



Project Verification Report

V3.1 - 2020

Project Verification Report

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	Project Verification Report Form (PVR)			
	,			
	BASIC INFORMATION			
Name of approved	LGAI Technological Center S.A.			
GCC Project Verifier / Reference No.	Certificate No: GCCV009/00			
(also provide weblink	Date of Issue: 06/06/2022			
of approved GCC Certificate)	GCC Verifier - LGAI Technological Center, S.A. (globalcarboncouncil.com)			
Type of Accreditation	☐ Individual Track¹			
	CDM Accreditation			
	SO 14065 Accreditation			
	(Astive coorditation from United Nations Francount, Convention on Climate			
	(Active accreditation from United Nations Framework Convention on Climate Change valid till 04/10/2023; Ref no. CDM-E0032)			
	https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0032			
Approved GCC	GHG Sectoral Scope:			
Scopes and GHG Sectoral scopes for	Scope 1 - Energy (renewable/non-renewable sources)			
Project Verification	GCC Scopes:			
	Environmental No-harm (E+)			
	Social No-harm (S+)			
	Sustainable Development Goals (SDG+)			
Validity of GCC approval of Verifier	06/06/2022 to 05/09/2023 (Extended by GCC)			
Title, completion	200 MW Solar Project in Tamil Nadu			
date, and Version number of the PSF to	Version: 04			
which this report applies	Dated: 01/08/2023			
Title of the project activity	200 MW Solar Project in Tamil Nadu			
Project submission	S00467			
reference no.	Project Details (globalcarboncouncil.com)			
(as provided by GCC Program during GSC)				

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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.

Eligible GCC Project Type ² as per the Project Standard (Tick applicable project type)	Type A: □ Type A1 □ Type A2 (Sub type 1) □ Type B – De-registered CDM Projects: □ Type B1 □ Type³ B2						
5		Capacity	State	Site	LSC dates		
Date of completion of Local stakeholder consultation		200 MW	Tamil Nadu	Village - Pannirkullam, District - Thoothukudi,	10/08/2018		
Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.	GSC Period: 05/10/2022 to 19/10/2022 Have https://www.globalcarboncouncil.com/global-stakeholders-consultation-5/#:~:text=S00467,comments%20were%20received						
Name of Entity requesting verification service (can be Project Owners themselves or any Entity having authorization of Project Owners)	Narbl	heram Power & St	teel Private Limited	d			
Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)	Mr. Binay Goenka Narbheram Power & Steel Private Limited Avani Signature, 6th Floor, 91A/1 Park Street, Kolkata- 700016, West Bengal, India Email: binay.goenka@athagroup.in						
Country where project is located	India						

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

 $^{^{\}rm 3}$ GCC Project Verifier shall conduct Project Verification for all project types except B2.

GPS coordinates of								
the Project site(s)	Legal Owner	State	Technology	Geo- Coordinates (Decimals)	Geo- Coordinates (DMS)			
	NVR Energy Private Limited	Tamil	Solar	8.9242° N 77.8424° E	8°55'27.26" N 77°50'32.67" E			
	Narbheram Solar TN Private Limited	Nadu	Solar	8.8791° N 77.8511° E	8°52'44.86" N 77°51'3.99" E			
Applied methodologies			ted Methodolog eration from ren		/ersion 21.0) - Grid-			
(approved methodologies of GCC or CDM can be used)								
GHG Sectoral scopes linked to the applied methodologies	GHG-SS # 1 (Energy (renewable/non-renewable sources)							
Project Verification Criteria: Mandatory requirements to be assessed	GCC Ri Applica Applica Applica Nationa Eligibilit Start da Meet ap Credible Addition Emission Monitor No GHO Local S Global S United I Change	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						
Project Verification Criteria: Optional requirements to be assessed	 ☐ Others (please mention below) ☐ 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) 							

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Project Verifier's The GCC Project Verifier [LGAI Technological Center S.A.], certifies the following Confirmation: with respect to the GCC Project Activity [200 MW Solar Project in Tamil Nadu]. The GCC Project The Project Owner has correctly described the Project Activity in the Project Verifier has verified Submission Form/10/ (version 04, dated 0108/2023) including the applicability of the GCC project the approved methodology [CDM approved consolidated Methodology - ACM0002 activity and therefore (Version 21.0) - Grid-connected electricity generation from renewable sources] confirms the and meets the methodology applicability conditions and is expected to achieve the following: 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 314,555 tCO_{2e}/year, as indicated in the PSF/10/, 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 following⁴ 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 rules⁵ and therefore recommends GCC Program to register the Project activity with above mentioned labels. **Project Verification** Version 2.0 Report, reference Date: 29/08/2023 number and date of approval Ref. No. A+SH_SYST_TQC_GCC_VAL_52922

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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 &}quot;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 Agustín Calle de Miguel

Technical Manager

Date: 29/08/2023

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1. PROJECT VERIFICATION REPORT

Section A. Executive summary

Narbheram Power & Steel Private Limited has commissioned LGAI Technological Center S.A. to perform a verification of "200 MW Solar Project in Tamil Nadu" (hereafter referred to as the project activity) in the Tamil Nadu state of India. This verification report summarizes the findings of the verification of the bundled project, performed based on GCC Project Verification Standard v.3.1.

Narbheram Power & Steel Private Limited has set up solar power project at Tamil Nadu state of India with total capacity of 200 MW and solar power project at Tamil Nadu India. The main purpose of the project activity is to generate electrical energy through sustainable means using solar energy and sale to Indian grid via respective state utilities. Same has been confirmed through Power Purchase Agreements (PPAs) between respective project's legal owners and Tamil Nadu Generation and Distribution Corporation Limited.

The generated green electricity will contribute to climate change mitigation efforts. This project activity is a large-scale solar power project. The Location details of each project locations with its commissioning dates are as below: --

Legal Owner	State	Capacity	Technology	Geo- Coordinates (Decimals)	Geo- Coordinates (DMS)	Purpose
NVR Energy Private Limited	Tamil	100 MW	Solar	8.9242° N 77.8424° E	8°55'27.26" N 77°50'32.67" E	Sale to Grid
Narbheram Solar TN Private Limited	Tamil Nadu	100 MW	Solar	8.8791° N 77.8511° E	8°52'44.86" N 77°51'3.99" E	Sale to Glid

Scope of Verification:

The verification scope is defined as an independent and objective review of the project PSF/10/, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against all applicable GCC criteria including the approved baseline and monitoring methodology ACM0002 Version 21.0/12/. The verification was based on the requirements in the Project Verification Standard, v.3.1/03/ for the project activity and GCC requirement. The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the PSF/10/.

The verification scope is given as a thorough independent and objective assessment of the project design including especially the correct application of the methodology^{/12/}, the project's baseline study, additionality justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PSF^{/10/} and other relevant supporting documents, to ensure that the GCC project activity meets all relevant and applicable GCC criteria.

Verification Process:

The verification of the project consisted of the following steps:

Publication of the project PSF (Project submission Form)^{/10/}.

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- Desk review of the PSF/10/ and supporting documents submitted by the project owner
- Onsite-audit, assessment, background investigation and follow-up interviews with personnel of the project owner and its representatives.
- Draft verification reporting based on the audit findings and desk review of the PSF/10/.
- Resolution of corrective actions (if any).
- Final Verification report reporting based on the closure of corrective actions
- Technical review of the final verification opinion along with other documents by the independent competent technical review team,
- Final approval of the final verification opinion,

Appointment of the verification team:

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. (Applus+ Certification) has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center, S.A. (Applus+ Certification).

The composition of audit team shall be approved by the LGAI Technological Center, S.A. (Applus+Certification) ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA)
- Auditor (A) / Auditor in Training (AiT)
- Technical Expert (TE)
- Technical Reviewer (TR)

The sectoral scope / technical area knowledge linked to the applied methodology/ies/12/ shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Mr. Atul Takarkhede	LA/TE	Yes	Yes	Yes	Yes
Mr. Denny Xue	TR	Yes	Yes	Yes	NA

The complete list of CVs is included as Appendix 2 of this report.

Conclusion:

The review of the PSF/10/, supporting documentation and subsequent follow-up actions (onsite visit and interviews) have provided LGAI Technological Center, S.A. (Applus+ Certification) with sufficient evidence to determine the fulfilment of stated criteria. LGAI Technological Center, S.A. (Applus+ Certification) is of the opinion that the project activity "200 MW Solar Project in Tamil Nadu" as described in the final PSF/10/ meets all relevant requirements of GCC and host country (legal requirements for producing power) criteria and has correctly applied the methodology ACM0002 Version 21.0./12/ Additionally, the project activity has fulfilled all the requirements related to local stakeholder process, Environmental Safeguards (E+ label), CORSIA Plus⁶, Social Safeguards (S+ label) and has forecasted to contribute to 03 UN SDGs. Therefore, the project is being recommended to GCC Steering committee for request for registration.

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⁶ Applicable only once PO submit host country approval for further verification of project activity. Also, FAR has been raised in appendix 04 of this report.

Section B. Project Verification team, technical reviewer and approver

B.1. Project Verification team

No.	Role		Last name	First name	Affiliation	lı	nvolve	ment i	n
		Type of resource			(e.g., name of central or other office of GCC Project Verifier or outsourced entity)	Desk/document review	On-site inspection	Interviews	Project Verification findings
1.	Team Leader/ Technical Expert / Financial Expert	OR	Takarkhede	Atul	True Quality Certification Private Limited	Yes	Yes	Yes	Yes

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

No.	Role	Type of	Last name	First name	Affiliation
		resource			(e.g., name of
					central or other
					office of GCC
					Project Verifier or
					outsourced entity)
1.	Technical reviewer	El	Xue	Denny	Applus+
					Certification
2.	Approver	IR	Calle de Miguel	Agustin	Applus+
			_		Certification

Section C. Means of Project Verification

C.1. Desk/document review

The details of the document observed during the verification process are listed below in Appendix 3 of this report.

C.2. On-site inspection

	Duration of on-site inspection: 03/02/2023									
No.	Activity performed on-site	Site location	Date	Team member						
1.	Verification team checked the implementation of the project, Baseline emission, and emission reduction calculation, technical description of the project and Onsite Monitoring practice.	200 MW Solar Project, Village: Thennampatti & Parivallikottai Taluk: Ottapidaram District:	03/02/2023	Dr. Atul Takarkhede (Team Leader/ Technical Expert / Financial Expert)						

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	Thoothukudi	
	(Tuticorin), state	
	(Tuticorin), state Tamilnadu,	
	India.	

C.3. Interviews

	Interview					Team	
No.	Last name First name		Affiliation	Date	Subject	member	
1.	Bhattachar ya	Mr. Gaurav	Manager, Atha Group		Project Implementation status, Project Boundary		
2.	Suresh	Mr. Mithun	Deputy Manager		Methodology/12/, Eligibility criteria Host country		
3.	Kumar	Mr. Ananth	Deputy Manager (Site in Charge)	03/02/2023	Requirements, Monitoring Plan Project activity start date and Crediting period Roles and responsibilities of the project owner Baseline Assumptions Emission reduction calculations Additionality Training to the Monitoring personnel Legal Ownership of the project activity, Double counting/09/ of the carbon credits of the project activity E+, S+, SDG+ and CORSIA aspects as per the PSF/10/ and GCC requirements geographical location and project boundaries, project capacities applicable legal compliances	Dr. Atul Takarkhede (Team Leader/ Technical Expert / Financial Expert)	
5	Durai	Mr. Chinna			Local Stakeholder Consultation,		
6	Raaj	Mr. Dhanna	Local Stakeholder		Local employment and benefits from the project activity,		
7.	Pandi	Mr. Muthu			Grievances		

C.4. Sampling approach

The verification team did not apply any sampling approach for the project activity. The onsite audit was conducted for the 200 MW solar power project implemented in the locations/site as mentioned in the PSF/10/.

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

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Areas of Project Verification findings	Applicable to Project Types	No. of CL	No. of CAR	No. of FAR
Green House G		•		
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		#CAR 01, CAR 02	-
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	-	-	-
Deviation from methodology and/or methodological tool	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
 Clarification on applicability of methodology, tool and/or standardized baseline 	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
- Project boundary, sources and GHGs	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
- Baseline scenario	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
Demonstration of additionality including the Legal Requirements test	A ₁ , A ₂ , B ₁ , B ₂	#CL 01	#CAR 03	
Estimation of emission reductions or net anthropogenic removals	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
- Monitoring plan	A ₁ , A ₂ , B ₁ , B ₂	-	#CAR 04	-
Start date, crediting period and duration	A ₁ , A ₂ , B ₁ , B ₂	-	#CAR 05	-
Environmental impacts	A ₁ , A ₂ , B ₁ , B ₂	-	# CAR 06	-
Local stakeholder consultation	A ₁ , A ₂ , B ₁	-	-	-
Approval & Authorization- Host Country Clearance	A ₁ , A ₂ , B ₁ , B ₂	-	-	FAR#01
Project Owner- Identification and communication	A ₁ , A ₂ , B ₁ , B ₂	-	-	_
Global stakeholder consultation	A ₁ , A ₂ , B ₁	-	-	-
Others (please specify)	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
VOLUNTARY CERTIFIC	CATION LABELS			
Environmental Safeguards (E+)	A ₁ , A ₂ , B ₁	-	# CAR 07	-
Social Safeguards (S+)	A ₁ , A ₂ , B ₁	-	# CAR 08	-
Sustainable development Goals (SDG+)	A ₁ , A ₂ , B ₁	-	# CAR 09	-
Authorization on Double Counting from Host Country (only for CORSIA)	A ₁ , A ₂ , B ₁	-	#CAR 10	FAR#01
CORSIA Eligibility (C+)		-	-	FAR#01
Total		01	10	01

Section D. Project Verification findings

D.1. Identification and eligibility of project type

Means of Proje	Assessment team checked the applicable GCC criteria regarding project type		
Verification	definition for project activity. The project activity has identified itself as A2 category,		
	sub type 1, which was found acceptable since the project has not been registered		
	under any GHG program and the program operations started since 24/10/2019 which		
	is the Commercial commissioning date/14/ of both the unit of the solar power plant		
	involved in the project activity. The commissioning document/14/ of the project activity		

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	has been verified in this regard and found in line with commissioning certificates/14/,			
	Same is confirmed by verification team.			
Findings	No findings raised during Verification.			
Conclusion	The project activity was found eligible as per the requirements under section 4 of the GCC Project Standard ^{/02/} which was verified from the documents issued by the respective state utility. Further, found sub type of project activity (i.e., Sub-Type 1) in line with the Clarification No. 1 ^{/07/} issued by GCC.			
	Verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry/23/, VERRA Registry/24/, Gold Standard (GS) Registry/25/, and voluntary non-GHG Programs like I-REC, Renewable Energy Certificate (REC)/26/ Mechanism in India for the information regarding the consistency of the title of the project activity, GPS coordinates, Legal Ownership of the Project activity and confirmed that the project was not submitted or registered under any other GHG programmes and non-voluntary non-GHG Programs. Hence, the project is applicable for A2 type project activity. Project also meets the special eligibility criteria as:			
		nandate and does not implement a legally d from the white category as per Ministry, DEFCC), Government of India.		
	 The project Complies with host country legal requirements and ensures compliance with legal requirement by accruing clearance certificate issued by TANGDECO dated 24/10/2019. start of the commercial operations of plant. 			
	The project delivers real, measurable and additional emission reductions /11/ of 314,555 tCO₂e / annum compared to its baseline scenario.			
	 Project applies an approved CDM applied methodology ACM0002 Version 21.0^{/12/}. 			
	Further, Verifiers team confirmed that the per para 14 (C) of GCC project standard	e project activity complies following point as ls v.3.1 ^{/02/} : -		
	S.no GCC Rules	Assessment		
	1 (i) GHG emission reductions (mandatory requirement);	(i) GHG emission reductions Assessment team verified the		
		JMRs /21/ and sales invoices/33/.		

⁷ https://pib.gov.in/newsite/printrelease.aspx?relid=137373

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2	(ii) Contributions to the UN SDGs (SDG+ label) (voluntary requirement for selection, but mandatory if	Project owner fulfilling total 03 SDGs via project activity, Same is verified by the assessment team employments records/18/, training records and HR
3	selected); (iii) Do-no-net-harm Environmental requirements (E+ label) (voluntary requirement for selection, but mandatory if selected);	polices and records/18/. Project activity scoring +4 point under E+ labelling/04/, Same is verified by the assessment team via ER calculation sheet/11/, solid waste/ hazardous waste register, E-waste/32/ maintained at the site.
4	(iv) Do-no-net-harm requirements for Society (S+ label) (voluntary requirement for selection, but mandatory of selected); and	Project activity scoring +3 point under S+ labelling/04/, Same is verified by the assessment team via employments records (long term), training records (safety and skill-based training) and HR polices and records/18/.
5	(v) Submission of Host Country Attestation on Double Counting as and when required by CORSIA (mandatory requirement for projects that intend to use ACCs for CORSIA).	During assessment, verifiers team observed project activity qualified for the CORSIA requirement. However, PO will submit the Host Country Attestation on Double Counting/09/ along with the submission for the issuance of ACC post 31st December 2020. FAR has also raised by assessment team for the same.

D.2. General description of project activity

Means of Project Verification

The project activity is installation of a 200 MW (2 unit of 100 MW each) power plant in Tamil Nadu state of India. the project uses 642,424 No's of 330Wp modules Hanwha Solar poly crystalline cells type of panels of and associated connection boxes, 58 no's Inverters of 2,091 KVA. The technical details/15/ has been verified during onsite visit and found in order. The project is a greenfield project and in the absence of the same the electricity requirement would have been met from fossil fuel intensive national grid. Therefore, the grid connected power plants has been selected as the baseline appropriately. During assessment, the verification team observed that the project installation was complete, and the project installation was carried out in accordance with the detailed project report. The detailed information related to the project site's location is mentioned above in section A of this report. The location and GPS coordinated were checked during site visit with the help of GPS Software i.e., Google maps. The project activity consists of solar power plant located at different locations with different capacities. Details are as follows: -

The project activity consists of solar power plant located at state Tamil Nadu. Details are as follows:

SI. No	Legal Owners	Capacity (MW)	Commissioning Date (COD)	State
1	NVR Energy Private Limited	100 MW	24/10/2019	
2	Narbheram Power & Steel Private Limited	100 MW	24/10/2019	Tamil Nadu

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The power generated by M/S NVR Energy Pvt. Ltd. for evacuation of 100 MW solar power plant above fed to the national grid via newly erected 1 no 110 Kv bay with equipment and 110 kv arrangement at Bay No. 103 at the existing Thennampattty 400/230-110 KV TNEB Substation with associated 110 Kv SC line on DC tower, total length of 2.75 Kms from 110/33 kV NVR pooling substation. And the power generated by M/S Narbheram Solar TN Pvt. Lyd. is transmitted through 1 no of 110 kV bay at 110/33 kV Narbheram Pooling station at Kolankinaru to the existing Thennampatty 400/230-110 KV TNEB substation. The operational lifetime of the solar module installed in the project activity is 25 years, Same has verified via technical specification document provided by the manufacturer^{/15/}. Technical specification of installed turbine in the project activity is provided in section A.3 of the final PSF^{/10/}. Same is verified and confirmed by verification team. The technical details of the project activity have been summarised below.

