking the employee feedback on work life balance. Conducting the employee employer interactive sessions. Addressing the employee grievances, if any, on an immediate basis.	Policy of the company	0	The project is unlikely to cause any harm.	
	Community and rural welfare (indigenous	*Though there is a positive impact on the community and rural welfare from*	-	Not Applicable	-	-	-	-	-	-	

	people and communities) *(SW02)*	*the implementation of project, but as such there are no additional community development activities undertaken by project owner*									
	Poverty alleviation (more people above poverty level) (SW03)	*Though the project creates employment, the impact is not considerable in scale.*	-	Not Applicable	-	-	-	-	-	-	
	Improving / deteriorating wealth distribution/ generation of income and assets (SW04)	*Though the project creates employment but the impact is not considerable in scale.*	As per the Industrial Relations Code 2020, The Code on Social Security 2020, The Occupational Safety, Health and Working Conditions Code, 2020 and The Code on Wages 2019.	Not Applicable	-	-	-	-	-	There is no chance of deteriorating working conditions as Project owner maintains best working environment for Employees, complying with the national laws, hence this parameter will not be scored.	
	Increased or / deteriorating municipal revenues (SW05)	-	-	Not Applicable	-	-	-	-	-	-	
	Women's empowerment (SW06) *(human rights)*	-	-	Not Applicable	-	-	-	-	-	-	
	Reduced / increased traffic congestion (SW07)	-	-	Not Applicable	-	-	-	-	-	-	

	Exploitation of Child labour *(human rights)* *(SW08)*	*The project owner values the human rights and child labor is prohibited inside premises of project*	Labour Act	-	Harmless- Child Labour and forced labour are strictly prohibited by law	-	-	Since none of the employed people are below the age of 16 years during the construction or operational phase of the project there is no chance of exploitation of child labour. As this activity is prohibited by law, so this parameter is not rated positive.	0	The project is unlikely to cause any harm.	
	Minimum wage protection *(human rights) (SW09)*	*The project owner will ensure that all the unskilled labor gets a minimum wage set by the government and pays all the employees as per the skill set and contract between both parties.*	As per the Industrial Relations Code 2020, The Code on Social Security 2020, The Occupational Safety, Health and Working Conditions Code, 2020 and The Code on Wages 2019.	-	Harmless	-	-	Since the minimum wage is mandated by law, hence this parameter is not scored.	0	The project is unlikely to cause any harm	
	Abuse at work place.(with specific reference to women and people with special disabilities / challenges) *(human rights) (SW10)*	-	-	-	-	-	-	-	-	-	
	Other social welfare issues (SW11)	-	-	Not Applicable	-	-	-	-	-	-	
	Avoidance of human trafficking and forced labour	-	-	Not Applicable	-	-	-	-	-	-	

	(human rights) *(SW12)*										
	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs *(human rights)* *(CW13)*	*The land acquired from the villagers to set up the Power plant, was mostly barren land with no human settlements. Hence, no forced eviction measures imply*	-	Not Applicable	-	-	-	-	-	-	
	Provisions of resettlement and human settlement displacement *(human rights)* *(CW14)*	*The land acquired from the villagers to set up the Power plant, was mostly barren land with no human settlements. Hence, no provisions of resettlement were laid down but the villagers whose land was acquired were compensated by monetary means as per the land (area) which was purchased from them*	-	Not Applicable	-	-	-	-	-	-	
	Add more rows if required	-	-	-	-	-	-	-	-	-	

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] or [is likely to cause] net harm to society.

