المجلس العالمي للبصمة الكربونية
GLOBAL CARBON COUNCIL

Project Verification Report

V3.1 - 2020

CONTENTS

COVER PAGE Project Verification Report Form (PVR)	
BASIC INFORMATION	
Name of approved GCC Project Verifier / Reference No. (also provide weblink of approved GCC Certificate)	LGAI Technological Center S.A. Certificate No: GCCV009/00 Date of Issue: 14/06/2023 https://www.globalcarboncouncil.com/wp-content/uploads/2023/06/GCCV-00900-LGAI-GCC-Verifier-Certificate.pdf
Type of Accreditation	☐ Individual Track[1] ☒ CDM Accreditation (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 ☐ ISO 14065 Accreditation
Approved GCC Scopes and GHG Sectoral scopes for Project Verification	GHG sectoral Scope: Scope 1 - Energy (renewable/non-renewable sources). GCC Scopes: Environmental No-harm (E+) Social No-Harm (S+) Sustainable Development Goals (SDG+) CORSIA requirements (C+)
Validity of GCC approval of Verifier	Active Accreditation from United Nations Framework Convention on Climate Change valid till 28/11/2028; Red no. CDM-E032 Re-approval on GCC pending from GCC. Extended based on the renewal of the CDM Accreditation from 05/06/2023 to 04/01/2024. (provisional approval of the CDM Accreditation as per EB 119th Meeting). Extended CDM Accreditation until 28/11/2028 communicated to GCC and awaiting responses about re-approval.
Title, completion date, and Version number of the PSF to which this report applies	100 MW solar power project in UP by Tata Power Renewables Energy Limited Completion date: 15/03/2024 Version number: 7.0
Title of the project activity	100 MW solar power project in UP by Tata Power Renewables Energy Limited
Project submission reference no. (as provided by GCC Program during GSC)	S00345

[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.

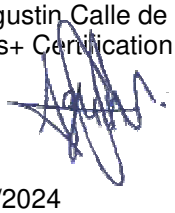
<table>
<tr><td>Eligible GCC Project Type[2] as per the Project Standard
(Tick applicable project type)</td><td>☒ Type A:
☐ Type A1
☒ Type A2 (Sub-Type 1)
☐ Type B – De-registered CDM Projects:
☐ Type B1
☐ Type[3] B2</td></tr>
<tr><td>Date of completion of Local stakeholder consultation</td><td>1. Banda Plant Site: 08/06/2022
2. Prayagraj Plant site:15/06/2022</td></tr>
<tr><td>Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.</td><td>Date of GSC completion: 22/09/2022
GSC Period: 08/09/2022 to 22/09/2022
https://www.globalcarboncouncil.com/global-stakeholders-consultation-5/
GSC comment has been verified from webpage. No comments were received.</td></tr>
<tr><td>Name of Entity requesting verification service
(can be Project Owners themselves or any Entity having authorization of Project Owners)</td><td>Tata Power Renewable Energy Limited</td></tr>
<tr><td>Contact details of the representative of the Entity, requesting verification service
(Focal Point assigned for all communications)</td><td>Mr. Sivanaryana Venkat Gavadhakatla
Tata Power Renewable Energy Limited
C/o The Tata Power Company Limited, Corporate Center,
A Block, 34 Sant Tukaram Road, Carnac Bunder, Mumbai-400009, Maharashtra
sivanarayana@tatapower.com
Tel: +91 22 6717 1912</td></tr>
<tr><td>Country where project is located</td><td>India</td></tr>
<tr><td>GPS coordinates of the Project site(s)</td><td><table><tr><th>Location</th><th>Latitude</th><th>Longitude</th></tr><tr><td>Banda site</td><td>N 28.220178
N 28°13'12.6"</td><td>E 80.170227
E 80^{0}10’12.8”</td></tr><tr><td>Prayagraj site</td><td>N 25.190604
N 25^{0}11’26.2”</td><td>E 81.656580
E 81^{0}39’23.7”</td></tr></table></td></tr>
<tr><td>Applied methodologies
(approved methodologies of GCC or CDM can be used)</td><td>ACM0002: Grid-connected electricity generation from renewable sources --- Version 21.0[4]</td></tr>
<tr><td>GHG Sectoral scopes linked to the applied methodologies</td><td>GHG-SS #1. Energy (renewable/non-renewable sources)</td></tr>
</table>

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

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

[4] https://cdm.unfccc.int/methodologies/DB/HF3LP6O41YY0JIP1DK6ZRJO9RSCX3S

Project Verification Criteria: Mandatory requirements to be assessed	☒ ISO 14064-2, ISO 14064-3 ☒ GCC Rules and Requirements ☒ Applicable Approved Methodology ☒ Applicable Legal requirements /rules of host country ☒ National Sustainable Development Criteria (if any) ☒ Eligibility of the Project Type ☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Baseline ☒ Additionality ☒ Emission Reduction calculations ☒ Monitoring Plan ☒ No GHG Double Counting
	☒ Local Stakeholder Consultation Process ☒ Global Stakeholder Consultation Process ☒ United Nations Sustainable Development Goals (Goal No 13-Climate Change) ☐ Others (please mention below)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria ☒ United Nations Sustainable Development Goals (in additional to SDG 13) ☒ CORSIA requirements
Project Verifier's Confirmation: The *GCC Project Verifier* has verified the GCC project activity and therefore confirms the following:	The GCC Project Verifier [LGAI Technological Center S.A.], certifies the following with respect to the GCC Project Activity [100 MW solar power project in UP by Tata Power Renewables Energy Limited]. ☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version 7.0, dated 15/03/2024) including the applicability of the approved methodology [ACM0002: Methodology for Grid-connected electricity generation from renewable sources, version 21.0] and meets the methodology applicability conditions and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reductions estimates correctly and conservatively. ☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated annual average [202,645] tCO_2 over the fixed crediting period of 10 years, as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2 and ISO 14064-3. ☒ 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 Sustainable Development Goals (SDGs), complies with the Project Sustainability Standard, and contributes to achieving a total of [3 SDGs (7, 8, & 13)] SDGs, with the following[5] 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 requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project. The Project Activity complies with all the applicable GCC rules[6] and therefore recommends GCC Program to register the Project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	Ref. No.: TQC 3402 Version 3.0, Dated 06/04/2024
Name of the authorised personnel of GCC Project Verifier and his/her signature with date	Mr. Agustin Calle de Miguel Applus+ Certification GCC Verifier Technical Manager  08/04/2024

[5] 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.

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

1. PROJECT VERIFICATION REPORT

Section A. Executive summary

LGAI Technological Center S.A. has been contracted by "Tata Power Renewable Energy Limited" an authorise Project Owner - to perform Project Verification of GCC Project Activity "100 MW solar power project in UP by Tata Power Renewables Energy Limited" (GCC ref. no. S00345) and implemented safeguards aimed to achieve environmental and social impacts without causing any net harm. During this verification exercise, emission reductions claimed and contribution of the project activity towards the United Nations Sustainable Development Goals would also be verified along with Environmental (E+) and social safeguards (S+).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented as per the PSF/1/ and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place;
- PSF and other supporting documents are complete;
- The actual monitoring systems, procedures and monitoring report confirms the requirements of the approved monitoring methodology/4/;

Brief Summary of the Project Activity

The purpose of project activity is to generate clean form of electricity through renewable solar energy source. The project "100 MW solar power project in UP by Tata Power Renewables Energy Limited" is a grid-connected 100 MW solar power plant consisting monocrystalline PV modules for the supply of generated electricity to the fossil-fuel intensive national electricity grid of India.
The project activity is commissioned in phase-wise manner as stated in the following table. The table incorporates commissioning dates of the project activities. Commissioning date is when the project was synchronised and was ready for injecting power into the grid.