Technical specifications of 200 MW solar power project in Tamil Nadu are provided below;

Parameter	Value		
Technical Summary – SOLAR			
Solar AC Capacity (MW)	200 MW		
Solar DC Capacity (MWp)	212 MWp		
Capacity of Modules	320Wp		
No. of Modules (approx.)	642,424 No's o	f 330Wp	
PV Modules Specifications (Propos	ed)		
PV Module Make	Hanwha Solar	one	
Module Model	330 Wp		
Rated Maximum Power (Pmax)	330 Wp		
Open Circuit Voltage (Voc)	45.3 V & 45.6V		
Short Circuit Current (Isc/A)	9.02 A & 9.10 A	١	
Temperature Coefficient of Pmax	-0.41% ⁰ C		
Inverter Make	TMEiC		
No of Inverters	58		
Inverter Capacity	2091 KVA		
Expected lifetime	25 years		
degradation factor	0.7%		
Type of meter(s)	Energy Meter		
Location of meter(s)	33/110 KV Power Transformer and connected to 110 kV bus of 400/230-110 kV Thennampatti Sub-station		
Accuracy of meter(s)	0.2		
Serial number of meter(s)	Meter type Main Meter Check Meter	NVR TNW02266 TNW02267	NSTN TNW02270 TNW02271

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Calibration frequency	Once in 5 years
Calibration Status	Calibrated

Further, in order to confirm the legal ownership of each project activity mentioned in above table, Verification team verified through each site's commissioning certificate^{/14/} and Power Purchase Agreement^{/16/}. Same we also cross checked with GCC LON^{/40/} attested by each legal owner. Thus, found acceptable.

The Project Owners have fixed the crediting period of 10 years which is in accordance with the GCC program manual/01/ and will generate an estimated 314,555 tCO₂e emission reductions annually/11/.

The project activity described as Type A2 (Sub-Type 1) and applied ACM0002 Version 21.0^{/12/}, falls into the Large-scale category as per CDM methodology^{/12/}.

No sampling approach was applied, as it was not required by the applied methodology^{/12/}, with regard to verification of project description in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities Version 09". In addition to generating emission reductions the solar power plant also qualifies for other voluntary certification labels.

In addition to generating emission reductions the project activity also qualifies for other voluntary certification labels: -

Voluntary Labels	Applied by the project	Score/label
Achieving the United Nations Sustainable	Yes	03 SDGs
Developmental Goals (SDG+)		(Silver)
Environmental No-net harm (E+)	Yes	+04
Social No-Net harms (S+)	Yes	+03
CORSIA (C+)	Yes	ACCs Generated during
		the crediting periods.

In the baseline scenario the main source of emission was found to be CO_2 as electricity was generated mainly through fossil-fuel based power plants whereas in project scenario the electricity is generated by the Solar Power plant thereby reducing the CO_2 emissions^{/11/}. Thus, non-application of GWP in this project activity was found to be acceptable as the project boundary does not include any of the GHG emissions in the project scenario as per the applied methodology^{/12/}.

The Description in the PSF^{/10/} includes sufficient details and provides clarity on the project activity Further verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry^{/23/}, VERRA Registry^{/24/}, Gold Standard (GS) Registry^{/25/}, and voluntary non-GHG Programs like I-REC Renewable Energy Certificate (REC)^{/26/} Mechanism in India for the information regarding the consistency of the title of the project activity , GPS coordinates, Legal Ownership of the Project activity to determine if the project was part of any other GHG Program prior to commencement of this verification. It was confirmed that the involved project owners have not submitted the project under any other GHG program apart from GCC.

Findings

CAR 01 & CAR 03 were raised and closed successfully. Please refer to the appendix 4 for further details.

Conclusion

The project description was verified based on the review of documents. Based on the review of documents and by means of onsite verification the details provided in the PSF/10/ is found acceptable and complete.

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

D.3.1 Application of methodology and standardized baselines

Means of Project Verificatio n

Project owner has applied CDM methodology – ACM0002 Version 21.0^{/12/} and no standardized baseline is used. Applicability of the methodology^{/12/} is verified as below;

oject sta erificatio	andardized baseline is used. Applicability of the methodology ⁽¹²⁾ is verified as below;			
1	Applicability Conditions as per ACM0002	Applicability to this Project Activity	Verification by Verification team	
, F	This methodology is applicable to grid-connected renewable 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 is a Renewable Energy Project i.e., Solar Power Project which falls under applicability criteria option 1 (a) i.e., "Install a Greenfield power plant". Hence the project activity meets the given applicability criterion.	Verification team, through technical specification review and physical site visit verified that the project activity is greenfield grid connected solar power plant. Hence this criterion is fulfilled.	
i i r	n case the project activity involves the ntegration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that: a. Integrate BESS with a Greenfield power plant; b. Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic or wind power plant(s)/unit(s); c. Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s); d. Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or	This criteria is not applicable for this project activity as it does not use battery Energy Storage System.	The applicability criterion is met as the project activity includes generation of electricity from a renewable source of energy (solar power) and is a green field project which neither includes capacity addition nor rehabilitations/retrofit. This has been verified during site visit and commissioning certificates issued by respective state utility.	
	wind power plant(s)/unit(s). The methodology is applicable under the following conditions: 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; b. In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind,	The project activity is an installation of a new grid connected renewable energy solar PV power plant and hence condition (a) is met. The conditions (b) to (d) are not applicable for this project activity.	applicable as the	

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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; c. In case of Greenfield project activities, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g., by referring to feasibility studies or investment decision documents): d. The BESS should be charged with electricity generated from associated renewable energy power plant(s). Only during exigencies may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions. The charging using the grid or using fossil fuel electricity generator should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. During the time periods (e.g., week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance certified emission the reductions for the concerned periods of the monitoring period. In case of hydro power plants, one of the This condition is not This is not applicable following conditions shall apply: relevant, as the project as the project activity is the installation of (a) The project activity activity is not the solar PV Panels to implemented in existing single or installation of a hydro multiple reservoirs, with no power plant. generate electricity

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change in the volume of any of the reservoirs; or (b) The project activity implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²; or (c) The project activity results in new single or multiple reservoirs and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m2; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, as per definitions given in the Project Emissions section, is lower than or equal to 4 W/m2, all of the following conditions shall apply. (i) The power density calculated using the total installed capacity of the integrated project, as per definitions given in the Project Emissions section, is greater than 4 W/m2; (ii) Water flow between reservoirs is 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/m2 shall be a. Lower than or equal to 15 MW; and

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Less than 10 per cent of the total installed capacity of integrated hydro power

project

	n 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	This condition is not relevant, as the project activity is not the installation of a hydro power plant.	This is not applicable as the project activity is the installation of solar PV Panels to generate electricity.
	(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 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.		
	Project activities that involve switching from fossil fuels to renewable energy 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; Biomass fired power plants;	The project activity does not involve any of the given criteria hence methodology is applicable for the project activity.	This is not applicable as the project activity is the installation of solar PV Panels to generate electricity.
c c b ic c t t t it	n the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible caseline scenario, as a result of the dentification of baseline scenario, is "the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the mplementation of the project activity and undertaking business as usual	The project activity is a new solar power plants. Also, no replacement, modification and retrofit measures are implemented here. Hence, this criterion is also not relevant to the project activity.	This is not applicable as the project activity is the installation of solar PV Panels to generate electricity.

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maintenance". Applicability of the Tool 07/13/ "Tool to calculate the emission factor for an electricity system", is verified as below: **Applicability Conditions as per Tool** Applicability to this Verification by **Project Activity** assessment team This tool may be applied to estimate the condition This project involves This OM, BM and/or CM when calculating applicable. OM, BM, generation electricity baseline emissions for a project activity and CM are estimated through small power that substitutes grid electricity that is using the tool under plant where generated where a project activity supplies section B.6.1 electricity is delivered for electricity to a grid or a project activity that to the grid. Thus, the calculating baseline emissions. Only grid results in savings of electricity that would applicability criteria were found to be met. have been provided by the grid (e.g., connected plants demand-side energy efficiency projects). have been considered for the calculation of OM and BMcalculations. "CEA CO₂ Database. version 18.0"/34/ published by Central Electricity Authority which outlines Operating, Build and Combined Margin Emission Factors for

Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, the conditions specified in "Appendix 2: Procedures related to off-grid power generation" should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation

Since the project activity is grid connected. this condition is applicable, and the emission factor has been calculated accordingly. The emission factor for the project electricity system is calculated for grid power plants only.

Indian Grid was used for the calculations. In

provided, it can be

calculation is based on grid connected

that

of

link

FF

reference

plants only.

seen

The project activity is grid connected and thus emission factor is calculated and thus OM, BM and CM are estimated using the tool under section B.6.2 of the PSFfor calculating baseline emissions.

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and not to other aspects such as		
·		
transmission capacity.		
In case of CDM projects the tool is not	The project activity is	The project activity is
applicable if the project electricity system	located in India, a	located in India, a non-
is located partially or totally in an Annex I	non-Annex I country.	Annex I country.
country.	Therefore, this	Therefore, this
	criterion is not	criterion is not
	applicable for the	applicable for the
	project activity	project activity
Under this tool, the value applied to the	The project activity is	The condition is not
CO ₂ emission factor of biofuels is zero.	a grid connected solar	
	power project and	database ^{/34/} does not
	does not use biofuels.	include any biofuel
	Therefore, this	plant
	criterion is not	
	applicable for the	
	project activity. The.	

Applicability conditions of Tool 01- Tool for the demonstration and assessment of additionality, Version 7.0.0.

Applicability Conditions as per Tool -01	Applicability to this Project Activity	Verification by Verification team
The use of the "Tool for the demonstration and assessment of additionality" is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.	The project is not proposing any new methodologies, hence the use of the "Tool for the demonstration and assessment of additionality" is mandatory. Refer to section B.5 of PSF for details where additionality of the project activity is demonstrated using TOOL1.	The methodology is approved in CDM and the tool is included by the same approved methodology viz., ACM0002 version 21.0. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met. The project owner does not propose any new methodologies to demonstrate additionality.
Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.	Steps of this tool are applied in the section B.5 of the PSF.	The methodology is approved in CDM and the tool is included by the same approved methodology viz., ACM0002 version 21.0. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met.

Applicability conditions of Tool 24 - Common practice—Version 3.1. is verified as below;

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Applicability Conditions as per Tool -24	Applicability to this Project Activity	Verification by Verification team
This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality.	As "Tool for the demonstration and assessment of additionality" is applied, therefore, Tool 24 is applied and complied with for investment analysis for the demonstration of additionality. Please refer to section B.5 of PSF for details.	Project activity applies "Tool for the demonstration and assessment of additionality". Hence this tool is applicable.
In case the applied approved baseline and monitoring methodology defines approaches for the conduction of the common practice test that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	Not Applicable. The applied approved baseline and monitoring methodology does not define any different approaches for the conduction of the common practice test from those described in this methodological tool.	Not applicable

Applicability conditions of Tool 27- Investment Analysis – Version 12.

Applicability Conditions as per Tool -27	Applicability to this Project Activity	Verification by Verification team
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 "Nonbinding 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.	Project activity applies "Tool for the demonstration and assessment of additionality". Hence this tool is applicable
In case the applied approved baseline and monitoring methodology contains	The applied approved baseline and monitoring methodology does not	Not applicable

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	requirements for the investment	· · · · · · · · · · · · · · · · · · ·		
	analysis that are different from			
	those described in this	different from those		
	methodological tool, the			
	requirements contained in the	methodological tool. Hence,		
	methodology shall prevail.	Not Applicable.		
Findings	CAR 02 & CAR 06 were raised in this section and closed successfully. Please refer to the			
	appendix 4 for further details.			
Conclusio	The verification team confirms that; It has critically assessed each applicability condition listed in			
n	the selected methodology/12/ and the relevant information contained in the PSF/10/ against these			
	criteria. The selected CDM methodol	ogy/12/ (and tools) for the project activity is applicable		

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

Means of Project Verification	Since the applicability of methodology ^{/12/} was found to be fulfilled, further clarification to the methodology ^{/12/} were not required.
Findings	No finding was raised.
Conclusion	The verification team confirms that; It has critically assessed each applicability condition listed in the selected methodology/tool/12/ and the relevant information contained in the PSF/10/ against these criteria.

D.3.3 Project boundary, sources and GHGs

Means of Project Verification	As per the applied methodology ACM0002 Version 21.0 ^{/12/} , the project boundary is 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 project power plant is connected to. The components of the project boundary mentioned in the PSF ^{/10/} were found to be in compliance with para 22 of the applied methodology ^{/12/} The verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified. The verification team confirmed that all GHG sources required by the methodology ^{/12/} have been included within the project boundary. It was assessed that no emission sources related to project activity will cause any deviation from the applicability of the methodology ^{/12/} or accuracy of the emission reductions. The project boundary is clearly depicted with the help of a line diagram in section B.3
	of the PSF/10/ and duly verified by the verification team via Google earth and geo- coordinates and was found appropriate.
Findings	No findings were raised
Conclusion	The verification team was able to assess that complete information regarding the project boundary has been provided in PSF ^{/10/} and could be assured from the line diagram.
	The verification team confirms that the identified boundary, selected emissions sources are justified for the project activity.

D.3.4 Baseline scenario

Means of	Project	The baseline scenario as per paragraph 47 of the applied methodology/12/, prescribed
Verification		the baseline scenario of the project activity. The project activity will displace electricity
		from an electricity distribution system that is or would have been supplied
		by at least one fossil fuel fired generating unit i.e., in the absence of the project
		activity. As per paragraph 47, Baseline emissions for other systems are the product

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of amount electricity displaced with the electricity produced by the renewable generating unit and an emission factor.

The relevant National and/or sectoral policies, regulations and circumstances such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector have been taken into account in the identification of the baseline scenario such as:

- Electricity Act 2003/30/
- National Electricity policy 2005/31/
- The Electricity (Supply) Act, 1948/45/
- The Electricity Regulation Commission Act, 1998/46/
- Schedule 1 of Ministry of Environmental and Forest notification^{/28/}
- Tariff Policy 2006/22/

Determination of Grid Emission Factor (EF_{grid,CM,y})

The project owner used the "Tool to calculate/13/ the emission factor for an electricity system" to determine the emission coefficient as per 23 (a) of the indicatives simplified baseline and monitoring methodologies for selected small scale CDM project activity ACM0002 Version 21.0/12/ methodology and "Tool to calculate the emission factor for an electricity system"/13/ states that 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. In this case the Combined Margin (weighted average of Simple Operating Margin and Build Margin) is estimated based on three years average (2018-19, 2019-20, 2020-21) of Simple Operating Margin and Build Margin of current year (2020-21) is in line with steps of "Tool to calculate/13/ the emission factor for an electricity system". Both the value of Simple Operating Margin and Build Margin are selected under ex-ante approach. The grid boundary w.r.t the connected grid is INDIAN grid.

In accordance with "Tool to calculate the emission factor for an electricity system"^{/13/} Dispatch Data Analysis" is the first methodological choice out of four options of calculating OM emission factor. Nevertheless the "Dispatch data analysis operating margin" is ruled out in India due to lack of necessary dispatch data of the grids. The same fact is also considered by the Central Electricity Authority^{/28/} (Ref the user guide for CO₂ Baseline Database for the Indian Power Sector version 18.0^{/34/}, December 2022)

Out of other 3 options of calculating OM Project Owner have rightly selected simple OM emission factor calculation as the share of low cost / must run resources of the selected grid over the three most recent years (18-19, 19-20, 20-21) which is less than 50% of the gross grid generation. For wind and solar projects, "Tool to calculate the emission factor for an electricity system"/13/ allows the usage of the default weights for solar project are as follows: $W_{OM} = 0.75$ and $W_{BM} = 0.25$. Using the above values, the combined margin emission factor is valued at $0.9310 \text{ tCO}_2/\text{MW}h$.

The calculation of $\mathsf{EF}_{\mathsf{grid},\mathsf{CM},\,y}$ is current and publicly available and published by the Central Electricity Authority on its web-site. The verification team is convinced of the result of the emission coefficient calculation. It is deemed to be adequate and transparent.

The baseline scenario in the PSF/10/ is reported as the supply of electricity to grid and thereby displacement of electricity from the electricity distribution system connected to the Indian Grid. The baseline scenario applied in the PSF/10/ was compared with the requirements of the baseline described in the applied methodology/12/ and found consistent.

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Findings	No findings raised in this context
Conclusion	 The verification team confirms the following; All assumptions and data used by the project participants are listed in the PSF/10/, including their references and sources; All documentation used by project participants as the basis for assumptions and source of data for establishing the baseline scenario is correctly quoted and interpreted in the PSF/10/; The verification team also concluded that the identified baseline scenario reasonably represents what would occur in the absence of the project
	activity

D.3.5 Demonstration of additionality

Means of Project Verification

As per section 6.4.8 'Project additionality' of the GCC Project standard/2/, the following two approaches are used for the demonstration of additionality:

During conceptualization of the project activity, board of directors of the project owners considered the GCC revenue to improve the project financials. During the board meeting for board of Directors decided that they would consider GCC revenue for their project activity. In continuation to the board decision (mentioned in below table) /28/, PO issued the respective purchase order for the supply of Solar modules.