Appendix 7. conclusion Matrix for demonstration of contribution of project to sustainable development and GCC verifier's

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

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 5. Achieve gender equality and empower all women and girls	-	-	-	-	-	-	-		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	-	-	-	-	-	-	-		
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	**Target 7.2**[11]**:** Increase global percentage of renewable energy. **KPIs:** Amount of renewable energy supplied to grid for consumption.	Yes	Project activity directly contributes to increase in share of renewable energy through generation of renewable electricity and exporting Net electricity generated to grid by the project.	Total renewable electricity being generated and fed to the national grid to replace the emission intensive electricity	Approximately **1,606,463 MWh** of renewable electricity is expected to be exported to national grid in over 10 years	Project activity contributes directly to SDG target by increasing the share of renewable energy in energy mix	Net electricity exported to grid by the project	The project is expected tp generate 1,606,463 MWh of energy throughout the crediting period from solar energy which is a renewable source	yes
Goal 8. Promote sustained, inclusive	**Target 8.5**: Full	Yes	Project activity has generated employment during its	Construction, operation, and	The project is generating	Project activity contributes	Maintaining record of	VVB during the onsite	

[11] https://sustainabledevelopment.un.org/content/documents/26279VNR_2020_India_Report.pdf

and sustainable economic growth, full and productive employment and decent work for all	employment and decent work with equal pay. **KPIs:** Average earning of females and male employees engaged in the project and segregated by age and persons with disabilities.		construction phase (temporary jobs) as well as in operational phase (permanent jobs)	maintenance of Power Plant (Project Activity) results in the generation of employment	employment to 40 individuals	directly to SDG target by providing employment and paying the individuals equally who are engaged in the work of equal value	staff employed/ pay roll records	interview confirms that long term employment has been provided during the construction and operational phase of the project activity. The VVB confirms that SDG 8 is likely to be achievable	
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	-	-	-	-	-	-	-		
Goal 10. Reduce inequality within and among countries	-	-	-	-	-	-	-		
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	-	-	-	-	-	-	-		
Goal 12. Ensure sustainable consumption and production patterns	-	-	-	-	-	-	-		

Goal 13. Take urgent action to combat climate change and its impacts	**Target 13.A:** Implement the UN Framework Convention on climate change. **KPIs:** Amount of emission reduction achieved by project under UNFCCC / GORD / Domestic market mechanism	Yes	Project activity directly contributes to this SDG as Project is generating zero emission electricity in the Project scenario	Installation of **100 MW** Solar Power generation capacity	Approximately **149,637 tCO_2e** annual reduction in the Greenhouse gas emissions. The project is generating zero emission electricity, thereby, aiding in combating the climate change	Project activity contributes directly to SDG target by reducing emissions resulting from burning of fossil fuels in the baseline scenario to generate electricity	As per the applied methodology	The project is expected tp generate 1,606,463 MWh of energy throughout the crediting period from solar energy which is a renewable source which is equivalent to emission reduction of 149,637 tCO2 annually.	yes
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	-	-	-	-	-	-	-		
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	-	-	-	-	-	-	-		

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	-	-	-	-	-	-	-		
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	-	-	-	-	-	-	-		

SUMMARY	**Targeted**	**Likely to be Achieved**
Total Number of SDGs[12]	**3**	**3**
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	**Silver**	**Silver**

[12] All SDGs being claimed are beyond the CSR requirements

DOCUMENT HISTORY

Version	Date	Comment
V 3.1	31/12/2020	▪ The name of GCC Program's emission units has been changed from "Approved Carbon Reductions" or ACRs to "Approved Carbon Credits" or ACCs.
V 3.0	23/01-b/2020	▪ Revised version released on approval by the Steering Committee as per the GCC Program Process; ▪ Revised version contains the following changes: ○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC); ○ Considered and addressed comments raised by the Steering Committee: ➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and ➢ electronic consultations EC01-Round 04 (17.08.2020 – 22.08.2020). ▪ Feedback from the Technical Advisory Board (TAB) of ICAO on GCC submissions for approval under CORSIA[13];
V 2.0	25/06/2019	▪ Revised version released for approval by the GCC Steering Committee. ▪ This version contains details and information to be provided, consequent to the latest worldwide developments (e.g., CORSIA EUC).
v1.0	01/11/2016	▪ Initial version released for approval by the GCC Steering Committee under GCC Program Version 1

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

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