Sr. No.	Location	Capacity (MW_{AC})	Date of Commissioning
1.	Banda	50	03/12/2021
2.	Prayagraj	50	03/01/2022

The project activity involves the development, construction and operation of a Greenfield solar PV plant by Tata Power Renewable Energy Limited. It is a green field power project located in Bijora Bijuria Village, Shahjahanpur District of U.P. (referred as Banda Site) & PPGCL BARA Village- Prayagraj, U.P., state of India. The generated electricity is fed to the Indian national grid and sold to Uttar Pradesh Power Corporation Limited (UPPCL) and Noida Power Company Limited (NPCL) under signed power purchase agreement/17/ using state grid of Uttar Pradesh.
The project boundary includes the project site where the plant has been installed, power evacuation infrastructure including the other power stations feeding to the connected electricity grid, energy metering points, switch yards and other civil constructions.

Some of the important technical specifications of the project are provided in the following table:

Site	Banda
Capacity	50 MW_{AC}
Module make	JA Solar
Module capacity	440 Wp, 445 Wp, 450 Wp, 460 Wp
Transformers details at Grid sub stations	4 Nos of 12.5 MVA,33/4*0.600 KV transformer
Connecting grid substation details	50 MW Solar Power plant connected to 132 KV Banda substation through Single circuit 132 kV transmission line

Energy meter details	**Meter at substation** ABT Meter Genus Main meter –UP -5099-A Check meter-UP -5101-A **Meter at Plant End** Meter model -Secure Apex 150 Main meter-UPP 68962 Check meter-UPP 68963
Inverters (make capacity & numbers)	KEHUA TECH ,16 Nos., 3.125 MW, 2 MPPT

Site	Prayagraj
Capacity	50 MW_{AC}
Module make	JA Solar & JE Energia
Module capacity	445Wp,455 Wp & 460Wp
Transformers details at Grid substations	Make- Heptacare Power Private limited, IDT - 12.5MVA Power T/F - 50/62.5MVA
connecting grid substation details	132 KV Jari TPREL, Prayagraj
Energy meter details	**Meter at substation-** Make –Secure, Model –APEX 150, Main meter-3441 A, Check meter-3442 A **Meter at Plant Site** Meter Details-Secure, Main meter-UPP 68959, Check meter-UPP 689660
Inverters (make capacity & numbers)	KEHUA TECH, 3.125 MW, 16 nos.,2 MPPT/Inverter

The estimated annual average power generation, by the project activity, is 217,781 MWh. It will result into annual average ACCs of up to 202,645 tCO_2e and a total of 2,026,459 tCO_2e ACCs over 10-year fixed crediting period. The generated ACCs will be utilized to offset GHG emissions.

The project activity is installation of 100MW_{AC} capacity solar power plant. It is an environmentally safe and sound technology, and no GHG emissions are associated with the electricity generation from the plant. The project also contributes to the sustainable development by reducing the country's dependence on the fossil fuel, generating employment, providing training, healthy life and environment in the region.

Scope of verification:

The verification scope is defined as an independent and objective review of the project PSF, the project's baseline study, 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 and relevant tools as well. The verification was based on the requirements mentioned in project verification standard, v.3.1 for the project activity and GCC requirement. The contribution of the project activity towards the United Nations Sustainable Development Goals and CORSIA requirements would also be verified. The verification is not meant to provide any consulting towards the project owner. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the PSF.

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

The scope of the services provided by LGAI Technological Center S.A., for the project is to perform Project Verification of concerned GCC Project Activity and implemented safeguards aimed to achieve environmental and social impacts without causing any net harm. The contribution of the project activity

towards the United Nations Sustainable Development Goals and CORSIA requirements would also be verified.
The scope of project verification is to provide an independent evaluation on the proposed GCC project activity with respect to commitments and targets based on forecasted GHG emission reductions or net anthropogenic GHG removals, sustainability and environmental and social do no-net-harm, against applicable GCC rules and requirements/6/. Claims and assumptions made in the Project Submission Form (PSF) /1/are assessed against ISO 14064-2 and ISO 14064-3/5/ and GCC criteria, including but not limited to, GCC Program Framework and Program Manual, GCC PS, GCC VS/6/, applied CDM methodology/4/ and other relevant rules and requirements established under Program process.
Project verification is not meant to provide any consulting towards the project owners. However, stated requests for clarifications (CL) and/or corrective actions (CAR) may have provided input for improvement of the project submission form.

Project Verification Process:

LGAI employed a risk-based approach in the verification, focusing on the identification of significant risks for project implementation. The verification process was undertaken by a competent verification team and involved the following:
(a) Document review, involving:

- A review of documents and evidence submitted by the project owner in context of the reference rules and guidelines issued by GCC;
- Cross checks between the information provided in the PSF/1/ and information from the publicly available sources, GCC Verifier's sectoral expertise and independent background investigations;

(b) Follow-up actions (on-site inspection as well as remote interviews), including:

- Interviews with stakeholders/ representative of the project owners in the project host country (i.e. India);
- Cross checks between information provided by interviewed personnel to ensure that no relevant information has been omitted;

(c) Reference to available information related to projects or technologies similar to the proposed GCC Project Activity under verification;
(d) Review, based on the selected methodologies and applied methodological tools, on the appropriateness of formulae and accuracy of calculations;
(f) Review of the claims regarding the additional certification labels (E+, S+, SDG+ and CORSIA market eligibility);
(g) Reporting audit findings with respect to clarifications, non-conformities and the closure of findings, as appropriate and;
(f) Preparation of a draft verification opinion based on the audit findings and conclusions;
(g) Technical review of the draft verification opinion along with other documents as appropriate by an independent competent technical review team;
(h) Finalization of the Project Verification Opinion (this report).

Assessment of the verification:

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. has composed a project assessment team in compliance with the contract Review and Assessment Team appointment rules in the Internal Quality Management Systems of LGAI Technological Center as well as in compliance with the applicable requirements in the accreditation standard.

The composition of Assessment Team (LGAI Technological Center validation team) has been approved by LGAI Technological Center during the Contract Review process ensuring that the required skills and capabilities are covered.

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

- Lead Auditor (LA)
- Auditor (A)
- Technical Expert (TE)

- Financial Expert (FE)
- Technical Reviewer (TR)
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training).

The Sectoral Scope / Technical Areas required knowledge linked to the applied methodology(/ies) is covered by the Assessment Team as shown below:

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Mr. Jitendra Mohan Singh	LA/TE	Yes	Yes	Yes	Yes
Mr. Jitendra Mohan Singh	FE	Yes	Yes	Yes	Yes
Mr. Denny Xue	TR/TE	Yes	Yes	Yes	NA

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

Team has been selected based on host country knowledge, technical expertise, understanding of ISO 14064-2, ISO 14064-3,/5/, applied methodology and methodological tool, GCC guidelines, rules and regulations related to project activity/4//6/, and auditing skills. LGAI confirms that assessment team is completely independent of all other aspect of project or its components.