S.No	Document Name	Document Date
1	RFS	01/04/2017
2	Detailed Project report	04/05/2017
3	Board Resolution	25/05/2017
4	Letter of Award	29/08/2017
5	Power Purchase Agreement	26/09/2017
6	Purchase order	04/03/2019
7	Commissioning	24/10/2019

For demonstrating additionality under GCC the project activity is required to undergo the following tests

a) **Legal Requirement Test:** - based on the available literature on Electricity Market Law in India it was confirmed that there are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions or other legally binding mandates requiring its implementation, or requiring the implementation of a similar technology/measure that would achieve equivalent levels of GHG emission reductions.

b) Additionality Tests:

As per the applied methodology ACM0002 Version 21.0, additionality of the following project activity is demonstrated and assessed by the latest version of Tool 01: Tool for the demonstration and assessment of additionality" Version 7.0. The PO has adopted the stepwise approach for demonstrating and assessing the additionality of the project activity as follows:

Project was envisaged for capacity of 200 MW in Tamil Nadu state of India i.e., which consists of 100 MW of two unit in Thoothukudi (Tuticorin), Tamil Nadu, state of India, Currently, project activity is fully commissioned and continuously contributing towards emission reduction. GCC PSF for this project activity was web-hosted for

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global stakeholder's consultation on 05/10/2022. Start date of the Project is 24/10/2019 which is the commissioning date of both plants covered under project activity.

In line with GCC Project Standard, version 03.1., the additionality of the Project activity is ascertained in line with the applicable guidance from the GCC. The demonstration of additionality for the proposed Project activity is being carried out in accordance with the additionality tool provided by the UNFCCC i.e., "Tool for demonstration and assessment of Additionality" Version 07.0.0. The tool provides a step-wise approach to demonstrate additionality which is displayed below:

Step 0: Demonstration whether the proposed project activity is the first-of-its-kind

The proposed project activity is not the first-of-its-kind. Hence not applicable.

Step 1: Identification of alternatives to the project activity consistent with current laws and regulations

Alternative 1: The proposed project activity without GCC benefit;

Alternative 2: Continuation of the current situation, i.e., electricity will continue to be generated by the existing generation mix operating in the grid.

Having regard to the fact that the project activity under consideration is solar power project, verification team is convinced that there are no other realistic and credible alternatives. Both the alternatives are in compliance with all applicable legal and regulatory requirements as; the implementation of project activity is a voluntary initiative and is not mandatory or a legal requirement; the applicable environmental regulations do not restrict the use of solar energy; and There is no legal requirement on the choice of a particular technology.

Verification team noted that the project fulfils the norms put down by Central Pollution Control Board. As per Central Pollution Control Board (Ministry of Environment & Forests, Govt. of India), final document on revised classification of Industrial Sectors under Red, Orange, Green and White Categories (29/02/2016).

The newly introduced White category of industries pertains to those industrial sectors which are practically non-polluting such as Biscuit trays etc. from rolled PVC sheet (using automatic vacuum forming machines), Cotton and woolen hosiers making (Dry process only without any dying/washing operation), Electric lamp (bulb) and CFL manufacturing by assembling only, Scientific and mathematical instrument manufacturing, Solar power generation through photovoltaic cell, wind power and mini hydel power (less than 25 MW). Thus, There shall be no necessity of obtaining the "Consent to Establish/Operate" for White category of industries.

However, of the two alternatives identified, alternative (i) cannot be considered realistic as further analysis in the following paragraph reveals that it is not economically feasible option. Hence, alternative (ii) alone could be justified as realistic, credible and plausible alternative to the PP.

Verification team is therefore, convinced that the project developer has taken into consideration all realistic and credible alternatives (having regard to the governing methodologies) including the project being undertaken as a non-GCC activity and continuation of current scenario. The identification of alternatives is in conformity with the guidance given by the tool.

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Outcome of Sub-step 1a: All the realistic alternatives for the project activity have been enlisted above.

Sub-step 1b: Consistency with mandatory laws and regulations:

The alternative(s) shall be in compliance with all applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g., to mitigate local air pollution. (This sub-step does not consider national and local policies that do not have legally-binding status.)

Both the alternatives are in compliance with all applicable legal and regulatory requirements as;

The implementation of project activity is a voluntary initiative and is not mandatory or a legal requirement;

The applicable environmental regulations do not restrict the use of solar energy; and

There is no legal requirement on the choice of a particular technology.

Moreover, Outcome of Sub-step 1b: Hence, both the alternatives enlisted above are found to comply with the mandatory laws and regulations taking into account the enforcement of the legislations in the region or country and EB decisions on national and/or sectoral policies and regulations. However, Alternative 2 has been selected as the appropriate baseline alternative for this project activity.

Step 2: Investment analysis

Determine whether the proposed project activity is economically or financially less attractive than at least one other alternative, identified in step 1, without the revenue from the sale of emission reductions credits. To conduct the investment analysis, use the following sub-steps:

Sub-step 2a: Determine appropriate analysis method and Sub-step 2b (Option III): Apply benchmark analysis

a) Suitability of investment analysis, financial indicator and benchmark:

Project developer had demonstrated that the financial returns of the proposed GCC project activity would be insufficient to justify the required capital investment as per GCC Verification Standard. In the PSF, Project Owner has adopted a conservative approach to identify the benchmark for the project activity. The project is generating revenue in terms of power generated from the Solar power plant being used for sell to grid. Thus, simple cost analysis (Option I) is not appropriate. Hence out of 2 options, investment comparison analysis (Option II) benchmark analysis (Option III), benchmark analysis is used for the project activity as per project type and decisionmaking context. Therefore, the Expected return on equity is considered appropriate benchmark. Accordingly, the post-tax Equity IRR has been considered as the relevant financial indicator for the project activity which is acceptable to the Verification team. Moreover, the financial indicator selected by the PO is correct based on the fact that tool do not restrict the PO to either use project IRR or Equity IRR. This is under the prerogative of the PO to select appropriate indicator based on his preferences to know the IRR based on his equity investment or debt investment. The same is thus acceptable to the Verification team. Verification team however checked the Equity IRR calculation and found that input assumptions used for the

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calculation of Equity IRR are applicable at the time of investment decision of the project and thus is in accordance with the relevant guideline of the tool.

"In situations where an investment analysis is carried out in nominal terms and the available IRR benchmarks are in real terms, project owner shall convert the real term values of benchmarks to nominal values by adding the inflation rate. The inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period. If this information is not available, the target inflation rate of the central bank shall be used. If this information is also not available, then the average forecasted inflation rate for the host country published by the IMF (International Monetary Fund World Economic Outlook) or the World Bank for the next five years after the start of the project activity shall be used"

The investment analysis has been carried out in Nominal terms. Accordingly, default value has been adjusted by adding suitable forecasted inflation rate taken from RBI (Central Bank, India). Project Participant has calculated Benchmark based on WPI mean inflation rate. As per the Tool for the determination and assessment of additionality version 07, available to the PO at the time of Investment decision, the inflation forecast should be for the duration of the crediting period. However, since RBI provides forecast inflation only for 5 & 10 years, the project investor has calculated benchmark using 10 years durations and the same is considered as Benchmark for the project activity⁸.

As per the Tool for the determination and assessment of additionality version 07 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:

Appendix A specifies default value of expected return on equity in real terms for Energy Industries (Group 1) in India = 9.77% (PO referred Methodological Tool Investment analysis version 12.0 for default value as a conservative approach)

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

Nominal Benchmark 9 = {(1+Real Benchmark) x (1+Inflation rate)}-1

Where:

- Default value for Real Benchmark = 9.77% (Tool Investment analysis version 12.0)
- Inflation Rate forecast by Reserve Bank of India (RBI) (i.e., Central Bank of India) for India & in case where RBI Inflation forecast was not available, average Inflation rate forecast for India has been sourced from IMF web site.

Benchmark estimation:

Chronology of major events regarding project activity are as follows: -

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⁸ Since RBI provides inflation forecast only for 5 years and 10 years, hence inflation forecast for 10 years is being considered keeping in view length of crediting period to be 10 years.

⁹As per Fisher Equation, https://en.wikipedia.org/wiki/Fisher_equation

Project Location	DPR date	Investment decision date ¹⁰	PPA date	O&M agree ment date	EPC contract date / Purchase Order date
Tamil Nadu 200 MW	04/05/2 017	25/05/2017	26/09/2017	15/03/2 019	04/03/2019

Since RBI publishes the inflation forecast for 5 years and 10 years, PO has considered the maximum 10-year inflation considering the renewable crediting period to be 10 years.

Inflation Forecast for India as per RBI website:

Project Capacity	Technology	State	Inflation Forecast WPI Mean value from RBI	Benchmark
200 MW	Solar	Tamil Nadu	4.50% ¹¹	14.71%

b) Parameters and assumptions used:

The project activity is a renewable source of electricity generation and supplies the electricity to the Indian Electricity grid. The key parameters which determine the Equity IRR of the project activity are project cost, PLF and profitability estimates.

In the revised GCC PSF, the project cost is based on the DPR (Detailed Project Report). The details of the DPR are as below:

Project cost as per the DPR: -

Site Name	Project Owner	Project Capacity (MW)	Project Cost (In Million INR)	DPR Date
Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	8,860.00	04/05/2017

DPR has been submitted to verification team. The DPR was available during decision making and financial profitability of the project was decided based on this DPR. Verification team observed that, Narbheram Solar TN Private Limited and NVR Energy Private Limited both are parent company of Narbheram Power & Steel Private Limited. The boards of directors for Narbheram Solar TN Private Limited and NVR Energy Private Limited are identical, indicating a partnership between these entities, Detailed project report is prepared for complete 200 MW, Verification team verified the board resolution for 200 MW, find it consistent. Verification team checked the DPR of the project activity and found that consideration of the project cost in revised GCC PSF is correct and it is in line with Appendix of Methodological tool "Investment Analysis" Version 12 as well as in compliance to GCC Verification Standard. Hence, the project cost consideration is justified. Verification team checked the actual project cost and still the project do not breach the benchmark. The sensitivity analysis below confirms the same. Since the actual cost is considered there is no way the cost can go up and thus the same is assessed to be correct. Further, also cross checked with

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¹⁰ The investment decision dates of the project activities have been referred from the Board Resolution document of the projects. Same has verified through Board Resolution letter.

https://rbi.org.in/Scripts/PublicationsView.aspx?id=17433

the CA (Chartered Accountant) certificate submitted to the verification team, details are as follow:

Site Name	Project Owner	Project Capacity (MW)	Actual Project Cost (In Million INR)	CA Certificate Dated
Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	8,024.20	15/10/2020

In India, infrastructure projects are generally entitled to a debt equity ratio of 70:30. The debt equity ratio for the project is 70:30. Verification team checked the order for the respective state regarding ratio of debt and equity which was available at the time of investment decision and found that the ratio of Debt to equity was considered correctly for the present verification condition.

The profitability of the project, which forms the basis for IRR calculation is based on installed capacity, PLF, electricity tariff, O&M cost, depreciation, and taxation.

C) Assessment of Plant Load Factor (PLF):

PO considered the Plant load factor as per DPR:

Site Name	Project Owner	Project Capacity (MW)	PLF (%) = 3rd party DPR	DPR Date
Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	19.90%	04/05/2017

D) Assessment of Electricity Tariff:

Tariff rate as per DPR and PPA: -

Site Name	Project Owner	Project Capaci ty (MW)	Tariff Rate (as per DPR) (In INR)	Tariff Rate (as per PPA) (In INR)	PPA Date
Tamil	Narbheram Power &	200	4.00	3.47	26/09/2017

Verification team assessed the tariff and found that same value was available during decision making and in conformity with guidance Appendix of Methodological tool "Investment Analysis" Version 12.0. Furthermore, Verification team has also checked the actual tariff as mentioned in electricity invoices. IRR is still below benchmark with the consideration of PPA signed which is valid for total operational lifetime of the project.

e) Assessment of O& M cost:

O&M as per Detailed Project Report: -

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Site Name	Project Owner	Project Capacity (MW)	O&M Cost (In Million INR) (Without tax)	DPR Date
Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	140.00	04/05/2017

The offer letter has been used in the financial calculation as same was available during decision making and hence applicable. According to Appendix of Methodological tool "Investment Analysis" Version 12.0, the cost should be based on the input parameters available at the time of decision making and the PO has submitted offer letter supporting this consideration. Therefore, considering the above assessment, verification team concluded that the O&M cost considered from respective offer letter in the computation of financial indicator is in conformity with guidance Appendix of Methodological tool "Investment Analysis" Version 12.

Further, the actual O&M agreements were also signed for individual Legal owners and the values are mentioned in the below table. The IRR is still below the benchmark:

Site Name	Project Owner	Project Capacity (MW)	O&M Cost (In Million INR) (Without tax)	O&M agreement Date
Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	40.00	15/03/2019

F) Assessment of Tax computation:

The project owner has adopted book depreciation rates as per Schedule XIV of the Companies Act, 1956 for computing book profit and Income Tax Act 1961 stipulated for income tax calculation, which are in conformity with the accepted accounting principles adopted by the company and income tax laws in the host country. The block of assets has been computed for depreciation purpose as per the accepted accounting principles. Tax liability has been calculated as per the income tax rules and the rulings given. In computing the income tax liability, the project developers have considered Tax holiday (u/s 80IA of the Income Tax Act, 1961). Accelerated depreciation on plant and machinery is also sourced from IT act. The tax rates assumed corresponds to the tax rate prevailing at the time of taking decision. Hence, these assumptions are appropriate during decision making context.

g) Cross checking parameters:

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Name of the parameter	DOE assess	ment					
Project Cost	The proposed project activity consists of below SPVs. The details are given below.						
	Project Owner	Project Cap	pacity Pro (In INR	ject Cost Million	Project (Million I		
	Narbheram Power & Steel Private Limited	200 MW	8,86	60.00	44.30		
	The project c at the time do The Verificat project site fi that, the redu analysis. Sinchence, increase	ecision made ion team has rom the EPC action in projece the compasse of the sa	for the pross also check Contracts act cost is we rison is dorume in futu	ject activity cked the ace and CA ce rithin 10% r re with actu re is not pe	tual cost ctual cost rtificate a ange of s al project ossible. T	of each	
	project activit	ty is additiona	al with actua				
	Site Name	Project Owner	Project Capacity (MW)	Million INR)- Actual	per Actual CA CA te Certif	ct (In (In INR) MW- al from ficate EPC	
	Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	8,024.20	40.12		
	The difference to time difference to time difference to time difference to the verificat and found the appropriate. Based on secost consider found to be a cost is availabenchmark at the IRR as particular to the time to the	erence, man kills of individual tion team als at project co ctoral scope red as per D appropriate for lable to Ver and thus the s	nufacturer, lual PO etc o checked st consider expert and PPR for the or solar pro- ification te- eame is acc	different s different s ed for proj local know proposed ojects. Also am and II eptable.	tates tariect is four ledge, the project as, since the RR is st	ontractor ff orde nd to be e proje nctivity ne actu ill with	
	THE INIT AS	Jei tile assu		Project	13 43 10	llows.	
	Site Name	Project Owner	Project Capacity (MW)	Cost (In Million INR)	IRR	Benc mark	
	Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	8,860.00	8.60%	14.71 %	

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-	The IRR as	per the actual	project cost	is defined	as below:
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THE IIVIV 43	per the actual project cost is defined as below.				
Site Name	Project Owner	Project Capacity (MW)	Actual project cost as per the CA Certifica te and EPC Contract s	IRR	Benc hmar k
Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	8,024.20	11%	14.71 %

As described above actual project cost with benchmark, the project is still additional. Since the comparison is done with actual project cost, the increase of the same in future is not possible. Thus, Verification team is of the opinion that project is still additional with the consideration of actual project cost for the project activity.

O&M cost and Escalation in the operational expense =5.7(%)-Standard practice in India

The proposed project activity consists of below SPVs. The details are given below.

Project Owner	Project (MW)	Capacity	O&M Cost (In Million INR)
Narbheram Power & Steel Private Limited	200 MW		140.00

The O&M cost has been considered from DPR and was available at the time decision made for the project activity.

The Verification team has also checked the actual O&M contract for each project site and found the changes in O&M cost is within threshold limit. Thus, the project activity is additional with actual O&M cost.

Site Name	Project Owner	Project Capacity (MW)	O&M Cost (In Million INR) (Without tax)-Actual
Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	0.7

Even after consideration of O&M cost as zero, the project activity is additional.

The Verification team also checked different states tariff orders and found that O&M cost and its escalation considered for project is found to be appropriate.

IRR value as per the assumptions from the DPR is as below:

Project Owner	Project Capacity (MW)	O&M Cost (In Million INR)	IRR	Benchmark
Narbheram Power & Steel Private Limited	200 MW	140	8.60%	14.71%

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IRR value based on the actua	al O&M agreements signed is as
below:	

Delow.					
Site Name	Project Owner	Projec t Capaci ty (MW)	O&M Cost (In Million INR) (Without tax)- Actual	IRR	Bench mark
Tamil Nadu	Narbheram Power & Steel Private Limited	200 MW	40.00	10.92 %	14.71%

Even after consideration of O&M cost as zero, the project activity is additional.

Benchmark for the project as described above along with actual O&M value, the project is still additional.

Based on sectoral scope expert and local knowledge, the project O&M cost and its escalation considered as per Offer Letter for the proposed project activity is found to be appropriate for solar projects. Also, the O&M cost is available to Verification team and IRR is still within benchmark, thus, the same is acceptable.

The verification team has further cross checked per MW O&M cost of other below mentioned similar projects i.e.

Tariff

The proposed project activity consists of below SPVs. The details are given below.

Site Name	Project Owner	Project Capacity (MW)	Tariff Rate (as per DPR)	Tariff Rate (as per PPA & as per Invoices)
Tamil Nadu	Narbhera m Power & Steel Private Limited	200 MW	4.00	3.47

The Tariff rate has been considered from DPR and the same was available at the time decision made for the project activity.

The Verification team has also checked the actual PPA for each project site and found there are no changes in tariff rate and is within threshold limit. Thus, the project activity is additional with actual Tariff rate.

The tariff considered is levelized tariff and hence there is no any escalation. This is found to be appropriate and accepted.

IRR value as per the assumptions from the DPR is as below:

Site Name	Project Owner	Tariff Rate (as per DPR)	IRR	Benchmar k
Tamil Nadu	Narbhera m Power & Steel Private Limited	4.00	8.60%	14.71%

IRR value as per the actual PPA signed between Individual project owners and State electricity Board is as below:

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Site Name	Project Owner	Tariff Rate (as per PPA & invoices)	IRR	Benchm ark
Tamil Nadu	Narbheram Power & Steel Private Limited	3.47	5.66%	14.71%

Since the IRR is still below benchmark with the consideration of Actual Power purchase agreement signed which is valid for total operational lifetime of the project, Verification team confirms that the project is still additional with actual Tariff rate. Moreover, in the above table the order from State electricity tariff order is checked and it is confirmed that PPA signed with the rate as mentioned in the Tariff order and hence increase of the same is not possible. Based on sectoral scope expert and local knowledge, the project tariff rate considered as per state tariff order for the proposed project activity is found to be appropriate for solar projects.