Conclusion

The review of the PSF/1/, supporting documentation, on-site inspection and interviews have provided LGAI with sufficient evidence to determine the fulfillment of stated criteria including additional labels (E+, S+ and SDG+). LGAI is of the opinion that the project activity “100 MW solar power project in UP by Tata Power Renewables Energy Limited” as described in the final PSF/1/ meets all relevant requirements of ISO 14064-2, ISO 14064-3,/5/ GCC and host country (legal requirements for producing power) criteria and has correctly applied the methodology ACM0002 Version 21.0/4/.

The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard and therefore requests GCC Steering Committee to append this project Environmental No-net-harm Label (E+), Social No-net-harm Label (S+) to this project. The Project Activity is likely to contribute to the achievement of United Nations Sustainable Development Goals (SDGs), complies with the Project Sustainability Standard and therefore requests GCC Steering Committee to append UN SDG Certification Labels (SDG+) to this project.

The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3/22/ paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA. Therefore, the project is being recommended to GCC Steering Committee for request for registration.

Section B. Project Verification team, technical reviewer and approver

B.1 Project Verification team

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Project Verification findings
1.	Team Leader, Technical Expert	OR	Singh	Jitendra Mohan	True Quality Certifications Private Limited-Outsourced entity	✓	✓	✓	✓
2.	Financial Expert	OR	Singh	Jitendra Mohan	True Quality Certifications Private Limited-Outsourced entity	✓	✓	✓	✓

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

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

Section C. Means of Project Verification

C.1 Desk/document review

A desk review is undertaken, involving but not limited to,

- A review of the data and information presented to verify their completeness, and to assess the nature, scale and complexity of the verification activity.
- A review of the monitoring plan and monitoring methodology, paying attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- An evaluation of data management and the quality assurance & quality control system in the context of their influence on the generation and reporting of emission reductions, to achieve the desired confidence in the project owner's GHG information and claims regarding the additional

certification labels (E+, S+, SDG+ and CORSIA market eligibility).

- Review of GCC and GSC comments have been taken into account and solved. There is no comment from global stakeholder, However, minor comment GCC related to “Environment and Social Safeguards Standard” has been addressed by PO. Assessment team confirms the same through screenshots of project listing webpage submitted by the PO.

The list of documents reviewed is included in the section ‘Appendix 3’ of this report.

C.2 On-site inspection

Duration of on-site inspection: 11/10/2022-13/10/2022				
No.	Activity performed on-site	Site location	Date	Team member
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14.	The project verification team conducted interviews with the project owner, plant in-charge, other stakeholders to confirm the information and to resolve issues identified in the document review. An assessment was conducted as a part of verification activity and involved: An assessment of the implementation and operation of the project activity as per the PSF/1/and GCC requirements To verify that project design, as documented is sound and reasonable, and meets the identified criteria GCC Standard Requirements/6/ and associated guidance To assess conformance with the certification criteria as laid out in the GCC Standard; /6/ To evaluate the conformance with the certification scope, including the GHG project and baseline scenarios, additionality; GHG sources and the physical infrastructure, activities, technologies and processes of the GHG project to the requirements of the CDM/GCC; /4//6/ To evaluate the calculation of GHG emissions, including the correctness and transparency of formulae and factors used; assumptions related to estimating GHG emission reductions; and uncertainties; and To determine whether the project could reasonably be expected to achieve the estimated GHG reduction/removals. A review of information flows for generating, aggregating and reporting of the ex-ante parameters and ex- post monitoring parameters. A review of parameters identified for sustainable development goals identified in the PSF/1/ Interviews with relevant personnel to confirm that the operational and data collection procedures can be implemented in accordance with the Monitoring Plan A cross-check between information provided in the submitted documents and data from other sources A review of calculations and assumptions made in determining the GHG data and estimated ERs, and an identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters Verification of Stakeholder Consultation by interviewing the stakeholders To verify legal ownership of the project activity and avoidance on double	Village- Bara, District- Prayagraj, (Uttar Pradesh) & Village- Bijora Bijuria District- Shahjahanpur (Uttar Pradesh)	11/10/ 2022 - 13/10/ 2022	Jitendra Mohan Singh (TL/TE/FE)

C.3 Interviews

No.	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Tiwari	Prashant	Group Head, Carbon Assets Management (TREPL)	11/10/2022 13/10/2022	Project Conceptualization at legal level, Project Boundary, Eligibility criteria, Host country requirements, Emission reduction calculations	Jitendra Mohan Singh (Team Leader/ Technical Expert & Financial Expert)
2.	Mishra	Keshri	Lead Engineer, TREPL	11/10/2022	Project Implementation, Monitoring Plan, Local Stakeholder Consultation	
3.	Kumar	Saurabh	O & M TREPL	11/10/2022	Operation & Management of Plant, Data recording & data storage Env. Health & Safety, QA/QC	
4.	Kumar	Praveen	O & M, TREPL	11/10/2022		
5.	Yadav	Rama Shanker	Local stakeholder	11/10/2022	Interviews Local stakeholders and discussed E+, S+, SDG+, contribution, livelihood of the local people Local stakeholder consultation process and feedback.	
6.	Kumar	Deepak	Local Stakeholder	11/10/2022		
7.	Swain	Tushar	Local Stakeholder	11/10/2022		
8.	Singh	Hansh Pratap	Local Stakeholder			
9.	Singh	Toofan	Local Stakeholder	13/10/2022		
10.	Nand	Krishna	Local Stakeholder	13/10/2022		
11.	Chaubey	Ashish Kumar	Consultant, Infinite Solution	11/10/2022 13/10/2022	Implementation plan, Additionality, Investment inputs, benchmark and Financial Analysis E+, S+, SDG+, CORSIA+ Contribution of the project towards sustainable development	

C.4 Sampling approach

No Sampling Approach is used during project verification. All the data provided by the project owner has been duly verified.

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

Areas of Project Verification findings	Applicable to Project Types	No. of CL	No. of CAR	No. of FAR
Green House Gas (GHG)				
Identification and Eligibility of project type	A_1, A_2, B_1, B_2	00	00	00
General description of project activity	A_1, A_2, B_1, B_2	03	03	00
Application and selection of methodologies and standardized baselines	A_1, A_2, B_1, B_2	00	00	00
- Application of methodologies and standardized baselines	A_1, A_2, B_1, B_2	01	02	00
- Deviation from methodology and/or methodological tool	A_1, A_2, B_1, B_2	00	00	00
- Clarification on applicability of methodology, tool and/or standardized baseline	A_1, A_2, B_1, B_2	00	00	00
- Project boundary, sources and GHGs	A_1, A_2, B_1, B_2	00	01	00
- Baseline scenario	A_1, A_2, B_1, B_2	01	01	00
- Demonstration of additionality including the Legal Requirements test	A_1, A_2, B_1, B_2	03	06	00
- Estimation of emission reductions or net anthropogenic removals	A_1, A_2, B_1, B_2	00	03	00
- Monitoring plan	A_1, A_2, B_1, B_2	00	02	00
Start date, crediting period and duration	A_1, A_2, B_1, B_2	00	01	00
Environmental impacts	A_1, A_2, B_1, B_2	00	00	00
Local stakeholder consultation	A_1, A_2, B_1	00	00	00
Approval & Authorization- Host Country Clearance	A_1, A_2, B_1, B_2	00	00	FAR 01
Project Owner- Identification and communication	A_1, A_2, B_1, B_2	00	01	00
Global stakeholder consultation	A_1, A_2, B_1	01	00	00
Others (Refer finding section attached in the report)	A_1, A_2, B_1, B_2	00	00	00
VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E^+)	A_1, A_2, B_1	00	02	00
Social Safeguards (S^+)	A_1, A_2, B_1	01	02	00
Sustainable development Goals (SDG^+)	A_1, A_2, B_1	01	00	00
Authorization on Double Counting from Host Country (only for CORSIA)	A_1, A_2, B_1	00	01	FAR 01
CORSIA Eligibility (C^+)		00	00	FAR 01
Total		**11**	**25**	**01**

Section D. Project Verification findings

D.1 Identification and eligibility of project type

Means of Project Verification	The project activity has identified itself as A2 category, Sub-type 1 as per GCC Project standard/6/ which was found acceptable since a. The project is neither registered nor in process of registration with any GHG/Non-GHG Program, which was confirmed through declaration provided by PO in the PSF section A.5 and performing secondary independent research (public domains on web) by checking registry website i.e. VERRA, GS, UNFCCC, REC, i-REC and found that project has not been registered under any GHG program in-line with requirement of clarification no 1, section 6/6/. b. The project activity started its commercial operation on 03/12/2021. Further, commissioning certificate/9/ of solar power plants of the project activity has been verified in this regard and found acceptable. c. Further it could be confirmed that the project has started its operation after 01/01/2016 which qualifies the project into sub-type 1. This has been verified based on GCC's Rules and requirements/6/ Further, following points are verified by the assessment team; a. Project is not required by a legal mandate and it does not implement a legally enforced mandate.

	This has been confirmed through the review of various articles/20/ discussing the rules and regulations for electricity generation in India. The main legislation that governs the electricity sector in India is Electricity Act, 2003 (Electricity Act)/10/. However, there is no specific legislation governing renewable energy in India. As renewable energy is considered as a part of the electricity sector, it is governed under the provisions of the Electricity Act, which provides a framework for the generation, transmission, distribution, trading and use of electricity. b. Project complies with all applicable host country legal requirements and it ensures compliance with legal requirements as it has acquired commissioning certificate/9/ from UPNEDA and signed power purchase agreement/17/ between project owner and with Uttar Pradesh Power Corporation Limited (UPPCL) & Noida Power Corporation Limited (NPCL). The power purchase agreement were signed prior to the start date of the Project activity which is in-line with the paragraph 16 (b) of Project Standard Version 3.1/6/, the project owner has ensures compliance with legal requirement by accruing Letter of Award/9/ from UPNEDA prior to the start of the commercial operations of plant which is acceptable to the GCC verifier. c. The project also delivers real, measurable and additional emission reduction/2/ of 202,645 tCO_2e annually (average value over the crediting period) as compared to the baseline scenario. d. Project applies an approved CDM monitoring and baseline methodology ACM0002 version 21.0. /4/
Findings	No findings raised.
Conclusion	The project activity was found eligible as per the requirements under section 4 and has been confirmed to be type A2 project in line with paragraph 11 (a) (ii) of the GCC Project Standard version 3.1/6/.

D.2 General description of project activity

Means of Project Verification	The project activity is installation of a 100 MW_{ac} solar power plant in Bijora Bijuria Village Shahjahanpur District & PPGCL BARA Village - Prayagraj District, Uttar Pradesh, India which was confirmed from letter of award issued by UPNEDA /9/ The project is grid connected greenfield project through signed power purchase agreement/17/, UPPTCL approved SLD/8/ and in the absence of the activity same electricity would have been produced from the fossil intensive Indian grid. Therefore, Indian grid chosen as a baseline is found to be appropriate.. During course of assessment, verification team observed that the project installation of 100 MW_{AC} was in accordance with Detailed Project Report (DPR) /8/ dated 01/02/2019 which was prepared prior of signing power purchase agreement. The signing date (12/02/2019) of power purchase agreement/17/ has been considered as investment decision date which was further checked by the GCC Verifier & found acceptable. Technical specifications of the components used during the project commissioning are given below: **BANDA SITE**

Site	Banda
Make	JA Solar, Jinergy & SUNTECH
Module capacity	50 MW ac
Module Type and numbers	440 Wp- 7336 445 Wp- 77968 450 Wp- 40376 455 Wp- 16576 460Wp- 13928

Transformers details at Grid substations	4 Nos of 12.5 MVA,33/4*0.600 KV transformer
Connecting grid substation details	50 MW Solar Power plant connected to 132 KV Banda substation through Single circuit 132 kV transmission line
Energy meter details	Meter at substation ABT Meter Genus Main meter –UP -5099-A Check meter-UP -5101-A Meter at Plant End Meter model -Secure Apex 150 Main meter-UPP 68962 Check meter-UPP 68963
Inverters (make capacity & numbers)	KEHUA TECH ,16 nos, 3.125 MW, 2MPPT MW,

PRAYAGRAJ SITE

Site	Prayagraj
Make	JA Solar
Module Capacity	50 MW ac
Module Capacity and number	455 Wp 80304 460 Wp 79296
Transformers details at Grid substations	Make- HAMMPND POWER SOLUTION & VOLT AMP, IDT - 12.5MVA 4 nos., Power T/F - 50/62.5MVA
Connected grid substation details	132 KV Jari TPREL, Prayagraj
Energy meter details	Meter at substation Make – Secure, Model – APEX 150, Main meter-3441A, Check meter-3442 A Meter at Plant End Meter Details-Secure, Main meter-UPP 68959, Check meter-UPP 689660
Inverters (Make, Capacity & quantity)	KEHUA TECH, 3.125MW, 16 nos,2MPPT/Inverter

The project owner declared in the PSF/1/ the lifetime of the project activity is 25 Years as guaranteed by the suppliers of the project activity and same has been verified with the technical data sheet/8/ provided by the project owner and found acceptable.

TATA Power Renewable Energy Limited (TPREL) has bid for 100 MW capacity under Request for Proposal (RfP) for Procurement of 550 MW Power from Grid Connect Solar PV Power Projects Through Tariff Based Competitive Bidding Process issued by Uttar Pradesh New and Renewable Energy Development Agency, (UPNEDA); Bid No. 03/UPNEDA/GRID Connect/RfP/2018 dated 12/10/2018. Letter of Award (LoA)/9/ dated 14/12/2018 has been awarded by UPNEDA to TPREL with project ID RS0000339 and RS0002542 for 50 MW each.