PLF

The proposed project activity consists of below SPVs. The details are given below.

Project Owner	Project Capacity (MW)	PLF (%)
Narbheram Power & Steel Private Limited	200 MW	19.90%

Validation team assessed the DPR. Same report has been used in the financials and the emission reduction calculation. PLF estimation for combined 200 MW by TUV Rhineland (3rd party engineering company) is in line with Para 3 (b) Annex 11, EB 48 and acceptable to the Verification team.

The PLF has been taken from the DPR, and the same has been checked and found that PLF considered for the project activity in within the range of sensitivity analysis and found to be appropriate. Based on sectoral scope expert and local knowledge, the project PLF considered as per DPR for the proposed project activity is found to be appropriate for solar projects.

IRR for PLF value as per the DPR prepared by TUV Rhineland (3rd party engineering company), Annex 11 EB 48

Project Owner	Project Capacity (MW)	PLF (%)	IRR	Benchmark
Narbhera m Power & Steel Private Limited	200 MW	19.90%	8.60%	14.71%

IRR as per the PLF value of the Tariff orders= CERC (=Central Electricity Regulatory Commission) order. The details are given below:

Project Owner	Project Capaci ty (MW)	PLF (%)- As per the tariff order of State electricity regulatory commission	IRR	Benchmark
Narbhera m Power & Steel	200 MW	19%	8.60%	14.71%

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Private		
Limited		

Verification team also confirms that, by considering the PLF value as mentioned in the tariff order for Central Electricity Regulatory Commission, the IRR is still below the benchmark, hence, the project is additional.

Verification team also compared estimated PLF with respect to actual PLF covered during period 01/01/2021 to 31/12/2021 with the combined generation of both the unit . Actual PLF are as follows:

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Narbheram Solar TN Private Limited Generation (100 MW)	NVR Energy Private Limited, Generation (100 MW)	Combined Generation for 200 MW
		24 422 22
9,658.20	11,505	21,163.20
12,642.90	11,478	24,121.20
13,615.80	9,643	23,259.00
12,574.80	12,620	25,195.20
11,517	13,592	25,109
13,195.50	12,563	25,758.60
13,879.80	11,499	25,379.10
14,318.70	13,176	27,494.40
14,691.30	13,858	28,549.20
11,853.30	14,295	26,148.60
9,005.40	14,679	23,684.40
12,714	11,844	24,558
Total: 149,666.40	148,465	300,419.40

Project Owner	Project Capacit y (MW)	PLF (%)- Calculated as actual generation during period (01/01/2021 to 31/12/2021)	IRR	Benchmark
Narbhera m Solar TN Private Limited.	100 MW	17.14%	5.56%	14.71%

Additionally, when taking into account the Plant Load Factor (PLF) starting from the commissioning of each unit, it was observed that the actual PLF value falls within the estimated range. This observation is supported by generation records spanning from the commissioning date up until the present. Consequently, the verification team has reached the conclusion that the Internal Rate of Return (IRR) remains below the benchmark, indicating that the project is still additional.

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Tax Rates

Income tax rate (%)	34.94%
MAT (Minimum Alternate tax) (%)	21.55%
Health and Education Cess (%)	4.00%

The above table shows the tax rate considered for individual project Owner and the same is found suitable.

Verification team noted that the project developer has adopted book depreciation rates as per Schedule XIV of the Companies Act, 1956 for computing book profit and Income Tax Act 1961 stipulated for income tax calculation, which are in conformity with the accepted accounting principles adopted by the company and income tax laws in the host country i.e., INDIA. Tax liability has been calculated as per the income tax rules and the rulings given. In computing the income tax liability, the project developers have considered Tax holiday (u/s 80IA of the Income Tax Act, 1961). Accelerated depreciation on plant and machinery is also sourced from IT act. The tax rates assumed corresponds to the tax rate prevailing at the time of taking decision. Hence, these assumptions are appropriate during decision making context and thus acceptable to the Verification team.

No further assessment is required as the Values are directly procured from Income Tax Act, 1961 which is standard guideline for Tax value in India.

Sensitivity analysis:

The Guidance on Investment analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation. The project developer has identified Plant Load Factor (PLF), Project cost, Electricity tariff and O&M cost as critical assumptions. These critical parameters constitute more than 20% of either total project costs or total project revenues. The sensitivity analysis reveals that even under more favorable conditions, the IRR without CDM revenue would not cross the benchmark return as given in the following table:

Sensitivity Analysis:

Sensitivity result for 200 MW solar project at Tamil Nadu

Variation %	-10%	Normal	10%	Variation required to reach benchmark
PLF	6.36%	8.60%	11.23%	20.65%
O&M	8.94%	8.60%	8.26%	-204.26%
Project Cost	11.19%	8.60%	6.88%	-18.59%
Tariff Rate	6.36%	8.60%	11.23%	20.65%

The results of sensitivity analysis show that even with a variation of +10% & -10% in project cost, O&M cost, PLF and Tariff Rate, Equity IRR is significantly lower than the benchmark. And it is evident from the results given above; the project remains additional even under the most favorable conditions.

Verification team also confirmed the breaching values for individual parameters (=Individual project owners) and thus confirms that the project is still additional

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Site Name	Project Owner	Project Capacity (MW)	PLF in DPR	Actual PLF	Variati on in PLF	Breaching Value for PLF
Tamil Nadu	Narbhera m Power & Steel Private Limited	200 MW	19.90%	17.14%	13.86%	20.65%

Site Name	Project Owner	Project Capaci ty (MW)	DPR Project Cost	Actual Cost from CA Certificate	Variati on in projec t cost	Breaching value for Project Cost
Tamil Nadu	Narbhera m Power & Steel Private Limited	200 MW	8,860.00	8,024.20	-9%	-18.59%

Site Name	Project Owner	Project Capacity (MW)	DPR Tariff	PPA Tariff	Variation in Tariff	Breaching value in Tariff Rate
Tamil Nadu	Narbhera m Power & Steel Private Limited	200 MW	4.00	3.47	13%	20.65%

Site Name	Project Owner	Project Capacity (MW)	DPR O&M cost	Actual O&M cost	Varia tion in O&M	Breaching value in O&M
Tamil Nadu	Narbher am Power & Steel Private Limited	200 MW	140.00	40.00	-71%	-204.26%

Common Practice analysis: -

For 200 MW solar project in Tamil Nadu:

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The common practice analysis is proved by following points as per the requirement of Methodological tool "Common Practice", version 03.1 EB84, Annex 712:

Applicable Geographical Area (Para 9): The Andhra Pradesh state have been considered as the applicable geographical area for this project. PO had considered the Rajasthan as geo-graphical area due to regulatory regime since applicable power tariff structure for renewable energy projects is unique for all the states across national boundary of India; which is based on Electricity Act 2003 (EA 2003), section 82 which clearly mentions "Every State Government shall, within six months from the appointed date, by notification, constitute for the purposes of this Act, a Commission for the State to be known as the (name of the State) Electricity Regulatory Commission" Appropriateness of the same has been checked and confirmed from EA 2003 (http://www.cercind.gov.in/Act-with-amendment.pdf).

Furthermore, following significant points on the State specific policy & regulatory framework on the renewable energy projects with special emphasis to solar power projects have been validated:

Electricity Act 2003 (EA 2003) has changed the legal and regulatory framework for the renewable energy sector in India. The EA 2003 mandates policy formulation to promote renewable sources of energy by the federal government, the State governments and the State Electricity Regulatory Commissions (SERCs) within their jurisdictions.

The Electricity Act 2003 introduced some enabling provisions conducive to accelerated development of grid connected renewable energy sources. Under Section 61(h), promotion of cogeneration and generation of electricity from renewable sources of energy has been made the explicit responsibility of SERCs, which are bound by law to take these considerations into account while drafting their terms and conditions for tariff regulations. Nearly all SERCs have issued their tariff regulations incorporating suitable clauses, which will enable them to provide a preferential treatment to renewable energy (RE) during the tariff determination process. The SERCs determine the tariff for all renewable energy projects across the States, and the state-owned power Distribution Companies (DISCOMs) ensure grid connectivity to the renewable energy project sites.

EA 2003 has initiated the adoption of the National Tariff Policy, 2006 as one of the key policies, National Tariff Policy (2006) framed under the Section 3 of the EA 2003. As per the excerpt from National Tariff Policy, 2006; pursuant to provisions of section 86(1)(e) of the EA 2003, the Appropriate Commission shall fix a minimum percentage for purchase of energy from such sources taking into account availability of such resources in the region and its impact on retail tariffs. Such percentage for purchase of energy should be made applicable for the tariffs to be determined by the SERCs latest by 01/04/2006.

As mandated under section 86(1)(e) of the Electricity Act (2003), by 26/06/2012 SERCs had fixed quotas (in terms of % of electricity being handled by the power utility) to procure power from renewable energy sources. The mandate, which is called a Renewable Purchase Specification (RPS), varies from 0.5% to 14% in various states over varying time-scales. Few states have come out with technology specific RPSs. Besides, the state regulators determine the tariff for all RE projects in the states and ensure connectivity to the grid through extension of power evacuation from the RE project sites

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¹² https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-24-v1.pdf

At present thirteen SERCs have declared preferential feed—in tariffs (FITs) for purchase of electricity generated from solar power projects established in respective states, which varies from state to state in India. All the SERCs have adopted a 'cost plus' methodology to fix the feed—in tariff, which varies across the states depending upon the state resources, project cost and more importantly the tariff regulations of SERCs. Solar power related tariff polices in different states also has difference in regulatory and policy incentives. Several states have implemented fiscal and financial incentives for renewable energy generation, including; energy buy back (i.e., a guarantee from an electricity company that they will buy the renewable power produced); preferential grid connection and transportation charges and electricity tax exemptions.

Therefore, the investment climate for the renewable energy projects varies from State to State within India due to state specific local policy & regulatory framework as outlined by the State Electricity Regulatory Commissions of the respective state. This difference in investment condition leads to essential distinction among solar energy projects between different States of the host country India.

Thus, the specific geographical area i.e., state of Tamil Nadu for the common practice analysis of the proposed project activity is considered and thus the same is acceptable to the Verification team.

Measure (Para 10): The project activity reduces greenhouse gas emissions by generating electricity using renewable energy source- solar. Therefore, the project activity falls under the following measure:

(b) Switch of technology with or without change of energy source including energy efficiency improvement as well as use of renewable energies.

Output (Para 11): The project activity produces electricity. Therefore, electricity is considered as output of the project activity.

Different Technologies (Para 12): The project activity uses solar energy for producing electricity and hence as per Para 12(a), the technologies which use energy source/fuel other than solar will be considered as the different technologies for the project activity.

For the concerned project activity, Common Practice Analysis has been carried out for 200 MW capacity solar Power Project at Tamil nadu which is developed by Narbheram Power & Steel Private Limited

Stepwise approach for common practice analysis has been carried out as per Methodological tool "Common Practice" version 03.1 EB84, Annex 7:

Step (1): Calculate applicable capacity or output range as +/-50% of the total design capacity or output of the proposed project activity.

Range	Capacity	Unit
+50%	300	MW
Capacity of the proposed project activity	200	MW
-50%	100	MW

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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 GCC PSF is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity.

Identification of the similar projects (CDM and non-CDM) is carried out as per substeps of Step (2) as follows:

Verification team noted that as the projects are in Tamil Nadu state of India, therefore, projects in the geographical area of Tamil Nadu have been chosen for analysis. Each state has different policies regarding renewable energy; hence Tamil Nadu state is considered as geographical region for common practice analysis. The distinction from choosing the state to entire geographical boundary is already explained above in the report and thus the applied geographical area is acceptable to the Verification team

Verification team noted that the project activity is a green-field solar power project and uses measure (b) "Switch of technology with or without change of energy source including energy efficiency improvement as well as use of renewable energies". Therefore, projects applying same measure (b) are candidates for similar projects.

Verification team confirms during the site visit that the energy source used by the project activity is solar. Hence, only solar energy projects have been considered for analysis.

Verification team confirms during the site visit that the project activity produces electricity; therefore, all power plants that produce electricity are candidates for similar projects.

Since the project activity is 200 MW, the output range of \pm 50% has been considered as 300 MW (Higher range for comparison) to 100 MW (Lower range for Comparison) which is assessed to be correct.

As per CDM guidelines, the start date of the project activity is 24/10/2019 which is date of Technology purchase order. Therefore, projects which have started commercial operation before 24/10/2019, have been considered for analysis.

Numbers of Similar projects identified, which fulfil above-mentioned conditioned are

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 $N_{solar} = 08$

Verification team checked the sources which are considered to determine the similar projects and found correct.

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 verification. Note their number, Nall.

CDM project activities, which have got registered or are under validation have been excluded in this step. The list of the power plants identified is provided to the Verification team. After excluding the registered and under validation projects the total number of projects.

 $N_{all} = 5$

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 Ndiff.

As per the tool on Common Practice, the project activities have been separated from the different technologies on the basis two criteria:

Size of Installation – Verification team confirms that as the proposed project activity is a large-scale project and applies large scale methodology i.e., ACM0002 therefore small scale projects i.e. with capacity below or equal to 15 MW are considered as different projects.

Investment climate on the date of the investment decision – The solar projects developed under different phases and different batches of National Solar Mission (NSM) can considered as different technology projects, since National Solar Mission have different target and the investment scenario is different. For proposed project activity, there are no any different technology projects considered out of similar identified projects.

Hence, projects where either of the conditions is satisfied those projects are counted for calculating Ndiff projects.

Thus, $N_{\text{diff}} = 4$

Step (5): Calculate factor $F=1-N_{\text{diff}}/N_{\text{all}}$ representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology like the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.

Calculate $F = 1-N_{diff}/N_{all}$

F = 1-(4/5) = 0.2

As per methodological tool "common practice" version 03.1, the proposed project activity is a "common practice" within a sector in the applicable geographical area if the factor F is not greater than 0.2 and Nall - Ndiff is not greater than 3. Thus, if both conditions are fulfilled, then project activity will be a common practice.

Otherwise, the project activity is treated as not a common practice.

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	Outcome of Step 5:
	As,
	i. F = 0.2; which is equal to 0.2
	ii. N _{all} - N _{diff} = 1; which is not greater than 3
	The project activity does not satisfy both the conditions. Hence, project activity is not a common practice.
	Thus, the proposed project activity is not a "common practice" within a sector in the applicable geographical area.
	Conclusion:
	As described above, the project fulfils all necessary requirements of Additionality specified in the 'Tool for the demonstration and assessment of Additionality' v7.0.0. Hence, the project is additional.
	Hence, project activity is not a common practice. The above discussions show that Solar power development is not a common practice and the project activity is not financially attractive; hence the project activity is additional and the Verification team considers the approach and calculations acceptable as per the requirements in the methodological tool.
Findings	CL 01 & CAR 03 were raised and successfully closed. Please refer to the appendix 4 for further details.
Conclusion	The information mentioned in the PSF/10/ is duly supported by evidence quoted herein. The verification team has described all steps taken, and sources of information used to cross-check the information contained in the PSF/10/. The verification team determined that the evidence assessed is credible, where appropriate.

D.3.6 Estimation of emission reductions or net anthropogenic removal

Means of P Verification	Project	The verification team checked whether the equations and parameters used to calculate GHG emission reductions or net anthropogenic GHG removals for PSF ^{/10/} is in accordance with applied methodology ^{/12/} . Verification team checked section B.6 of the PSF ^{/10/} to confirm whether all formulae to calculate baseline emissions, project emission and leakage have been applied in line with the underlying methodology ^{/12/} .
		Emission reductions:- As per Paragraph 62 of the applied methodology, emission reductions are calculated as follows:- $ER_y = BE_y - PE_y$
		Where: $ER_y = Emission reductions in year y (tCO_2e/y)$ $BE_y = Baseline Emissions in year y (t CO_2/y)$ $PE_y = Project emissions in year y (t CO_2/y)$

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Baseline Emissions:

The baseline emissions as discussed in B.6.1 mentioned that the emission would have occurred in the absence of the project activity. The emission reduction calculation has been done as per the SSC methodology ACM0002 Version 21.0^{/12/}

 $BE_y = EG_{PJ, y} x EF_{grid, CM, y}$

Where,

 $BE_y = Baseline Emissions in year y (tCO₂/yr)$

 $EG_{PJ, y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the GCC project activity in year y (MWh/yr)

 $\mathsf{EF}_{\mathsf{grid},\mathsf{CM},y} = \mathsf{Combined}$ margin CO_2 emission factor for grid connected power generation in year y calculated using TOOL07 (tCO₂/MWh)

As per PSF the estimated net electricity generation from the project activity is 337,868 MWh/year which is calculated based on the respective PLF which is taken from the project detailed project report. The report has been verified. Hence the value considered by the Project owner is acceptable. Based on the sectoral expertise and manufactures guaranteed of the panel suppliers of the project activity this is acceptable to verification team. The combined margin emission factor calculated based on the Tool is 0.9310 tCO₂e/MWh. Hence the baseline emission value will be 314,555 tCO₂e/year.

Project emission: -

The quantity of diesel combusted in DG set will be monitored and the ex-post value will be used for estimation of project emissions in the crediting period. $PE_v = 0 \text{ tCO}_2$.

Leakage Emissions:-

As per the paragraph 61 of the applied methodology ACM0002, Version 21.0, "No other leakage emissions are considered. The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g., extraction, processing, transport etc.) are neglected.

 $ER_v = 314,555 - 0$

= 314,555 tCO₂e.

Based on the above estimation $ER_y = BE_y$, Hence the annual emission reductions based on the ex-ante parameters is 314,555 tCO₂e.

Findings Conclusion

No Findings were Raised.

Verification team confirm that the algorithms and formulae proposed to calculate project emissions, baseline emissions, and emission reductions in the PSF/10/ is in line with the requirements of the selected methodology ACM0002 Version 21.0/12/ For ex-ante calculation, the assessment team confirms that

- All assumptions and data used by the project participants are listed in the PSF/10/ including their references and sources.
- All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PSF/10/

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- All values used in the PSF^{/10/} are considered reasonable in the context of the proposed project activity
- The baseline methodology^{/12/} and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions:
- All estimates of the emissions can be replicated using the data and parameter values provided in the PSF^{/10/}.
- All calculations are complete and without any omissions.