From the total 100 MW capacity of project, 50MW AC Grid connected Solar power plant located at Banda generates electricity and injects 25 MW AC power into state grid (Uttar-Pradesh) through signed power purchase agreement/17/ between Uttar Pradesh Power Corporation Limited (UPPCL) & TATA Power

Renewable Energy Limited (TPREL) and injects another 25 MW AC power in state grid through signed power purchase agreement/17/ between NPCL (Noida Power Company Limited, Greater Noida) & TATA Power Renewable Energy Limited (TPREL). Thus, PPA is executed as 25 MW to UPPCL and 25 MW to NPCL for the Banda.
The another 50MW AC Grid connected Solar Power Plant at Prayagraj generates power and inject into the state grid through signed power purchase agreement (PPA)/17/ between Uttar Pradesh Power Corporation Limited (UPPCL) and TATA Power Renewable Energy Limited (TPREL)

Verification team noted that the project was commissioned in phase wise manner in presence of Uttar Pradesh Power Corporation Limited (UPPCL) & Noida Power Corporation Limited (NPCL) with whom Project owner has a power purchase agreement/17/ signed for period of 25 years. The project started its commercial operation by exporting electricity to grid on following dates and was confirmed from certificate of commissioning/9/ issued by UP New & Renewable Energy Development Agency (UPNEDA):

Sr. No.	Site Name	Capacity (MW_{AC})	Date of Commissioning
1.	Banda, Shahjahanpur	50	03/12/2021
2.	Bara, Prayagraj	50	03/01/2022

Thus, it confirms that Tata Power Renewable Energy Limited had commissioned 50 MW_{AC} Solar power plant at village Bijora – Bijuria , district Shahjahanpur & 50 MW_{AC} at village PPGCL BARA, district Prayagraj confirming project ownership in the name of Project Owner and verified ownership right's with signed power purchase agreement /17/ which is found to be appropriate. Commissioning Certificates are checked & reviewed by the project verification team and confirms that project activity was commissioned on 03/12/2021 which is the earliest commissioning date and same has been considered as start date of the project activity in accordance with GCC definition/1/ and is accepted and affirms that the project category is A2 and sub-type 1.

Latitude and Longitude of the physical site of this project activity has been included appropriately in the PSF /1/ which were found consistent with the values of GPS meter taken during the site visit and satellite images via independent research. In addition, project location of both the sites have been checked and verified by the commissioning certificates/9/ issued by government body i.e Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA) & found acceptable. The coordinates of the physical site of the project activity found correct. The same are as follows:

Location	Latitude	Longitude
Banda site	N 28.220178 N 28°13'12.6"	E 80.170227 E $80^0$10'12.8"
Prayagraj site	N 25.190604 N $25^0$11'26.2"	E 81.656580 E $81^0$39'23.7"

Project Owner is generating power using solar panels. The power generated by solar panels is fed to the unified Indian grid through 132 kV Banda substation through Single circuit 132 kV transmission line & 132 KV Jari TPREL, Prayagraj which is further confirmed from Single line Diagram/8/ & Meter Sealing Certificates/8/ and thus, found acceptable The operational lifetime of the technology is 25 years and 00 months as per the technical specifications/8/ data sheet provided by the manufacturer. The Project Owner has fixed the crediting period of 10 years (03/12/2021 to 02/12/2031) which is in accordance with the

<table>
<tr><td></td><td>GCC program manual/6/ and will generate an estimated 217,781 MWh per Annum and achieved an estimated 202,645 tCO_2e emission reductions annual average.

The project activity is described as Type A2, sub-type 1, applying CDM methodology ACM0002 version 21.0/4/ and falls into the large-scale category (as per the applied CDM methodology).

No sampling approach was applied, as it was not required by the applied methodology, regarding verification of project description.

In addition to generating emission reductions the solar power plant also qualifies for other voluntary certification labels.
<table>
<tr><th>Voluntary Labels</th><th>Applied by the project</th></tr>
<tr><td>UN Sustainable development goals (SDG+)</td><td>Yes (Silver)</td></tr>
<tr><td>Environmental No-net harm (E+)</td><td>Yes</td></tr>
<tr><td>Social No-net harm (S+)</td><td>Yes</td></tr>
</table>
In the baseline scenario the main source of emission was found to be CO_2 as electricity generated mainly through fossil fuel dominated national power plants whereas in project scenario the electricity was generated by the solar power plant thereby reducing the CO_2 emissions. Thus, non-application of GWP in this project activity was found to be acceptable as the project boundary includes emissions from on-site electricity in the project scenario as per applied methodology/4/, however electricity generated from grid connected solar plant is being used. The project owner has applied for the CORSIA compliance. The requirements for the same with respect to the scope of project verification have been checked and found appropriate. Final compliance with respect to CORSIA (C+ label) will only be checked and confirmed at Emission Reduction Verification stage.

The description in the PSF/1/ includes sufficient details and provides clarity about the project activity. The project activity is not a bundled project. The verification team also checked the GCC website[7] and other public domain to determine if the project was part of any other GHG/non GHG Program[8],[9],[10] as explained under section D.1 of the PVR, prior to commencement of this verification. It was confirmed that the project owners have not submitted this project under any other GHG/non GHG program apart from GCC.</td></tr>
<tr><td>Findings</td><td>CL 01, CL 05, CL 06, CAR 01, CAR 10 and CAR 11 were raised and resolved. Please refer appendix 4 for more information.</td></tr>
<tr><td>Conclusion</td><td>The GCC verification was based on review of supportive evidences submitted by the project owner. Hence, in line with the requirements of paragraph 36 of the GCC Project Standard version 3.1/6/, project verification team confirms that project description as contained in the final PSF/1/ was found accurate and contains complete details of the GHG emission-reduction activity, including schematics, specifications and a description of how the project reduces emission reductions by generating renewable energy.</td></tr>
</table>

[7] https://projects.globalcarboncouncil.com/
[8] https://cdm.unfccc.int/
[9] https://registry.verra.org/
[10] https://globalgoals.goldstandard.org/

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

D.3.1. Application of methodology and standardized baselines

Means of Project Verification

Project owner has applied approved CDM methodology – ACM0002, version 21.0/4/ and no standardized baseline is used. Applicability of the methodology as per paragraph 04 to 10 is verified as follows;

Applicability criteria	Project Activity status	Verification by assessment team
1. This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).	The project activity is installation of a new grid connected renewable solar power plant/ unit at a site where no renewable power plant was operated prior to the implementation of the project activity (Greenfield plant) meeting the requirement of criteria (a) and hence this criterion is applicable for this project activity	The project involves installation of 100 MW grid connected Solar Power Plant by TATA Power Renewable Energy Limited (TPREL)/9/. The project activity is a newly installed green field grid connected solar power-based electricity generation project .The electricity generated from project activity is exported to the national grid in India through power purchase agreement/17/ with state grid (Uttar Pradesh). In baseline scenario, the equivalent amount of electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources. Thus, the project activity is projected on an average to generate 217,781 MWh/year/2/ electricity and is estimated to displacing 202,645 tCO_2e annually over the crediting period. This was verified through the documents /9//17/ submitted by the Project owner and confirmed the requirement.
2. In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable	The project activity does not involve use of Battery Energy Storage System (BESS). Hence, this criterion is not applicable for this project activity.	During the on-site visit & interviews and through the review of PPA/17/ and commissioning certificate/9/, assessment team verified that, this is

		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 [11] 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 wind power plant(s)/unit(s)		a greenfield On-grid solar power plant & not incorporate any Battery Energy Storage System and hence this criterion is not applicable. Thus, application of Table 2 of ACM0002, version 21.0/6/ is also not applicable.
		3. 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, 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	The project activity is the installation of new grid connected solar power plant and does not involve use of BESS. Hence, this criterion is not applicable for this project activity.	During the on-site visit & interviews and through the review of PPA/17/ and commissioning certificate,/9/ assessment team verified that, this is a greenfield solar power plant and does not involve any battery storage system/BESS. Hence this criterion is not applicable. .

[11] In case of retrofit or capacity addition for concentrated solar power projects, stakeholders may submit a request for revision to this methodology, providing an apportioning approach to calculate the project emissions due to any fossil fuel consumption attributed to the increased electricity generation from the BESS.

		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 applicable under paragraph 5 (a) above, 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 the 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 following the requirements under section 5.4.4 below. 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 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 of the certified emission reductions for the concerned periods of the monitoring period.		
	4.In case of hydro power plants, one of the following conditions shall apply; (a)The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b)The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m^2; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m^2; or (d)The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m^2, all of the following conditions shall apply: i. The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m^2; ii. Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; iii. Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m^2 shall be:	The proposed project activity is an installation of a new grid connected (solar) power plant/ unit and not Hydro power plant, therefore this criterion is not applicable for this project activity.	During the on-site visit & interviews and through the review of PPA/17/ and commissioning certificate,/9/ assessment team verified that, this is a greenfield solar power plant and hence this criterion is not applicable.

	a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.		
	5.In the case of integrated hydro power projects, project proponent shall: a. Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or b. Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of 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.	The proposed project activity is an installation of a new grid connected (solar) power plant/ unit and not Hydro power plant, therefore this criterion is not applicable for this project activity.	During the on-site visit & interviews and through the review of PPA/17/ and commissioning certificate,/9/ assessment team verified that, this is a greenfield solar power plant and hence this criterion is not applicable.
	6.The methodology is not applicable to: a. Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity,	The project activity is installation of a new grid connected (solar) power project/ unit and does not involve switching from fossil fuel to renewable energy, therefore	The project activity is the installation of new solar power plant/unit to generate electricity and it not does not involve switching from fossil fuels to renewable energy

	since in this case the baseline may be the continued use of fossil fuels at the site; b. Biomass fired power plants/units.	criterion described in point (a) is not relevant to the project activity. This is a (solar) power plant/ unit and not a biomass fired plant, therefore criterion described in point (b) is not applicable to the project activity.	sources at the site of the project activity and not the installation of biomass fired power plant. Hence this criterion is not applicable for the project activity.
	7.In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	The project activity is a new grid connected (solar) power plant/ unit and not a retrofits, replacements or capacity additions and therefore this criterion is not applicable to the project activity.	This is the new installation of Solar Power Plant and not a retrofit, rehabilitations replacement or capacity additions which was verified and confirmed through onsite verification and interviewed with project owner & their representatives. Hence it is not applicable to the project activity. .
	TOOL01: Tool for the demonstration and assessment of additionality Version 7.0.0		
	Para 9 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.	Project owner is not proposing any new methodology hence, this criterion is not applicable for the project activity.	The applicability criterion is met as the methodology selected for the proposed project requires the use of this tool 01.
	Para 10 Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.	The additionality tool is included in the applied methodology ACM0002. Hence, this criterion is applicable for the project activity.	The applicability criterion is met as the methodology applied in this proposed project requires the use of this tool.

	TOOL07: Tool to calculate the emission factor for an electricity system Version 7.0		
	Para 3: "This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects)."	OM, BM and CM are estimated using the tool under section B.6.3 for calculating baseline emissions. Hence, this criterion is applicable and tool is applied for the project activity	This project involves generation of electricity through solar power plant where generated electricity is delivered to the grid. The baseline scenario is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in "TOOL07: Tool to calculate the emission factor for an electricity system/10/". Thus, the applicability criterion is met.
	Para 4: Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e. option IIa and option IIb. If option IIa is chosen, the conditions specified in "Appendix 1: Procedures related to off-grid power generation" should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total	Since the project activity is grid connected, this condition is applicable and the emission factor has been calculated accordingly.	In accordance with Tool 7,/4/ PO has chosen only grid connected power plants for calculation of emission factor. Baseline emissions include only CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The baseline emissions are calculated by multiplying the baseline emission factor which is grid emission factor ($EF_{grid,CM,y}$) and the electricity exported to the Indian Grid. The grid emission factor ($EF_{grid,CM,y}$) is estimated as a combined margin (CM), which is derived from operating margin (OM) and build margin (BM) factors calculated based on the data published by "Central Electricity Authority of India" in its "CO_2 Baseline database for the Indian

	electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.		Power Sector" Version 17/11/ dated October 2021 (which is the latest publicly available data). The combined margin for the project is in line with steps of tool to calculate the emission factor for an electricity system (Version 7.0)./4/ Both the values of OM and BM are selected under ex-ante approach. So, in accordance with the tool to calculate the emission factor for an electricity system, version 7.0, weight factors of w_{OM} = 0.75 and w_{BM} = 0.25 has been used by the PO and the resultant grid emission factor ($EF_{grid,CM,y}$) has been appropriately calculated as 0.9305 tCO_2/MWh. The assessment team is convinced of the result of the emission factor calculation and confirms that the calculation is done in a transparent manner.
	Para 5: In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	The project activity is located in India, a non-Annex I country. Therefore, this criterion is not applicable for the project activity.	The project activity is located in India, a non-Annex I country. Therefore, this criterion is not applicable for the project activity
	Para 6: Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	The project activity is a grid connected (solar) power project/ unit and does not involve emission from biofuels. Therefore, this criterion is not applicable.	There is no grid connected biofuel power plants in the Host country, hence the condition is not applicable.
	Tool 05 – "Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation", Version 03.0		
	Para 5: If emissions are calculated for electricity consumption, the tool is only applicable if one out of the following three scenarios applies to the sources of electricity consumption: (a) Scenario A: Electricity consumption from the	The project activity is a new grid connected solar power plant and the electricity is consumed from the grid for the project activity. Therefore, the scenario A is applicable for the project activity.	The project will import electricity from the grid - night operation/when solar power plant is not working. The electricity consumption of this project will be from the grid only and will be deducted from export figures to arrive at net electricity supplied to grid

		grid. The electricity is purchased from the grid only, and either no captive power plant(s) is/are installed at the site of electricity consumption or, if any captive power plant exists on site, it is either not operating or it is not physically able to provide electricity to the electricity consumer; (b) Scenario B: Electricity consumption from (an) off-grid fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants are installed at the site of the electricity consumer and supply the consumer with electricity. The captive power plant(s) is/are not connected to the electricity grid; or (c) Scenario C: Electricity consumption from the grid and (a) fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants operate at the site of the electricity consumer. The captive power plant(s) can provide electricity to the electricity consumer. The captive power plant(s) is/are also connected to the electricity grid. Hence, the electricity consumer can be provided with electricity from the captive power plant(s) and the grid.		by the project activity. And hence Scenario A is selected.
		This tool can be referred to in methodologies to provide procedures to monitor amount of electricity generated in the project scenario, only if one out of the following three project scenarios applies to the recipient of the electricity generated: (a) Scenario I: Electricity is supplied to the grid; (b) Scenario II: Electricity is supplied to	The project activity is a new grid connected solar power plant therefore, scenario I is applicable for the project activity.	This project involves generation electricity through solar power plant where generated electricity is delivered to the grid. Hence, Scenario I is applicable for the project activity