D.3.7 Monitoring plan

Means of Project Verification

The monitoring plan is included in Section B.7 of the PSF based on the approved monitoring methodology ACM0002 Version 21.0 and is correctly applied to the project activity. The monitoring plan has been found to be in compliance with the requirements of the applied methodology for calculation of GHG emission reductions, GCC Environment and Social Safeguards Standard v.3.0, and Project Sustainability Standard v.3.1.

The assessment team has reviewed all the parameters in the monitoring plan against the requirements of the applied methodology and confirmed that monitoring parameters are applied in line with the requirement of the methodology and relevant in the context of the program. The procedures have been reviewed by the assessment team through document review and interviews with the respective monitoring personnel. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the project owner. Specifically, these points include the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the project. Therefore, the project owner will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

The parameters that are fixed ex-ante are:

The parameters that are fixed ex-ante are.					
Parameter	Value	Source			
Build Margin Emission	0.8687 tCO ₂ /MWh	Based on latest CO2			
factor (<i>EF</i> _{grid, BM, y})		Baseline Database for			
Operating Margin	0.9518 tCO ₂ /MWh	the Indian Power Sector			
emission factor (EF _{grid, OM,}		User Guide, Version			
(y)		18.0, December 2022			
Combined Margin CO2	0.9310 tCO ₂ /MWh				
emission factor					
$(EF_{grid,CM,y})$					

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

S.n	Monitoring	Assessment
ο.	Parameter	

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1. EG _{facility,y}	Quantity of net electricity generation supplied by the project
(SDG 7)	plant/unit to the grid in year y
	The monitoring parameter will be continuously monitored
	by means of bi-directional tri-vector energy meter
	(Mentioned in Appendix 08) of 0.2s accuracy class. For the
	purpose of measurement, the readings of main meter will
	be accounted in normal scenario but in case of failure of
	main meter, back up meter reading will be accounted. The calibration of the meters will be maintained by respective
	state utility. The monitoring parameter will be recorded for
	emission reduction on monthly basis. Value for electricity
	generation will be calculated as per the calculation method
	mentioned in table 3 of Section B.7.1 of PSF. Cross check
	mechanism also will be in line with the mechanism
	mentioned in the same section. This was confirmed by
	interviewing the monitoring personnel of the project activity
	during on site visit and verifying documents submitted by
	the project owner The monitoring practices followed by the
	project owner is appropriate in relation to the project activity
2. Local	and its acceptable to the assessment team.
2. Local Employment	This parameter is continuously monitored based on the number of local employments generated by the project
Generation	owner in the long-term basis. This will be verified using the
(SDG 8)	HR and payroll records of the employees who worked on
(0200)	the project activity along with details of female-male break
	up, age and role and persons with disabilities, if any. This
	was confirmed by interviewing the monitoring personnel of
	the project activity during on site visit and the monitoring
	practices followed by the project owner is appropriate in
	relation to the project activity and its acceptable to the
3. Climate	Verification team.
Action (SDG	The parameter is calculated based on the net electricity generation from the project activity and grid emission
13)	factor. Reduction of CO2 emissions due to implementation
1.5,	of project activity that would otherwise be emitted by
	thermal power plants. The monitoring parameter will be
	continuously monitored by means of energy meters as
	mentioned above monitoring parameter EG _{PJ,y} .
4. New short-	This parameter is monitored based on the number of jobs
term jobs (<	created by the project owner in the short-term basis and
1 year) created	ensures that local employment has created through the
created	project activity. This will be verified using the HR and payroll records of the employees who worked on the project
	activity. This was confirmed by interviewing the monitoring
	personnel of the project activity during on site visit and the
	monitoring practices followed by the project owner is
	appropriate in relation to the project activity and its
	acceptable to the assessment team.
5 Long-term	This parameter is continuously monitored based on the
jobs ₍ (> 10	number of jobs created by the project owner in the long-
year)	term basis. This will be verified using the HR and payroll
created/ lost	records of the employees who worked on the project
(SJ01)	activity. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the
	personner or the project activity during on site visit and the

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			monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the Verification team.
	6.	Educational services improved or not (SE02)	The parameter will record the employee provide job related training in order to increase the knowledge and monitored via no training records.
	7.	CO2 emissions (EA03)	The parameter is calculated based on the net electricity generation from the project activity and grid emission factor. Reduction of CO2 emissions due to implementation of project activity that would otherwise be emitted by thermal power plants. The monitoring parameter will be continuously monitored by means of energy meters as mentioned above monitoring parameter EG _{PJ,y} .
	8.	Replacing fossil fuels with renewable sources of energy (ENR07)	This parameter refers to total quantum of fossil fuel replaces due to the project activity against the quantity of fossil fuel-based electricity replaced due to the project activity. this parameter will be calculated on yearly basis and has a positive impact with no environmental impact. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the Verification team.
	9	E-waste (EL04)	The PO has claimed that the E- waste produced during the operations will be regulated and disposed to the waste handlers. The waste management plan and waste management policy of the PO have been verified by the verification team and found to be in compliance with the local laws. The monitoring parameter will be continuously monitored by means of plant records. Actual plant records of project waste (if any) to be shared by the PO at the time of Emission reduction verification of the project activity.
	10.	End of life products/ equipment (EL06)	The PO has claimed that the waste produced due to end of the product/equipment life during the operations will be regulated and disposed to the waste handlers. The waste management plan and waste management policy of the PO have been verified by the verification team and found to be in compliance with the local laws. The monitoring parameter will be continuously monitored by means of plant records. Actual plant records of project waste (if any) to be shared by the PO at the time of Emission reduction verification of the project activity.
	been proced mentio implen involve The ve emissi	reviewed to che lures, rules and ned in the PSF. nented for monited in the bundle perification team of on reductions	ne operation, maintenance and data monitoring. The PSF has eck that the procedures for data uncertainty, emergency responsibility, operational and management structure are The monitoring plan completely describes all measures to be oring all parameters required and applicable to all activities project activity. Confirmed that the parameters are sufficient to calculate the including the environmental and social safeguards in ethodology and are correctly reported in the PSF.
Findings	CAR 04 has been raised and successfully closed. Please refer to the appendix 4 for further details.		
Conclusion	The ve	rification team co	onfirms that,

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- The verification team confirms that the monitoring plan based on the approved monitoring methodology^{/12/} is correctly applied to the PSF^{/10/}.
- The monitoring plan will give opportunity for real measurements of achieved emission reductions. The verification team considers that monitoring arrangements described in the monitoring plan is feasible within the project design.
- The means of implementation of the monitoring plan are sufficient to ensure that the emission reduction and other voluntary labels achieved from the project activity is verifiable and thereby satisfying the requirement of Verification Standard/03/.
- The monitoring plan will give opportunity for real measurements of achieved emission reductions. There are no host country requirements pertaining to monitoring of any sustainable development indicators. Therefore, there are no such parameters identified in the PSF^{/10/}.

D.4. Start date, crediting period and duration

Means of Project Verification	Solar power plant of 100 MW each in the project activity ^{/14/} . The Commissioning certificates ^{/14/} of the installation of the project activity has been verified and confirmed start date as per PSF is found correct and acceptable to verification team. A crediting period of a maximum length of 10 years has been selected by project owner. The start date of the crediting period is stated as 24/10/2019, which is appropriate as per paragraph 40(b) of the Project Standard version 03.1 ^{/02/} . The crediting period is therefore from 24/10/2019 – 23/10/2029.
	The expected lifetime of the project activity is 25 years which is verified by the technical details ^{/15/} of the turbines and other installed technologies and confirmed based on the sectoral expertise.
Findings	CAR 05 has been raised and successfully closed. Please refer to the appendix 4 for further details.
Conclusion	The start dates and the crediting period type & length have been verified and found to be in accordance with GCC project standard version 03.1. ^{/02/}

D.5. Environmental impacts

Means of Project Verification	As The guidelines on Environmental Impact Assessment have been published by Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006. Further amendments to the notification have been done on 01/12/2009, the Solar Power projects are not listed in any of the categories of the schedule, hence, No EIA required as per host country legislation
Findings	No findings were raised
Conclusion	In the opinion of the assessment team, in the project activity environmental impacts is not significant as per host country legislation. Further analysis not required in this context.

D.6. Local stakeholder consultation

Means	of Project	A LSC was conducted for the project activity on below mentioned dates: -
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Verification	Project Owner	Capacity	State	Site	Meeting date	
	Narbheram Power & Steel Private Limited	200 MW	Tamil Nadu	Village- Pannirkullam , District- Thoothukudi,	10/08/2018	

The stakeholders were invited via notice to head of the village and through meeting notice published in the local language newspaper. The consultation was performed to meet the requirement of the GCC since there are no Host country requirement to conduct consultation for such projects.

The verification team confirms that the local stakeholder consultation/17/ was performed by the project owner before the submission of the project for global stakeholder consultation. PO has submitted the document of local stakeholder consultation, meeting. During the interview at the time of onsite audit, some of the local stakeholders/17/ (Name provided in section C.3 above) were interviewed and agenda of the meeting was discussed and their feedback on the implementation of the project activity, which is found to be in line with PSF/10/. The objective of the stakeholder consultation was to identify the concerns, comments raised and the impacts of project activity on local communities. The analysis has been done to identify the impact/influences of different stakeholders due to the project activity.

The stakeholder consultation responses were received by the assessment team. The verification team confirms that there were no negative comments received during the LSC. The list of relevant stakeholders identified and requested for feedback is also provided in the PSF/10/. During the on-site interviews with the stakeholders following parameters were confirmed,

- Employment generated by the project activity, mainly related to unskilled work like security guards and contractual labour. The project activity employs all local personal only for unskilled jobs.
- Increase in local community business during the construction activity of the project
- No negative environmental impacts like noise pollution, or water pollution or overuse of local resources
- No negative social impacts due to project

It was also noted that SDG contributions claimed are related to overall national/global impacts of the project and particular assessment related SDG contribution/project level indicator with local stakeholder^{/17/} was not required. Local employment generation by the project activity is confirmed. The verification team confirms that the local stakeholder consultation^{/17/} 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^{/17/} 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^{/10/} was

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	accurate. There was no negative feedback received. The list of the relevant stakeholders who were requested for feedback is also provided in the PSF ^{/10/} .
Findings	CAR 06 was raised in this section and closed successfully. Kindly refer appendix 04 for more information.
Conclusion	The verification team confirms that the summary of stakeholders' comments reported in PSF/10/ is complete. In the opinion of the team, the local stakeholder consultation/17/ process was adequately conducted by the project participant considering the ongoing pandemic to receive unbiased comments from the all the stakeholders. The verification team confirms that the local stakeholder consultation/17/ process performed for the project activity fulfils the requirements.

D.7. Approval and Authorization- Host Country Clearance

Means of Project Verification	As per the GCC program guidelines the submission of HCA on double counting ^{/09/} is required by CORSIA labelled project after 31/12/2020 as verified under section D.13 of this report. For carbon credits issued during 01/01/2016 to 31/12/2020 the HC approval is not required. Thus, for this project activity Host country clearance ^{/27/} is	
	not required at the time of project verification.	
Findings	No Findings were raised.	
Conclusion	The verification team confirms that no Host Country approval is required by the CORSIA labelled project activity and the HCA will be required during the first or subsequent verification, when the issuance of carbon credit is considered beyond 1st Jan 2021.	

D.8. Project Owner- Identification and communication

Means of Project Verification	The information and contact details of the project owner and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF/10/ which was checked. The Authorization letters signed by the project owners has been verified and also the company registration documents and project owner valid KYC document have been checked. The project owner of the project is Narbheram Power & Steel Private Limited. and same to be demonstrated by the project legal owner through the commissioning certificates/14/ power purchase agreement/16/ and invoices/33/ of the Narbheram Power & Steel Private Limited. All information were consistent in these documents and acceptable to the verification team
Findings	No Findings were raised
Conclusion	The verification team confirms that the information of the project owners has been appended as per the template and the information regarding the project owners stated in the PSF ^{/10/} and authorization letter were found to be consistent

D.9. Global stakeholder consultation

Means of Project	The PSF ^{/10/} was made available through the dedicated interface on the GCC website.	
Verification	The duration of the period for submission of comments for the global stakeholder consultation was from 05/10/2022 to 19/10/2022. There were no comments received	
	during this period	
Findings	No findings were raised.	
Conclusion	The PSF ^{/10/} had been made public for receiving stakeholder feedback and two comments were raised during the GSC process, which was addressed in the validation report and addressed successfully.	

D.10. Environmental Safeguards (E+)

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Means of Project Verification

The Project owner has chosen to apply for the Environmental No-net-harm Label $(E+)^{/04/}$. The assessment of the impact of the project activity on the environmental safeguards has been carried out in section E.1 of the PSF/10/. Out of all the safeguards no risks were identified to the environment due to the project implementation and operation. And the following have been indicated as positive impacts: -

Positive Impacts:

i. **Environmental – Air - CO₂ emissions (EA03)**: The project activity being renewable power generation avoids CO₂ emissions that would have occurred in baseline scenario due to the electricity generation in thermal power plants. The impacts are being monitored through parameter 'CO₂ emissions' and is verified under section D.3.7 of this report.

Impacts identified as 'Harmless' as regulatory complied OR mitigated;

- ii. **Environmental Replacing fossil fuels with renewable sources of energy (ENR07)**: Amount of electricity generated renewable sources that would be generated through fossil fuel. The parameter is being monitored with EG_{PJ,Facility,y} and validated under section D.3.7 of this report.
- iii. Environmental Solid waste Pollution from end-of-life products/
 equipment (EL06): The damaged turbine components may cause soil
 pollution if not stored and disposed-off as per the national/local law.
 Improper disposal of generated equipment may create soil contamination.
 To mitigate/reduce an environmental impact identified as harmful in the risk
 assessment and to develop a Program of Risk Management Actions plan to
 address the risk.
- iv. Environmental Solid waste Pollution from E-wastes: Any E-waste if generated from the plant shall be discarded in accordance with the host country regulations. The parameter is being monitored as 'Solid Waste Pollution from E-waste and batteries' and validated under section D.3.7 of this report.

Negative Impacts:

No negative impacts identified or verified for the project activity, which cannot be mitigated.

Environmental land solid waste pollution from hazardous waste, E-waste and end oflife products has been identified and proper mitigation action has been implemented for waste management/32/, which is found to be acceptable.

The appropriate monitoring plan has been put in place to monitor the elements marked positive and risks identified due to implementation of the project activity. Also, the parameter compliance with local regulations/laws i.e., Waste generated from the project activity will be also monitored to ensure the compliance of the laws during the crediting period. The detailed matrix has been included in appendix 5 of the report. CAR 07 has been raised and successfully closed. Please refer to the appendix 4 for further details.

Findings

Conclusion

Based on the documentation review the verification team can confirm that Project Activity is not likely to cause any negative harm to the environment but would have

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a positive impact, hence, is eligible to achieve additional E+ certifications/04/

D.11. Social Safeguards (S+)

Means of Project Verification	The Project owner has chosen to apply for the Social No-net-harm Label (S+) ^{/04/} . The assessment of the impact of the project activity on the social safeguards has been carried out in section E.2 of the PSF ^{/10/} . Out of all the safeguards no risks to the society due to the project implementation were identified and the following have been indicated as positive impacts: - Positive Impacts: i. Social: Long-term Jobs: The impacts being monitored throughout crediting period
	by parameter "Long-term jobs (> 10 year) created/ lost (SJ01)" and is verified under section D.3.7 of this report. ii. Social: New short-term jobs (< 1 year) created/ lost (SJ02)" /18/: The impacts
	being monitored throughout crediting period by parameter "short term job" and is verified under section D.3.7 of this report. The project activity generates short term job opportunities during the operation the project activity.
	iii. Social: Educational services improved or not (SE02): The impacts being monitored throughout crediting period by parameter The employee provide job related training in order to increase the knowledge and monitored via number training and records
	Impacts identified as 'Harmless' as regulatory complied OR mitigated:
	No negative impacts identified or verified for the project activity.
	Negative Impacts:
	No negative impacts identified or verified for the project activity, which cannot be mitigated.
	An appropriate monitoring plan has been put in place to monitor the elements. The detailed matrix has been included in appendix 6 of the report.
Findings	CAR 08 has been raised and successfully closed. Please refer to the appendix 4 for further details.
Conclusion	Based on the documentation review the verification team can confirm that Project Activity is not likely to cause any negative harm to the society but would have a positive impact, hence, is eligible to achieve additional S+ certifications

D.12. Sustainable development Goals (SDG+)

Means of Verification	Project	The assessment of the contribution of the project activity on United Nat Sustainable Development Goals has been carried out in section F of the PSF/10/. of the 17 Goals project activity has no adverse effect on any of the goal and contril to 4 SDGs:	
		I. Goal 7 . Ensure access to affordable, reliable, sustainable, and modern energy for all: SDG Target 7.2, The project activity contributes towards this goal by replacing the generation of fossil fuel dominated grid in baseline by renewable Solar-based power generation. The contribution towards SDG goal is being monitored by the parameter 'EG,Facility,y', quantity of net electricity generation supplied by the project plant/ unit to the grid in the	

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	monitoring plan and is found adequate. This has been discussed under section D.3.7 of this report. II. Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all: SDG Target 8.5, The contribution towards SDG goal is by providing local employment: jobs for the project activity. This is being monitored by the parameter 'Local Employment Generation' in the monitoring plan and is found adequate. Further, it has	
	been found that before the project activity, there were no such employment opportunity targeting to the local residents, but after the implementation of the project activity, technical skills training and employment were provided to local persons as well. This has been discussed under section D.3.7 of this report.	
	III. Goal 13 . Take urgent action to combat climate change and its impacts: SDG Target 13.2, The contribution towards SDG goal is being monitored by the parameter 'Climate Action' in the monitoring plan and is found adequate. This has been discussed under section D.3.7 of this report.	
	An appropriate monitoring plan has been put in place to monitor the elements. The detailed matrix has been included in appendix 7 of the report	
Findings	CAR 09 has been raised and successfully closed. Please refer to the appendix 4 for further details.	
Conclusion	Based on the documentation review the verification team can confirm that Project activity is not likely to contribute to the United Nations Sustainable Development Goals and would have a positive impact, hence, is eligible to achieve additional SDG+ certifications.	

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

Means of Project Verification	A declaration under section A.5 of the PSF ^{/10/} has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 24/10/2019 to 23/10/2029.
Findings	CAR 10 has been raised and successfully closed. Please refer to the appendix 4 for further details.
Conclusion	The project owner has clarified the intent of use of carbon credits for CORSIA. hence no double counting/09/ will take place.