	consumers/electricity consuming facilities; or (c) Scenario III: Electricity is supplied to the grid and consumers/electricity consuming facilities.		
	This tool is not applicable in cases where captive renewable power generation technologies are installed to provide electricity in the project activity, in the baseline scenario or to sources of leakage. The tool only accounts for CO_2 emissions.	The project activity does not involve captive renewable power generation technologies to provide electricity in the project activity, in the baseline scenario or to sources of leakage. Therefore, the tool is applicable for the project activity.	The project involves generation electricity through solar power plant where generated electricity is delivered to the national grid. Hence, the condition is not applicable.
	TOOL24: Common practice (Version 3.1)		
	Para 3: This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality.	Project activity applies methodological tool 01 "Tool for the demonstration and assessment of additionality". Hence, this criterion is applicable for the project activity.	Project activity applies "Tool for the demonstration and assessment of additionality/6/". Hence this tool is applicable.
	Para 4: 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.	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. Hence, this criterion is not applicable for the project activity	The applicability criterion is met as the methodology ACM0002 (Version 21.0) applied in this project requires the use of this tool to demonstrate the common practice of this project.
	TOOL27: Investment analysis (Version 12.0)		
	This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify	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	This project applies the methodological tool "Tool for the demonstration and assessment of additionality". The applicability criterion is met.

	the baseline scenario and demonstrate additionality", the guidelines "Non-binding best practice examples to demonstrate additionality for SSC project activities", or baseline and monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.	additionality (Please refer to section B.5 of PSF for details). Hence, this criterion is applicable for the project activity.	
	In case the applied approved baseline and monitoring methodology contains requirements for the investment analysis that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	The applied approved baseline and monitoring methodology does not contain requirements for the investment analysis that are different from those described in this methodological tool. Hence, this criterion is not applicable for the project activity.	The applicability criterion is met as the methodology ACM0002 (Version 21.0) applied in this project requires the use of this tool to demonstrate the investment analysis of this project.
	The project activity is the installation of solar power plant. As per section 4, GCC clarification Version 1.3, Thus, two-level analysis is needed for determination of homogeneous bundles for a bundled project. however, this is not bundled project since the project activity is a 100 MW (50 MW at Banda and 50 MW at Prayagraj) solar power project, applying the same methodology (ACM0002, v21.0), where all activities have same baseline (which is Indian Grid), generate the same output (Electricity), have the same date of investment decision on (12/02/2019), and located in the same state i.e., Uttar Pradesh in India. Also, these project activities were developed by the single legal owner i.e., TATA Power Renewable Energy Limited (TPREL) and applying the same additionality approach (Investment analysis). Hence the project activities are considered by default 'homogenous' and is not a bundled project, therefore project owner can apply requirements applicable to single projects (with single or multiple sites). As stated above, the project activity does not require to apply two-level analysis as per section 4 of 'Clarification No. 1' version (v1.3).		
Findings	CL 07, CAR 02 and CAR 12 were raised and resolved. Please refer appendix 4 for more information.		
Conclusion	The project verification team confirms that: a) It has critically assessed each applicability condition listed in the selected methodology and relevant information contained in the PSF/1/ against these criteria. The selected CDM methodology ACM0002, Version 21.0, Methodological Tool 01 (version 7.0.0)/4/ Methodological Tool 07 (version 7.0)/4/ Methodological Tool 24 (version 3.1)/4/ and Methodological Tool 27 (Version 12.0) /4/ for the project activity is applicable. b) Applied version of methodology (ACM0002, version 21.0) /4/ is the latest valid version at the time of submission of the proposed GCC project activity for registration.		

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

Means of Project Verification	As discussed in the above section, the applicability of methodology was found to be fulfilled. Therefore, further clarification to the methodology were not required.

Findings	No findings raised.
Conclusion	The project verification team confirms that no clarification on applicability of methodology and tool to the proposed GCC project activity has been issued

D.3.3. Project boundary, sources and GHGs

Means of Project Verification	As per the applied methodology ACM0002, version 21.0 /4/ the project boundary is the spatial extent of the project in which boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that project power plant is connected to. The components of project boundary mentioned in the PSF were found to be in compliance with paragraph 22 of the applied methodology./4/ The project verification team conducted desk review, onsite inspection of the implemented project to confirm the appropriateness of the project boundary identified. The verification team confirmed that all GHG sources required by the methodology have been included within the project boundary. Verification team not observed any DG sets or any other sources of emission during the site visit. It was assessed that no emission sources related to project activity will cause any deviation from the applicability of the methodology/4/ 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 and duly verified by the verification team during on-site inspection. The verification team confirms that PSF/1/ has included all the sources of emission within project boundary and there are no sources of GHG emission left out which will contribute more than 1% of expected annual emission reduction by the project activity, which are not addressed by the applied methodology./4/
Findings	No findings were raised.
Conclusion	The project verification team was able to assess that complete information regarding the project boundary has been provided in PSF/1/ and could be assured from the line diagram. Hence, in line with paragraph 44 of Project standard version 3.1,/6/ project verification team confirms that identified boundary and selected emissions sources are justified for the project activity.

D.3.4 Baseline scenario

Means of Project Verification	As established above in section D.3.1, the project activity is a grid connected greenfield project activity. Hence, as per paragraph 24 of the applied methodology ACM0002, version 21.0,/4/ the baseline scenario is "If the project activity is the installation of a Greenfield power plant*, the baseline scenario is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in "TOOL07: Tool to calculate the emission factor for an electricity system*". The project involves installation of new grid-connected solar power plant that generates electricity and delivers to the Indian grid. In the absence of above activity, the electricity would have been generated from operation of grid-connected power plants and by the addition of new generation sources into the grid. The information provided in the PSF/1/ was verified from PPA/17/ and found to be consistent. Hence, choosing Indian grid as a baseline scenario is found to be appropriate. The baseline scenario applied in the PSF/1/ was compared to the requirements of baseline described in the applied methodology/6/ and found consistent. 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 power sector have been taken into account in the

	identification of the baseline scenario such as: • Electricity Act 2003/10/ • National Electricity policy 2005/24/ • The Electricity (Supply) Act, 1948/24/ • The Electricity Regulation Commission Act, 1998/25/ • Schedule 1 of Ministry of Environmental and Forest notification/26/ • Tariff Policy 2006/27/ • National Solar Mission/27/ The above-mentioned National Acts and regulations pertaining to generation of energy in India does not influence the choice of fuel used for power generation. There is no legal requirement on the choice of a particular technology for power generation, During the implementation of project activity and establishing the baseline scenario aforementioned relevant national and/or sectoral policies, regulations and circumstances are taken into account in-line with para 63-65 of CDM VVS, version 3.0/4/. However, the project activity, which involves the implementation of solar energy-based power projects for electricity generation, is not compulsory or mandated by any legal requirement in India. Instead, it is a voluntary undertaking initiated by the involved parties/10/. Despite the gradual increase in renewable energy sources in power sector, still about two-third of installed power generation capacity is based on fossil fuel-based energy sources, hence the electricity grid is fed by electricity generated predominantly by the mainly fossil-fuel based power plants/23/. There is no legal and regulatory requirement that mandates the production of energy by the chosen technology. Investment in solar energy projects in the State of Uttar Pradesh and the Indian electricity grid are not mandatory. There are no national or local laws or regulations that require this investment to be undertaken, i.e., setting up of solar power projects. The setting up of solar energy projects is a voluntary activity, As per para 47 of applied methodology, the baseline emissions are calculated as follows: $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ Where, BE_y = Baseline emissions in year y (tCO_2/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) $EF_{grid,CM,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year *y* calculated using the latest version of "TOOL07: Tool to calculate the emission factor for an electricity system" (t CO_2/MWh)/4/. As project activity is the installation of a Greenfield power plant, hence $EG_{PJ,y} = EG_{facility,y}$ (as per para 49 of applied methodology) The notation of same parameters $EG_{PJ,Y}$ can be $EG_{facility,y}$ as project activity is installation of a greenfield power plant. Where, $EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh). Hence, for baseline emissions project owner has included CO_2 emissions from electricity generation in power plants that are displaced due to the project activity. These are produced by renewable generating unit (in MWh) multiplied by an