D.14. CORSIA Eligibility (C+)

Means of Project Verification	The project activity meets the CORSIA Eligibility since the crediting period is after 01/01/2016 and the project is applying for registration under GCC which is one of the approved programmes for eligibility. It was also confirmed that the project activity does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes					
Findings	FAR 01 is raised. Please refer to the appendix 4 for further details.					
Conclusion	The project activity meets the CORSIA Label (C+) eligibility:					
	The Project Activity complies with all the requirements for the Emission Unit Criteria of CORSIA					
	 A written attestation from the host country's national focal point on doubtened 					
	counting/09/ is not required for Emission units till 31 December 2020;					
	The project meets all the requirement of the Emission Unit Criteria					
	CORSIA required for projects under GCC and therefore can be issued a					
	CORSIA Label (C+) certification.					

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Section E. Internal quality control

The draft verification report prepared by the verification team was reviewed by an independent technical review team to confirm if the internal procedures established and implemented by LGAI Technological Center S.A. (Applus+ Certification) were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable GCC rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team were independent of the verification team.

The technical review process may accept or reject the verification opinion or raise additional findings in which case these must be resolved before requesting for registration. The technical review process is recorded in the internal documents of LGAI Technological Center S.A. (Applus+ Certification) and the additional findings gets included in the report. The final report approved by the admin reviewer and issued to PO and/or submitted for request for registration, as appropriate on behalf of LGAI Technological Center S.A. (Applus+ Certification).

Section F. Project Verification opinion

LGAI Technological Center S.A. (Applus+ Certification) has performed a verification of the "200 MW Solar Project in Tamil Nadu". The verification is performed on the basis of GCC criteria project verification standard, Version 3.1^{/03/} for the project activity, GCC guideline and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the final version of GCC PSF/10/ and the subsequent Onsite audit has provided Applus+ Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project meets all relevant GCC project standard/2/ requirements for the GCC. The project will hence be recommended by LGAI Technological Center S.A. (Applus+ Certification) for registration with the GCC.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO_2 emissions that are real, measurable and give long-term benefits to the mitigation of climate change. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 314,555 tCO_2e per $ext{Vear}^{11}$.

The verification has been performed following the requirements of the latest version of GCC verification standard, Version 03.1^{/03/}, GCC Project Standard, version 03.1^{/02/} and on the basis of the contractual agreement.

In detail the conclusions can be summarized as follows:

- The project does not result in negative social, environmental and/or economic impacts.
- The project contribution to Environment, Social Development and Economic and technological development
- The project additionality is sufficiently justified in the GCC PSF/10/.
- Conservative assumptions were applied in the project description.
- The monitoring plan of SDG parameters is transparent and adequate.
- The project meets the local stakeholder consultation/17/ requirements.

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The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the verification.

Appendix 1. Abbreviations

Abbreviations	Full texts							
ACC	Approved Carbon Credits							
ACM	Approved Consolidated Methodology							
BE	Baseline Emission							
BM	Build Margin							
CAR	Corrective Action Request							
CDM	Clean Development Mechanism							
CL	Clarification Request							
CM	Combined Margin							
СРСВ	Central Pollution Control Board							
CO ₂	Carbon dioxide							
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation							
СР	Crediting period							
EIA	Environmental Impact Assessment							
FAR	Forward Action Request							
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							
MoV	Means of Verification							
MP	Monitoring Plan							
MW	Mega Watt							
MWh	Mega Watt hour							
OM	Operating Margin							
PA	Project Activity.							
PSF	Project Submission Form							
PE	Project Emission							
PLF	Plant Load Factor							
PO	Project Owner							
PS	Project Standard							
SDG	Sustainable Development Goal							
tCO ₂ e	Tonnes of Carbon dioxide equivalent							
UNFCCC	United Nations Framework Convention on Climate Change							
VS	Verification Standard							

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Appendix 2. Competence of team members and technical reviewers

- Dr. Atul Takarkhede is Ph.D. (Environmental Sciences) from Institute of Science, RTM Nagpur University, Nagpur, and he has already published different technical papers related to environmental sciences. He counts with more than 11 years of experience in field of Environmental Auditing, consulting, and accreditation. He is an expert in ISO 9001-14001, CO2/GHG Reporting, Carbon Foot Print, Energy, Water and Waste Management /32/ reporting for organizations' environmental performance. His professional portfolio is mainly related with carrying out EIA, conducting QA/QC of EIA Reports; conducting environmental/water audits; NABET requirements appliance, functional area expert in Water Pollution & Solid & Hazardous Waste management /32/ among others. Furthermore, he counts with solid experience on CDM/VCS-GS consultancy and auditing. Currently he is associated with True Quality Certifications Private Limited and empanelled with Applus+ Certification to carry out GHG audits in the aforementioned schemes. Dr. Atul Takarkhede is based in Nagpur, India. Dr. Atul Takarkhede participates as part of the Audit Team as the Lead Auditor and Technical Expert for the assessment.
- Mr. Denny Xue (Master's Degree in Environmental Engineering, Bachelor's Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and technical review with Applus+. Before he joined Applus+ LGAI, he has been working for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development. Mr. Denny Xue is based in Shanghai, China. Mr. Denny Xue may participate in the project's technical review team

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
1	GCC	GCC Program Manual	Version 03.1	Project Owner
2	GCC	Project Standard	Version 03.1	Project Owner
3	GCC	Verification Standard	Version 03.1	Project Owner
4	GCC	Environment-and-Social - Safeguards-Standard	Version 03.0	Project Owner
5	GCC	Project-Sustainability-Standard Versi		Project Owner
6	GCC	Project Submission Form	Version 04.0	Project Owner
7	GCC	Clarification 01	Version 01.3	Project Owner
8	GCC	Clarification 02	Version 01.0	Project Owner
9	GCC	Standard on avoidance of double counting	Version 01.0	Project Owner
10	Project Owner	Webhosted PSF Final PSF	Version 2, Dated 03/10/2022 Version 03, Dated 16/02/2023 Version 04 01/08/2023	Project Owner
11	Project Owner	Webhosted ER sheet	Version 2, Dated 03/10/2022	Project Owner

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T-	T		<u></u>	_
			Version 03, Dated	
			16/02/2023	
		ER sheet	Version 04 01/08/2023	
40	LINIEGGO	Final ER Sheet	Version 05 16/08/2023	Desired
12	UNFCCC	Methodology: ACM0001.	version 21	Project Owner
13	UNFCCC	1. Tool 01 - Tool for the	1. Version 07.0	Project
		demonstration and	2. Version 07.0	Owner
		assessment of	3. Version-03	
		additionality	4. Version 12.0	
		Tool to calculate the		
		emission factor Version		
		7.0		
		3. <u>Tool 24 -</u> Common		
		practice (Version-03		
		4. Investment analysis		
		(Version 12)		
14	Project Owner	Commissioning Certificates: -		Project
		0		Owner
		 Commissioning certificate^{/14/} of Issued by TANTRANSCO_ 	=	
15	Project Owner	Technical Details of Solar Modules	-	Project
15	1 Toject Owner	installed in the PA.		Owner
16	Project Owner	Power Purchase agreements	-	Project
	,			Owner
17	Project Owner	local Stakeholder Consultation	-	Project
		documents like invitation, Notes on		Owner
18	Drainat Owner	LSC, Meeting Photos		Droinet
10	Project Owner	Employee Records / HR Records		Project Owner
19	Project Owner	CSR Policy of the Project Owner		Project
	i rojost o milo.	Recruitment & Selection Policy		Owner
		POSH Policy – sexual harassment		
		of women at workplace-Reg		
20	KASG & CO.	CA Certificate	15/10/2020	Project
				Owner
	TUV Rheinland	Detail Project Report (DPR) For	Issuance Dates of DPR	
	10 V Kilemand	Betail Floject Report (BFR) For	04/05-2015	
21	SLDC	REA Statement	2 00 _ 20 . 0	Project
				Owner
22	Government of	Electricity Act 2003 National	Dated 26/05/2003	Publicly
	India	Electricity Policy 2005	Dated 12/02/2005	available
23	CDM	CDM Website	-	Publicly
		https://cdm.unfccc.int/Projects/proj		available
24	VERRA	search.html Verra Registry	_	Publicly
24	VLIXIXA	https://registry.verra.org/app/searc		available
		h/VCS/All%20Projects		available
25	Gold Standard	GS Website:		Publicly
		https://registry.goldstandard.org/pr		available
		ojects?q=&page=1		

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			T	
26	I-REC Standard	International REC Standard (I-REC) https://www.irecstandard.org/regist-ries/	-	Publicly available
27	Government Of India	local body approvals	-	Project Owner.
28	Project Owner	IRR Sheet.	-	Project Owner
29	Government Of India	Income Tax Act 1961	-	Publicly Available
30	Government Of India	Companies Act 1956	-	Publicly Available
31	Government Of India	National Tariff Policy	-	Publicly Available
32	Company Policies	 CORPORATE SOCIAL RESPONSIBILITY (CSR) POLICY E Waste Management Policy - Gender Diversity & Inclusion Policy Health & Safety Policy Human Rights Policy 	-	Project Owner
33	Project Owner	Sales Invoices	-	Project Owner
34	Government Of India	CEA Database CDM - CO2 Baseline Database - Central Electricity Authority (cea.nic.in)	Version.18	Publicly Available
35	Government Of India	The Electricity Regulation Commission Act, 1998	-	Publicly Available
36	Government Of India	The Electricity (Supply) Act, 1948	-	Publicly Available
37	Government Of India	RERC Regulations, 2020	-	Publicly Available
38	Government Of India	National Renewable Energy Act 2015	-	Publicly Available
39	Government Of India	Schedule 1 of Ministry of Environmental and Forest notification	-	Publicly Available
40	Project Owner	GCC Letter of authorization signed between legal owners & external representative	-	Project Owner
41	Project Owner	EPC Contracts of each project site.	-	Project Owner
42	Project Owner	CERC Data (2015)	https://cercind.gov.in/20 15/orders/SO4.pdf	Project Owner
43	Project Owner	O & M Contract	-	Project Owner
44	Project Owner	Board Resolution Letter for each site covered under project activity	-	Project Owner
45	Government Of	National Electricity policy 2005 ¹³	-	Publicly

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¹³ https://powermin.gov.in/en/content/national-electricity-policy

	India		Available
46.	Govt. of Tamil	Tamil Nadu Generation and -	Publicly
	Nadu	Distribution Corporation Limited	Available

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

Table 1. CLs from this Project Verification

CL ID	01	Section no.	D.3.5	Date: 15/02/2023							
Description of CL											
As the project activity consists of two different project site 100 MW each, owned by two different SPV entities. However, PO has demonstrated additionality and provided financial assumptions combinedly for whole project activity. Thus, PO is requested to clarify the reason behind the same.											
Project Owner's response Date: 23/02/2023											
During the bo	During the board meeting, decision was taken to install a complete 200MW solar project. However later the										

project was installed in phases as per the availability of land.

Date: DD/MM/YYYY

Date: 01/08/2023

Date: 07/08/2023

Documentation provided by Project Owner

1) DPR for 200MW

GCC Project Verifier assessment

PO has provided CA certificate, DPR, etc for the additionality verification and found correct, but PO is requested to submit the following documents:

- 1. PV Syst Report in order to verify the PLF (decided during design phase),
- 2. Actual O and M contract
- 3. Source of tariff rate decided during DPR preparation and
- 4. Energy yield assessment full report.

kindly submit. CL is open.

Project Owner's response

- 1. The PV Syst Report is already a part of DPR
- 2. Actual O & M contract has been provided
- 3. The RFS tender document is used as a source of tariff rate decided during DPR preparation.
- 4. Energy yield report is already a part of DPR

Documentation provided by Project Owner

- 1) DPR for 200MW
- 2) O & M contract
- 3) RFS tender

GCC Project Verifier assessment

- 1. Solar PV system report is found in DPR and thus accepted.
- 2. Assessment team verified that, Project Owner submit the O&M contract of the project activity signed between PO and L&T, thus accepted.
- 3. PO submit the PVsyst report to the assessment team, which is used as a source of tariff rate.
- 4. Energy yield report submitted by the project owner, and thus accepted.

Thus, CL is closed.

Table 2. CARs from this Project Verification

CAR ID	01	Section no.	D.2	Date: 15/02/2023		
Description	of CAR					

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- 1. Font style and Size found altered throughout the PSF. Thus, found not inline with the guidelines to complete the latest available PSF template. Corrective action sought.
- 2. Applied Methodology throughout the PSF is not inline with latest version of applicable methodology. Thus, corrective action sought.
- 3. Section A.3 of PSF is not inline with the guidelines to complete PSF template v.4.0. thus, corrective action sought.
- 4. SLD diagram of project operations mentioned in section B.3 is not in line with the actual operation of the project activity. Thus, corrective action sought.
- 5. PO requested to submit detailed technical specifications and evidences for the lifetime of the Solar PV, Inverters involved. Kindly submit.
- 6. PO is requested to submit commissioning certificates, sample JMRs & PPAs for project activity. Kindly submit.

Project Owner's response

- **Date:** 23/02/2023
- 1. As per the guidelines of filling PSF template, the font style and size has been corrected to Arial 11.
- 2. the version number used in the revised PSF refers to the latest methodology version number.
- 3. Section A.3 of the revised PSF consist of the plant layout with metering arrangement.
- 4. SLD of Actual plant site has now been provided in section B.3 of the revised PSF.
- 5. The Detail of technical specification and the lifetime of module can be verified from the Module warranty and the datasheets which has been submitted to the assessment team
- 6. All the relevant documents like commissioning certificate, Sample JMRs & PPA has been submitted to the assessment team

Documentation provided by Project Owner

- 1. Revised PSF ver 03
- 2. Revised PSF ver 03
- 3. Revised PSF ver 03
- 4. Revised PSF ver 03
- 5. DPR, Datasheet, module warranty
- 6. Commissioning certificates, Sample JMRs, PPA

GCC Project Verifier assessment

- Date: DD/MM/YYYY
- 1. Assessment team found that the PP has altered the font throughout the PSF as per the guidelines to complete the PSF template. Comment is closed.
- 2. Applied Methodology throughout the PSF is found inline with the latest version of applicable methodology. Comment is closed.
- 3. The verifier team assessed and found Section A.3 of PSF is now inline with the guidelines to complete PSF template v.4.0. Comment is closed.
- 4. The assessment team found that the SLD diagram in section B.3 is now inline with the actual operation of the project activity. Comment is closed.
- 5. PO has now submitted the detailed technical specifications and evidences for the lifetime of the Solar PV, Inverters involved and found correct for the project activity. Hence CAR is closed.
- 6. PP has now submitted the commissioning certificate, the assessment team found that there are two commissioning dates mentioned in both the commissioning certificates. Kindly clarify the actual commissioning date of the project activity. Thus, comment is open.

Moreover, sample automated meter reading (AMR) for complete one year, is still pending. Kindly submit.

The verifying team cross checked the PPA submitted and found correct.

Project Owner's response

Date: 01/08/2023

As per the submitted commissioning certificate, 24/09/2019 is the plant commissioning date and the Commercial Operation Date (COD) is 24/10/2019.

Sample automated meter reading (AMR) has been submitted.

Documentation provided by Project Owner

- 1. AMR
- 2. Commissioning certificate

GCC Project Verifier assessment

Date: 08/08/2023

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 VVB team verified that, Project activity has 2 phase commissioned on same date moreover to verify the same PO submit the commissioning certificate to the VVB team. Thus, accepted.
 Meter reading document is now submitted by project owner.

Thus, CAR is closed.

CAR ID	02	Section no.	D.2	Date: 15/02/2023					
Description of CAR									

- 1. Project Owner requested to submit a Declaration of intention for use of carbon credits (ACCs) of project activity. Kindly submit.
- 2. As per the requirement of para 14 and 15 of the GCC Project Standard Project activity is required to demonstrate compliance with the criteria for CORSIA. Corrective action is sought.
- 3. In line with para 37 of the GCC Project standard "Project Owners shall provide documentary evidence establishing conclusively any right-of-use arising by virtue of a statutory, proprietary or contractual right of the plant, equipment, process or measure that generates GHG emission reductions and is accorded to the Project Owner". Thus, PO is required to provide signed Authorization letters to confirm the information provided in Appendix 1 of the PSF.

Project Owner's response

- 1. The Declaration of intention for use of carbon credits (ACCs) of project activity has been provided to the assessment team.
- 2. As per the project standard Para 15 (v) "Submission of Host Country Attestation on Double Counting as and when required by CORSIA (mandatory requirement for projects that intend to use ACCs for CORSIA)" however as per the standard on Avoidance of Double Counting version 01, para 16, "if the above documents cannot be submitted by the Project Owner as part of request for registration, then, HCLOA for the project activity shall be submitted to GCC Program together with the project documentation required for submission of request for issuance"
- 3) As per para 37 of the GCC standard signed letter of authorisation has been provided to the assessment team.

Documentation provided by Project Owner

- 1. Declaration of Intent for use of Carbon Credits
- 3. LOA

GCC Project Verifier assessment

Date: DD/MM/YYYY

Date: 24/02/2023

- 1. PO has submitted the Declaration of Intent for use of Carbon Credits of the project activity in PO letter head in no double counting certificate dt. 06/02/2023 and found correct. Thus comment is closed.
- 2. As per the requirement of para 14 and 15 of the GCC Project Standard, the PO has submitted LON along with the project documentation required for the submission of request for issuance. The assessment team checked the LON for the project activity and found correct. Thus comment is closed.
- 3. As per para 37 of the GCC standard, signed letter of authorisation has been provided by the PO and found correct.

Thus, CAR is closed.

CAR ID 03 Section no. D.3.5 Date: 15/02/2023

Description of CAR

- In line with para 45 of the Project Standard, PO requested to submit all supporting documents as mentioned in the additionality justification including financial additionality & barrier analysis.
- PO requested to justify versions of additionality tools/quidelines used based on their conservativeness.
- As the project activity is already commissioned, PO requested to provide actual assumptions values for assessment including project cost, PLF, tariff rate & O&M cost etc. Assessment on the additionality & IRR sheet is on hold till supporting submissions. Kindly submit.
- PO is requested to check the value of PLF and submit the supporting document for the same and correct values are to be incorporated in PSF and ER sheet.
- PO requested to review and revise common practice analysis for the projects within the range under the considered geographical area along with supporting documents. Kindly review and revise.

Project Owner's response Date: 24/02/2023

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- 1. As per para 45 of the project standard, all the relevant documents which proves the additionality has been submitted to the assessment team.
- 2. Version of the Meth ACM0002 has now been updated in the revised PSF
- 3. Actual vs Estimated project cost document has now been provided to the assessment team.
- 4. According to the GUIDELINES FOR THE REPORTING AND VALIDATION OF PLANT LOAD FACTORS annex 11 version 01 para 3(a) "The plant load factor provided to banks and/or equity financiers while applying the project activity for project financing, or to the government while applying the project activity for implementation approval; "PLF value has been considered from the 3rds party DPR, and the same has also been reflected in the ER & IRR Sheet for calculations.
- 5. During the time of decision making the total capacity considered for the project was 200MW. Hence the additionality and the common practice analysis has been made on 200MW and submitted to the assessment team.

Documentation provided by Project Owner

- 1. IRR, DPR
- 2. Revised PSF ver 03
- 3. Cost Analysis Sheet
- 4. DPR and ER sheet
- 5. NON ODA declaration

GCC Project Verifier assessment

1. As per para 45 of the project standard, all the relevant documents like copy of resolution passed at board meeting, RBI link for inflation rate, is submitted by the PO and found correct.

Date: DD/MM/YYYY

Date: 01/08/2023

Date: 08/08/2023

- . Hence, CAR is closed.
- 2. The assessment team found that the PO has now justified the versions of additionality tools/guidelines used in the PSF. kindly, show the comparision between the old version and latest version default value and apply conservative one. Comment is open.
- 3. Actual vs Estimated project cost document has now been submitted and found that the cost analysis sheet is not inline with the IRR sheet. CAR is kept open.
- 4. Value of PLF and the supporting document for the same is submitted now and found inline with the PSF. Hence, CAR is closed.
- 5. The assessment team verify that the total capacity considered for the project was 200MW during the time of decision making. Hence the additionality and the common practice analysis has been made on 200MW and found correct. Hence, comment is closed.

Project Owner's response

- 2. The comparison between the old version and latest version default value is incorporated in the IRR sheet and in the PSF. Selection of conservative benchmark has also been mentioned.
- 3. The cost analysis sheet has been updated, now it is in line with the IRR sheet.

Documentation provided by Project Owner

Revised PSF V4

Cost analysis sheet

GCC Project Verifier assessment

- 2. Assessment team observed that, investment analysis value at the time of decision making is now correct and consistent, comparison between between old version and latest version is found consistent.
- 3. Assessment team verified that, project owner submits the corrected cost analysis sheet, the details are now found consistent as per IRR sheet, thus accepted by assessment team. Thus, CAR is closed.

CAR ID | 04 | **Section no.** | D.3.7 | **Date:** 15/02/2023

Description of CAR

All the project activity is already commissioned, however, PSF is not clear about the monitoring meter's details including type, accuracy class, etc. Corrective action is sought.

Further, parameter tables for monitoring of SDG parameters were found incomplete and also specific information though project activity is already commissioned & in operation. Corrective action is sought. Moreover, Program of Risk Management Actions; date of closing programme, outcome & supporting documents for the same are missing. Corrective action is sought.

Project Owner's response Date: 24/02/2023

The details of meter has now been provided in the revised PSF.

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Documentation provided by Project Owner

1. Revised PSF

GCC Project Verifier assessment

PSF is now clear about the monitoring meter's details including type, accuracy class, etc. further the assessment team verified that the parameter tables for monitoring of SDG parameters are complete now. Thus, CAR is closed.

CAR ID 05 **Section no.** D.4 **Date:** 15/02/2023

Description of CAR

PO requested to submit the supporting document for the Start Date of the project activity. Kindly submit.

Project Owner's response

As a supportive to the start date of the project commissioning certificate has now been provided to the assessment team.

Documentation provided by Project Owner

1. Commissioning Certificate

GCC Project Verifier assessment

The supporting document for the Start Date of the project activity, commissioning certificate is now submitted and found not inline with the PSF. Kindly clarify the actual commissioning date for both the phases of the project activity, as the commissioning certificate has two different dates. Hence, comment is open

Project Owner's response Date: 01/08/2023

As per the submitted commissioning certificate, 24/09/2019 is plant commissioning date and 24/10/2019 is the Commercial Operation Date (COD).

Documentation provided by Project Owner

Revised PSF V4

GCC Project Verifier assessment

Assessment team verified that, Project Owner submit the commissioning certificate of the project activity, the commercial operation date of the project activity is consider as the actual date of the commissioning date of the PA, thus accepted by VVB team, **CAR** is **closed**.

 CAR ID
 06
 Section no.
 D.6
 Date: 15/02/2023

Description of CAR

PO requested to submit all supporting documents for the Local Stakeholders Consultation conducted including invitations and MoMs of the meetings & outcomes of the meetings. Kindly submit.

Project Owner's response

All the relevant documents for local stakeholder consultation including invitation, MOM Attendance sheet and photographs

Documentation provided by Project Owner

- 1. MoMs
- 2. LSC Invitation
- 3. SFR
- 4. Photographs

GCC Project Verifier assessment

The Local Stakeholders Consultation conducted including invitations and MoMs of the meetings & outcomes of the meeting for the project activity is submitted now and found correct for 200 MW. Moreover, the PO has submitted SPVs stakeholder meeting supporting documents held on different dates, which are not relevant to the project activity, also these details are not mentioned in the PSF. Kindly, clarify. Comment is kept open.

Project Owner's response

The non-relevant documents pertaining to another project activity has been removed from the folder now. Only project relevant LSC document has been updated in the folder.

Documentation provided by Project Owner

- 1. MoM
- 2. LSC Invitation
- 3. Photographs

GCC Project Verifier assessment

Date:

Date: DD/MM/YYYY

Date: 24/02/2023

Date: DD/MM/YYYY

Date: 08/08/2023

Date: 03/03/2023

Date: DD/MM/YYYY

Date: 01/08/2023

Assessment team verified that, Project Owner submit the relevant document to verify the actual date of the local stakeholder conducted for project activity, moreover to verify the same attendance sheet, meetings photos submitted by the project owner, thus CAR is closed.

CAR ID 07 Section no. D.10 Date: 15/02/2023

Description of CAR

PO requested to review & revised the Environmental safeguards for the positive and negative impacts. Corrective action is sought.

Project Owner's response

the Environmental safeguards for the positive and negative impacts has now been reviewed and revised in the revised PSF ver 03

Documentation provided by Project Owner

Revised PSF ver 03

GCC Project Verifier assessment Date: DD/MM/YYYY

PO has revised the environmental safeguards for the positive and negative impacts now in PSF and found correct for the project activity. Hence CAR is closed.

CAR ID Date: 15/02/2023 Section no. D.11

Description of CAR

PO requested to review & revised the Social safeguards for the positive and negative impacts. Corrective action is sought.

Date: DD/MM/YYYY

Project Owner's response Date: 27/02/2023

The Social safeguards for the positive and negative impacts have been reviewed and revised in the ver 03

Documentation provided by Project Owner

Revised PSF ver 03

GCC Project Verifier assessment

The assessment team verified and found that PO has revised the Social safeguards for the positive and

negative impacts in the PSF as per standards. Hence, CAR is closed.

CAR ID 09 Section no. D.12 **Date:** 15/02/2023

Description of CAR

PO requested to review & revise the UN SDGs for the positive and negative impacts. Corrective action is sought.

Project Owner's response Date: 24/02/2023

The UN SDGs for positive and negative impacts has now been corrected in revised PSF ver 03

Documentation provided by Project Owner

Revised PSF ver 03

GCC Project Verifier assessment

Date: DD/MM/YYYY

The assessment team verified and found that UN SDGs for the positive and negative impacts are not acceptable, as the SDG no is 4 and there is no explanation in section F, of the PSF. CAR is open.

Project Owner's response Date: 01/08/2023

The Monitoring table pertaining to the E+ S+ parameter for positive impact has now been included in the revised PSF ver 04

Documentation provided by Project Owner

Revised PSF ver 04

GCC Project Verifier assessment Date: 08/08/2023

Assessment team verified that, project owner update the UN SDG parameter and E+ & S+ parameter as well in revised PSF, Thus, accepted by VVB team, CAR is closed.

CAR ID 10 Section no. D.13 Date: 15/02/2023

Description of CAR

PO requested to submit Host Country Attestation on Double Counting related to CORSIA requirements. Kindly submit.

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Project Owner's response

As per the project standard Para 15 (v) "Submission of Host Country Attestation on Double Counting as and when required by CORSIA (mandatory requirement for projects that intend to use ACCs for CORSIA)" however as per the standard on Avoidance of Double Counting version 01, para 16, "if the above documents cannot be submitted by the Project Owner as part of request for registration, then, HCLOA for the project activity shall be submitted to GCC Program together with the project documentation required for submission of request for issuance. This Will be submitted during the time of verification.

Date: 24/02/2023

Date: DD/MM/YYYY

Documentation provided by Project Owner

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GCC Project Verifier assessment

As per the project standard Para 15 (v) "Submission of Host Country Attestation on Double Counting as and when required by CORSIA (mandatory requirement for projects that intend to use ACCs for CORSIA)" however as per the standard on Avoidance of Double Counting version 01, para 16, "if the above documents cannot be submitted by the Project Owner as part of request for registration, then, HCLOA for the project activity shall be submitted to GCC Program together with the project documentation required for submission of request for issuance. This Will be submitted during the time of verification", the assessment team found that the PO has submitted no double counting certificate for the project activity and found correct and acceptable. Hence, CAR is closed.

Table 3. FARs from this Project Verification

Table 3. 1 Arts from this 1 roject verification											
FAR ID	01	Section no.	D.7 , D.13 D.14	Date: 10/04/2023							
Description of	Description of FAR										
Verifying DOE	to check Host Count	ry Attestation on	Double Counting related to C	CORSIA requirements							
during verifica	ation stage.		_								
Project Own	er's response			Date: DD/MM/YYYY							
-	-										
Documentati	on provided by Proje	ect Owner									
-											
GCC Project	GCC Project Verifier assessment Date: DD/MM/YYYY										
-											

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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 requireme				for aspects	k Mitigation Action Plans Performance for aspects marked as indicator for Harmful monitoring of impact		Ex-ante scoring of environmental impact	Explanation of the Conclusion	3 rd Party Audit
			nt / regulatory/ voluntary corporate threshold Limits	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/exp lanation of the scoring of the environmental impact	Verification Process
Environm ental Aspects on the identified categories ¹⁴ indicated below.	Indicators for environment al 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 requirement s /legal limits / voluntary corporate limits related to the identified risks of environment al impacts.	If no environmen tal impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as Not Applicable	If environme ntal impacts exist but are expected to be in complianc e with applicable national regulatory/stricter voluntary corporate requirements and will be within legal/ voluntary corporate limits by way of plant design and operating principles,	If negative environm ental 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-safe)	Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as 'Harmful at least to a level that is in compliance with applicable legal/regulatory requirements or industry best practice or stricter voluntary corporate requirements	Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been identified as Harmful.	Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well including the data source.	-1 0 +1	Confirm the score of environmental impact of the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.	Describe how the GCC Verifier has assessed that the impact of the Project Activity against the particular aspect and in case of "harmful impacts" how has the project adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net positive impacts of the project with respect to the most likely baseline alternative.

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¹⁴ sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

	_				than tha	and aba!!						
					then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as Harmless //f the project has a positive impact on the environme nt mark it as as well.	and shall be indicated as Harmful						
Environ ment - Air	SOx emissions (EA01)	Operation of solar PV power project and wind project does result in emission of SOx in the project scenario. Therefore, no environmental impact is anticipated from the project activity.	The Air (Prevention & Control of Pollution) Act 1981 stipulates thresholds for both ambient air quality as well as stack emissions.	Not Applicable	Not Applicabl e as no emission s occur in the project scenario and therefore is not expected to or does not cause any harm	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified.
	NO _x emissions (EA02)	Operation of solar PV power project and wind project does result in emission of NOx in the project scenario. Therefore, no environmental impact is anticipated from the project activity.	The Air (Preventio n & Control of Pollution) Act 1981	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
	CO ₂ emissions (EA03)	Operation of the solar PV power project and wind project does not result in CO2 emissions. However, in absences of the project activity (baseline scenario) the fossil fuel-based power plants would have supplied equivalent amount of electricity	The Air (Prevention & Control of Pollution) Act 1981 stipulates thresholds for both ambient air quality as well as	Not Applicable as no emissions occur in the project scenario and therefore is not expected to or does	Harmless . Not Applicabl e. No Action Required	Not Applicab le	Not Applicable, No Action required	There is not legal/regulat ory limit for this aspect. The GHG emission reductions due to the installment of the project activity will be measured	Monthly measuring for electricity generation will be done by using electricity meters. Thus, emission reduction will be done using the actual generation values.	+1	In the baseline scenario (grid) some of the fossil fuel power plants may have emitted CO2 emissions, which has been calculated by the combined margin emission factor as	The project will have a positive impact by Reducing measurable amount of CO ₂ emissions. This amount of emission reduction will be monitored as per monitoring plan in the PSF section

	resulting in CO2, emission.	stack emissions.	not cause any harm.				monthly. The parameter has been monitored in section B.7.1			mentioned in the PSF. Therefore, emission reductions are expected to be reduced which will be regularly monitored and verified ex-post. There is not legal/regulatory limit for this aspect. The GHG emission reductions due to the installment of the project activity will be measured monthly. The	B.7.1 assessment of same is prov section D.3.7 of Project Verificati Report.
CO emissions (EA04)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	The Air (Preventio n & Control of Pollution) Act 1981	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	parameter has been monitored in section B.7.1. This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identifi
Suspende d particulate matter (SPM) emissions (EA05)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identifi
Fly ash generation (EA06)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identifi
Non- Methane Volatile Organic Compound s	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab Ie	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identifi

(NMVOCs) (EA07)											
Odor (EA08)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks i
Noise Pollution (EA09)	This is a solar and wind power project. This aspect has no impact on the solar project activities. Wind turbines produce noise when operating. The noise is generated primarily from mechanical and aerodynamic sources. Mechanical noise may be generated by machinery in the nacelle. Aerodynamic noise emanates from the movements of air around the turbine blades and tower. The types of aerodynamic noise may include low frequency, impulsive low frequency, tonal and continuous broadband. In addition, the amount of noise may rise with increasing rotation speed of the turbine blade.	Noise (Regulatio n and Control) Rules 2000 amended in 2010)	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	The solar and wind projects do not have any impact on noise pollution. Thus, this parameter is not applicable for this project and the parameter will not be monitored	Not Applicable	The solar power projects have no impact on the noise levels from the project activity. Further, no noise pollution generated by the wind project activity. There are no residential or commercial areas nearby the project location which can be justified by the project geo-coordinates and hence there is no noise pollution outside the project boundary. The noise pollution related to the wind power plant complies with the Noise (Regulation and Control) Rules 2000 amended in 2010). Due to the technical specification of the wind turbine and the distance	No risks id

											wind farm and the nearby residential settlement from the site, it is justified that there is no impact for noise level from the project activity.	
	Shadow Flicker	This bundle project activity contains a wind project. There is no shadow flicker from the wind machines installed at the site. Shadow flicker occurs when the sun passes behind the wind turbine and casts a shadow. As the rotor blades rotate, shadows pass over the same point causing an effect termed shadow flicker. Shadow flicker may become a problem when potentially sensitive receptors (e.g., residential properties, workplaces, learning and/or health care spaces/facilities) are located nearby, or have a specific orientation to the wind energy facility.	No Indian legislation exists. As guidance the Environme ntal, Health and Safety Guidelines for Wind Energy issued by the IFC (internatio nal finance corporatio n).	Not Applicable	Harmless	Not Applicab le	Not Applicable	Not Applicable	The wind turbines are located in open lands and no residential houses are nearby. So, the concept of Shadow flicker is not applicable to this project activity. No Indian legislation exists under which this aspect needs to be mentioned / monitored.	Not Applicable	The solar power projects have no impact due to shadow flicker. Further, no shadow flicker issued raised by the wind project activity as There are no residential or commercial areas nearby the project location which can be justified by the project geocoordinates. hence there is no impact for shadow flickering from the project activity.	
Environ ment - Land	Solid waste Pollution from Plastics (EL-01)	This is a solar power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
	Solid waste Pollution from Hazardous wastes (EL02)	There is no significant solid waste pollution involved in the solar power project. However, the disposal of the oil used in the transformer may lead environmental	Hazardou s s and waste managed	NA	Harmless Project owner will dispose the hazardou	Not Applicab le	Not Applicable	Project owner will dispose the hazardous waste (solar PV model) for recycling	Hazardous waste (solar PV model) quantity generated will be disposed.	0	The project owner undertakes to manage solar PV modules waste in an appropriate	No risks identified .

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	pollution is not handled	ent rules	s was	е	through the		manner and in	
	properly. Whenever, the	2016 ¹⁵ .	(solar l	V	licensed		compliance to	
	transformer oil is required		model)		hazardous		the prevailing	
	to be shanged the		for		waste vendor		laws and	
	to be changed, the				waste vendor			
	replaced oil is sold to a		recyclir				regulations. As	
	salvage vendor who		through				per MoEFCC	
	regenerates it and makes		the				notification	
	to reusable. This is a		license				dated	
	to reusable. This is a							
	common practice used		hazard				01.03.2019	
	across industry in all the		s was	e			(G.S.R. 178(E))	
	power plants in the		vendor				the Occupier	
	country. The practice						(developer) is	
	is/shall be followed by the						not required to	
	project owner at the						obtain	
	project owner at the						obtairi	
	project site						authorization	
							under	
							Hazardous and	
							Other Wastes	
							(Management	
							and	
							Transboundary	
							Movement)	
							Amendment,	
							Rules, 2019 if	
							they are	
							exempted from	
							obtaining	
							consent under	
							Water	
							(Prevention and	
							Pollution) Act,	
							1974 and Air	
							(Prevention and	
							Control of	
							Pollution) Act,	
							1981. However,	
							Infraprop	
							Private Limited	
							and Dosti Realty	
							Limited should	
							ensure proper	
							diaposal of	
							disposal of	
							Hazardous	
							Waste (DG oil, if	
							DG is installed)	
							through actual	
							user, waste	
							collector or	
							operator of the	
							disposal facility,	
							in accordance	
							with the Central	
							Pollution Control	

¹⁵ https://cpcb.nic.in/rules/

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										Board guidelines. Moreover, though not covered under the rule, the broken solar panels are recommended to be sent back to the manufacturer or an authorized recycler Hence, this parameter will not be scored.	
Solid waste Pollution from Bio- medical wastes (EL03)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
Solid waste Pollution from E- wastes (EL04)	No e-waste pollution is anticipated through the operation of the project. However, action plan has been proposed for management of e-waste if any.	E-waste (Managem ent and Handling) Rules	Not Applicable However, managem ent actions are introduced towards managem ent of e- waste if any.	Harmless	Not Applicab le	Proper management actions have been introduced to record e-waste from the project sites and its disposal mechanism.	Project owner is responsible to maintain records of e- waste generated and its disposal as per applicable law and procedure for same is being articulated under section B.7.2 as per E-waste (Managemen t and Handling) Rules.	Records of E-waste will be maintained as per applicable prevailing laws i.e. E-waste (Management and Handling) Rules and regulations. Please refer to Section B.7.2	+1	Although generation of e-waste is not anticipated from the project, the project owner has ensured that in case e-waste is generated the same will be stored and disposed-off as per the applicable E-waste rules. This aspect will be monitored throughout the entire crediting period and the monitoring measures for the same has been incorporated in section B.7.2.	The e waste generated from the Project activity will be disposed as per prevailing laws and regulations applicable in the host country. Hence this parameter will be scored and monitoring plan is provided in section B.7.1 of the PSF to ensure the compliance of the regulations which will be harmless during entire crediting period of the project activity which is appropriate and acceptable.

Solid waste Pollution from Batteries (EL05)	No battery waste is anticipated through the operation of the project. However, action plan has been proposed for management of e-waste if any.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No risks identified
Solid waste Pollution from end- of-life products/ equipment (EL06)	Damaged/ disposed Solar PV modules, WTG blades, etc at site might have negative environmental impacts if not managed well after their end of-life	Solid Waste Managem ent Rules, 2016	Not Applicable However, managem ent actions are introduced towards managem ent of solid waste pollution from end- of-life products/ equipment if any.	Actions towards manage ment of solid waste pollution from end-of-life products/ equipme nt has been introduce d	Since manage ment action is inducted therefor e no environ mental impact are anticipat ed	Proper management actions have been introduced to record end of life products/ equipment from the projects sites and its disposal mechanism	Project owner has introduced procedure to maintain records of end-of-life products/ equipment and its disposal as per applicable law and procedure for same is being articulated under Section B.7.2	The damaged/expired equipment shall be stored and disposed-off as per the national/local law. Project Owner is responsible to maintain records and filling of returns as per applicable law	+1	Project Owner is responsible to maintain records and dispose all products after ending lifecycle as per applicable law. Project owner will be responsible to maintain records and filling of record as per applicable law and will not have no significant impact. This aspect will be monitored throughout the entire crediting period and the monitoring measures for the same has been incorporated in section B.7.2.	Project owner provided mitigation plan to reduce the risk is not likely to cause any harm to the environment The appropriate monitoring plan has been put in place to monitor the risks identified due to the implementat ion of the project activity This will be monitored as per monitoring plan in the PSF section B.7.2 and assessment of the same is provided section D.3.7 of the Project Verification Report
Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
land use change (change	This is a solar and wind power project and hence	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and	No risks identified

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	from cropland /forest land to project land) (EL08)	this aspect has no impact on the project activity.									hence this aspect has no impact on the project activity.	
Environ ment - Water	Reliability/ accessibilit y of water supply (EW01)	Solar power projects use a modest amount of water for cleaning solar collection and reflection surfaces like mirrors, heliostats, and photovoltaic (PV) panels. However, the quantity is water used is very insignificant, particularly when compared with the baseline power plants	The Water (Preventio n & Control of Pollution) Act 1974	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	0	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
	Water Consumpti on from ground and other sources (EW02)	Solar power projects use a modest amount of water for cleaning solar collection and reflection surfaces like mirrors, heliostats, and photovoltaic (PV) panels. However, the quantity is water used is very insignificant, particularly when compared with the baseline power plants.	Permissio n for abstractio n of Ground water under Environme ntal (Protectio n) Act 1986	Not Applicable	Harmless	Not Applicab le	Not Applicable	The lifetime of the project activity is 25 years. The project Owner will not such a Groundwater compliance Ground water under Environment al (Protection) Act 1986	The project activity uses sprays to clean the SPV cells and hence groundwater is not for maintenance purpose	0	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
	Generation of wastewate r (EW03)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
	Wastewate r discharge without/wit h insufficient treatment (EW04)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified

	Pollution of Surface, Ground and/or Bodies of water (EW05)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
Environ ment – Natural Resour ces	Conservin g mineral resources (ENR01)	This is a solar and wind power project and hence this aspect has no impact on the project activity	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
	Protecting/ enhancing plant life (ENR02)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
	Protecting/ enhancing species diversity (ENR03)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	In India, there are no comprehe nsive regulation standards to ascertain for protecting plant life	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
	Protecting/ enhancing forests (ENR04)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified

	Protecting/ enhancing other depletable natural resources (ENR05)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
	Conservin g energy (ENR06)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
	Replacing fossil fuels with renewable sources of energy (ENR07)	The project activity involves generation of power using solar energy and wind energy resources which would have been otherwise generated from the fossil fuel dominant grid connected power plants in the absence of the project activity.	Not Applicable	Not Applicable	Harmless The overall impact is positive with respect to the baseline alternativ e.	No Action Require d	Not Applicable	Not Applicable	Total quantum of fossil fuel replaced due to the project activity will be monitored against the indicator of quantum of fossil fuel-based electricity replaced due to the project activity. Please refer to Section B.7.1 of the PSF	+1	Generation of electricity using renewable energy resources will replace use of fossil fuel-based grid electricity and associated fossil fuel used for its generation. Project owner will be responsible to maintain record of total quantum of renewable based electricity generated. The parameter has been monitored in section B.7.1.	The project will have a positive impact by relacing fossil fuels with renewable sources of energy. This amount of energy generated from the renewable energy sources i.e., solar power plant will be monitored as per monitoring plan in the PSF section B.7.1 for the parameter EGPJy and assessment of the same is provided section D.3.7 of the Project Verification Report.
	Replacing ODS with non-ODS refrigerant s (ENR08)	This is a solar and wind power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicabl e	Not Applicab le	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar and wind power project and hence this aspect has no impact on the project activity.	No risks identified
Net Sco	re:		+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 net harm to the environment.	

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

Impact of Proje Activity on	ect	Inforr	nation on Impacts	s, Do-No-Harm	Risk Assessme	ent and Estab	lishing Safeguard	ds		t Owner's clusion	GCC project Verifier's Conclusion (To be included in Project Verification Report only)
	Description of Impact (positive or negative) /Limit, Corpo policies / Indu best practi				Do-No-Harm Risk Assessment Risk Miti Action Pla (Choose which ever is applicable) aspects n as Harr			Performance indicator for monitoring of impact.	Ex-ante scoring of environ mental impact	Explanatio n of the Conclusion	3 rd Party Audit
	Social Aspects on Undicators Describe and identify actu			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 justificatio n/explanati on of the scoring of social impact of the project	Verification Process Will the Project Activity cause any harm?
Social Aspects on the identified categories ¹⁶ indicated below.	Indicators for social impacts	Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all sources during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control	Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts	If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as Not Applicable	If social impacts exist but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as Harmless), project having positive impact	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 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) 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.

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¹⁶ sourced from the CDM SD Tool and the sample reports are available (https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx)

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					on society. 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.
Social - Jobs	Long- term jobs (> 10 year) created/ lost (SJ01)	The project activity leads long term to the employment generation	There is no legal requirement from local authority to create permanent employment from the project activity	Not Applicable	Harmless as project will beneficial for local people and provide long term employment along with improving employable skills.	Not Applicable	There are no harmful impacts of the project activity as it leads to the employment generation.	Number of people employed by the project will be monitored through checking Employee logbook or register and confirmation from contractual service agency Refer to Section B.7.1. This parameter will be monitored annually	+1	Although there is no mandatory law to generate permanent employmen t from the project activity, however, project owner has been decided to provide training to the local people & generate permanent employmen t for local people Therefore this parameter will be scored. Since the project activity is already operational the project activity has already resulted in employabili ty. No risks have been identified and hence no risk mitigation action is required	The project operation has created new job opportunities in the area during operational phase of the project activity. The number of persons employed would be monitored through HR records and payroll records. This will be monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.

New short-term jobs (< 1 year) created/ lost (SJ02)	The project activity leads to the employment generation which is less than one year	No regulation / legal requirement	Not Applicable	Not Applicable	Not Applicable	There are no harmful impacts of the project activity as it leads to the employment generation.	There is not any monitoring system applicable for this safeguard, therefore it is not taken into account.	+1	Since the project activity is already operational the project activity has already resulted in temporary employmen t during its constructio n phase. No risks have been identified and hence no risk mitigation action is required. There is not any monitoring system applicable for this safeguard, therefore it is not taken into account.	The project operation has created new job opportunities in the area during operational phase of the project activity. The number of persons employed would be monitored through HR records and payroll records. This will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report
Sources of income generation increase d/reduced (SJ03)	There is a positive impact of the project activity on the creation of employment resulting in increase in source of income generation.	There is no legal requirement from local authority to create permanent employment from the project activity	Not Applicable	No Action Required	Not Applicable	Not Applicable	There is not any monitoring system applicable for this safeguard, therefore it is not taken into account	Not Applicab le	Source of income generation have increased due to the project activity. There is not any monitoring system applicable for this safeguard, therefore it is not taken into account.	No risks identified

	Avoiding discrimin ation when hiring people from different race, gender, ethnics, religion, marginali zed groups, people with disabilitie s (SJ04) (Human rights)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
Social - Health & Safety	Disease preventio n (SHS01)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
	Occupati onal health hazards (SHS02)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
	Reducing / increasin g accidents /Incident s/fatality (SHS03)	There is a possibility of accidents/incidents/nea r miss in project sites due to human intervention or technical failure or emergency.	In compliance with the EHS policy	Not Applicable	Harmless	Not Applicable	To avoided accidented project owner will provide the trainings Number of trainings minimum	Cause of Physical hazards in project sites due to human intervention or technical failure or emergency	0	This aspect is not applicable to this project activity.	No risks identified
	Reducing / increasin g crime (SHS04)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified

	Reducing / increasin g food wastage (SHS05)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identifie
	Reducing / increasin g indoor air pollution (SHS06)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identif
	Efficienc y of health services (SHS07)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identif
	Sanitatio n and waste manage ment (SHS08)	Project will generate domestic waste during construction and operation of the project.	As per Factories Act, Solid waste management rules	Not Applicable	Harmless The project will have proper sanitation facilities (during construction portable toilets, during operation permanent toilets) for both men and women as per factories act and domestic waste generated will be disposed as per local regulations.	Not Applicable	Not Applicable	Not Applicable	0	The project is unlikely to cause any harm.	No risks identif
	Other health and safety issues (SHS09)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identil
on	specializ ed training /	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	Not Applicable	No risks identi

rioject verili	oution recp	011									
	educatio n to local personne I (SE01)										
	Educatio nal services improved or not (SE02)	The employees will receive on job training as per training needs. It imparts a positive impact by helping employees in all-round development.	None	It is a positive e impact	NA	Not Applicable	Not Applicable	The employee provide job related training in order to increase the knowledge and monitored via no training records.	+1	The project owner provided the training and education related to the technology, through the training the employ will get knowledge and enhance skills, mentoring by the no of training recodes	The Project owner provided the training to the employee during time interval, it will help the employee.
	Project- related knowledg e dissemin ation effective or not (SE03)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
	Other educatio nal issues (SE03)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
Social - Welfare	Improvin g/ deteriorat ing working condition s (SW01)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
	Commun ity and rural welfare	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this	No risks identified

	(in all in a second			I		ı	ı				
pi ai co	(indigeno us people and communi ties)									project activity	
(5	(SW02)										
ai n pi ai pi le	Poverty alleviatio in (more people above poverty evel) (SW03)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
g d in w d o o g n in a a	Improvin g / deteriorat ng wealth distributi on/ generatio n of income and assets (SW04)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
d dd in m re	Increase Id or / Ideteriorat Ing Imunicipal Irevenues ISW05)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
ei m (S	Women's empower ment (SW06) (Human rights)	Equal working opportunity for both men and women this project site is located in isolated place due to that no women were there at plant location	HR policy	Not Applicable	Not Applicable	Not Applicable	Project owner implement and maintain the HR policy to ensure that no gender discrimination should be entertained while employing the workforce and paying the wages for the project activity 100% probability and equal pay packages will be	Not Applicable	0	Project owner will not monitor the parameter since no woman working at plant site	No risks identified

roject vermet											
							provided to the both men and women employees				
	Reduced / increase d traffic congesti on (SW07)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
	Exploitati on of Child labour (Human rights) (SW08)	No child (below the age of 14 years) will be employed in the project activity during the No child labour will be used in the project during construction and operation phase	National labour policy /HR policy -	Not Applicable	Not Applicable	Not Applicable	Subquitently the act was amended in 2016 with the enactment of the Child Labour (Prohibition & Regulation) Amendment Act 2016 prohibiting the employment of Children below 14 years in all employment and also with the provisions for prohibition on employment of adolescents (14-18 Years) in the scheduled hazardous	Not Applicable	0	No child labour will be used in the project during constructio n and operation phase.	No risks identified.
	Minimum wage protectio n (Human rights) (SW09)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
	Abuse at workplac e. (With specific reference to women and people with	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified

special disabilitie s / challeng es) (Human rights) (SW10) Other social welfare issues (SW11)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
Avoidant e of human traffickin g and forced labour (Human rights)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
Avoidante of forced eviction and/or partial physical or economic c displace ment of IPLCs (Human rights)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified
Provision s of resettlen ent and human settleme nt	applicable to this project	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicab le	This aspect is not applicable to this project activity	No risks identified

displace ment (Human rights) (CW14)										
Net Score:	+3									
Project Owner's Conclusion in PSF:	The Project Owner confirms that the Project Activity will not cause any net harm to society.									
GCC Project Verifier's Opinion:	The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society.									

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

UN-level SDGs	UN-level Target	Declared Country- level SDG		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/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 for guidance.	Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).	Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets	Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG indicator and its corresponding target, frequency of monitoring and data source	Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s).	Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or no)
Goal 1: End poverty in all its forms everywhere	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 3. Ensure healthy lives and	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA

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promote well-being for all at all ages								
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 5. Achieve gender equality and empower all women and girls	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 6. Ensure availability and sustainable management of water and sanitation for all	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all	SDG target 7.2, "By 2030 increase substanti ally the share of renewabl e energy in the global energy mix" by the utilization of solar power as a renewabl e energy source" Indicator 7.2.1 Renewab le energy	Yes	Increase the share of renewables in the total installed power capacity connected to the national grid.	337,868 MWh per year clean energy generation	The project provides 337,868 MWh annual clean energy to the grid.	The net electricity which will be supplied to the grid by the project activity will be monitored continuously through energy meter (main and check meter) installed at the substation. The meters remain under the custody of state utility. Please refer to Section	This project is renewable solar power project and installations started operation from 24/10/2019 and same was verified with the commissioning certificates provided by the project owner. The generated power from the project activity is the clean energy and continuously monitored by	Yes

r roject vermoation								
	share in the total final energy consump tion. KPI - Amount of renewabl e energy supplied to grid for consump tion.					B.7.1 for monitoring details.	the energy meters installed at the site and included in the monitoring plan in the PSF.	
Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all	SDG target 8.5, "By 2030, achieve full and productiv e employm ent and descent work for all women and men including for young people and persons with disabilitie s and equal pay for work of equal value, "Indicator 8.5.1 average hourly earnings	Yes	Number of employments as a part of project activity	Around 25 numbers of persons will be employed during the crediting period. In addition, training will be conducted for the employees.	Employment of persons the project activity is likely to in reduction of proportion of unemployment (Indicator 8.5.1)	The total number of persons employed will be assed from Employee logbook or register and confirmation from contractual service agency. Please refer to Section B.7.1 for monitoring details.	This is a direct positive impact of the project activity, which will help to reduce unemployme nt in the host country, this parameter is verifiable during the monitoring period. The total number of persons working in the project activity along with details of femalemale break up, age and role and persons with disabilities, if any will be monitored and Payroll/HR records	Yes

	of female and male employe e, by occupati on, age and persons with disabilitie s.						will be used to monitor this parameter. The relevant monitoring plan is included in the section B.7.1 of the PSF also the assessment of the same has been provided D.3.7 of PVR.	
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 10. Reduce inequality within and among countries	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 12. Ensure sustainable consumption and production patterns	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 13. Take urgent action to combat climate change and its impacts	SDG Target 13.2- "Integrat e climate change measure s into	Yes	Quantum of GHG avoided due to the project activity	The project activity is expected to result in avoidance of 314.555tCO₂e per annum.	Project activity results in avoidance of GHG emission by generation of electricity using renewable energy	Avoidance of GHG emission is estimated as product of electricity generated and supplied to the grid	This is direct positive impact of the project which will avoid around 314.555tCO 2 / Year. The generated	Yes

	national policies, strategie s and planning". KPI - Amount of emission reduction achieved by project under UNFCCC / GCC / Domestic market mechani sm.				resources and its supply to the grid, which will avoid generation of equivalent quantum of electricity from fossil fuelbased power plant resulting in emission of CO ₂ .	and grid emission factor. Please refer to Section B.7.1 for monitoring details.	power from the project activity is the clean energy and continuously monitored by the energy meters installed at the site and included in the monitoring plan in the PSF.	
Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
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	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA

build effective, accountable, and inclusive institutions at all levels								
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	Not Applicabl e	Not Applicabl e	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
							I	
SUMMARY						eted	Likely to be Achieved	
Total Number of SDGs						3		3
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF					Silver Silver			ver

Appendix 8. Project Monitoring Meters

Project Location	Meter make	Accuracy class	Main Meter details	Check Meter details	Calibration date	Due date
Feeder No 102 at GSS Narbheram Solar TN Private Limited.	Secure	0.2s	TNW02270	TNW02271	12/12/2020	17/12/2025
Feeder no 103 at GSS NVR Energy Private Limited	Secure	0.2s	TNW02266	TNW02267	17/12/2020	17/12/2025

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DOCUMENT HISTORY

Version	Date	Comment
V 3.1	31/12/2020	 The name of GCC Program's emission units has been changed from "Approved Carbon Reductions" or ACRs to "Approved Carbon Credits" or ACCs.
V 3.0	23/08/2020	 Revised version released on approval by the Steering Committee as per the GCC Program Process; Revised version contains the following changes: Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC); Considered and addressed comments raised by the Steering Committee: during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and electronic consultations EC01-Round 04 (17.08.2020 – 22.08.2020). Feedback from the Technical Advisory Board (TAB) of ICAO on GCC submissions for approval under CORSIA¹⁷;
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

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¹⁷See 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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