	emission coefficient (measured in tCO_2e/MWh) calculated in a transparent and conservative manner as: Combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in "Tool to calculate the emission factor for an electricity system" (Version 07.0),/4/ it is the latest version of the tool that is used to calculate emission factor. The Combined Margin emission factor is fixed ex ante with a calculated value as 0.9305 tCO_2e/MWh. The calculations, source of data are checked by the project verification team and found it to be correct.
Findings	CL 08 & CAR 14 were raised and resolved. Please refer appendix 4 for more information.
Conclusion	Hence, in line with paragraph 55 and 57 of the Project standard Version 3.1/6/, project verification team concluded that • All assumptions and data used by the project owner are listed in the PSF/1/, including their references and sources. • All documentation used by project owner as the basis for assumptions and source of data for establishing the baseline scenario are correctly quoted and interpreted in the PSF/1/; • All assumptions and data used in PSF are justified appropriately and considered reasonable in context of the proposed project activity. • The baseline methodology/4/ and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. Identified baseline scenario reasonably represents what would occur in the absence of the project activity and leads to a conservative estimation of GHG emission reductions.

D.3.5 Demonstration of additionality

Means of Project Verification	In line with paragraph 45 of the Project Standard v3.1,/4/ GCC project activities are required to undergo the following tests to demonstrate additionality: A. Legal requirement Test: As established in section D.1 above, the project is an A2 type (Sub-type 1) project, has not been required by a legal mandate and it does not implement a legally enforced mandate. This has been confirmed through the review of various articles/21/ discussing the rules and regulations for electricity generation in India. The main legislation that governs the electricity sector in India is Electricity Act, 2003 (i.e. Electricity Act). However, there is no specific legislation governing renewable energy in India. As renewable energy is considered as a part of the electricity sector, it is governed under the provisions of Electricity Act, which provides a framework for the generation, transmission, distribution, trading and use of electricity. The project complies with all the applicable host country legal requirements, and it ensures compliance with the Electricity Act, 2003 and associated relevant rules, notifications, and amendments as it has a Power Purchase Agreement (PPA)/17/ with Uttar Pradesh Power Corporation Limited (UPPCL) & Noida Power Corporation Limited (NPCL) dated on 12/02/2019 & 13/02/2019, which is valid for 25 years and has acquired commissioning certificate/9/ for synchronization of the total capacity of 100 MW_{ac} from Noida Power Corporation Limited (NPCL) & Uttar Pradesh Power Corporation Limited (UPPCL) for the start of the commercial operation (on 03/12/2021) of the project. 1. Compliance against other regulations such as: • Environmental (Protection) Act, 1986 and amendment(s) ○ Environmental Impact Assessment (EIA) Notification, 2006 and amendment(s) – Based on various literature available on public domain /21/ verified by project verification team, solar power projects do not require EIA. ○ The Air (Prevention and Control of Pollution) Act, 1981 including Rules 1982 and 1983 and amendment(s) - project is complying against this

act as it is a White Category /21/ project and does not involve any emissions.

- The Water Prevention and Control of Pollution, Cess Act, 1977 including Rules 1978 and 1991. The project is complying against the requirement of this Act as it is a white category/21/ project and does not involve significant water use except for the purpose of sanitation, as project is solar based power generation which doesn't use water for generation of energy. It was confirmed during onsite visit that the solar modules cleaning is done through solar module cleaning machine which is a dry way of cleaning. It was also recorded by our team that they witnessed during visit.
- Batteries (Management and Handling) Rules, 2001/10/ and amendments – this rule is not applicable for project activity as per the defined criteria in the rules document. Further no battery use was observed during on-site visit and neither the same is anticipated in future

.

- E-waste (Management) Rules 2016/10/ and amendment(s) – To comply with E-waste management rules, PO has implemented monitoring of E-waste and disposal plan for the same in line with national guidelines to handle E-waste.

The project has been exempted from Environmental Impact Assessment as per the office memorandum /21/ dated 7th July 2017 by Ministry of New and Renewable Energy. However, PO has obligations through its power purchase agreement/17/ to abide by all necessary rules and regulations. The project activity was observed to be complying with all applicable rules and regulations which has been observed at site.

Therefore, based on the desk review, on site assessment and sectoral expertise of the team, it is confirmed that the project is meeting all the host country regulations.

B. Additionality Test:

In line with paragraph 49 of the Project Standard v3.1,/6/ additionality has been demonstrated considering the requirements of the methodology.

As per the paragraph 32 of the applied methodology (ACM0002 version 21.0),/4/ *"The additionality of the project activity shall be demonstrated and assessed using the latest version of the "TOOL01: Tool for the demonstration and assessment of additionality".*

Therefore, project owner has demonstrated additionality of the project activity in line with "Tool for the demonstration and assessment of additionality"– (Version 07.0.0)./4/
The tool provides a step-wise approach to demonstrate and assess the additionality of a project. These steps are as follows:

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

Sub-step 1a: Define alternatives to the project activity

As per the applied methodology ACM0002 version 20.0/4/; Para 22, if the project activity is the installation of a Greenfield power plant, the baseline scenario is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid connected power plant and by the addition of new generation sources. However, for the assessment of additionality, the following alternatives are identified:

The alternatives identified for the project activity are:

	Alternative 1: The Project Owner could proceed with the implementation of the project without considering the carbon credit benefits. The electricity produced from the renewable energy project would have been sold to the grid. This is in compliance with all applicable legal and regulatory requirements and can be a part of the baseline. However, the project activity is not feasible without revenues from sale of carbon credits. This argument has been discussed in step 2 of the Additionality section. **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. The project activity comes under white category as per local regulation, thus there shall be no necessity of obtaining the Consent to Operate'' for White category of industries. Since project activity falls under white category and the non-polluting nature of project fulfils the compliance to the local laws and regulations (This sub-step does not consider national and local policies that do not have legally-binding status.). GCC Verifier has assessed the following relevant rules and regulations to confirm the legal requirements test is met by the project: • Electricity Act, 2003 /21/ • National Electricity Policy, 2005/24/ • The tariff policy 2006/27/ • The Electricity (Supply) Act, 1948/24/ • The Electricity Regulation Commission Act, 1998/25/ • Factories act 1948/25/ 1. **Electricity Act 2003** The Electricity Act of 2003 governs electricity generation, transmission, distribution, and trading in India. It promotes renewable energy by mandating a Renewable Purchase Obligation and enabling open access to the grid. It also establishes Renewable Energy Certificates for incentivizing renewable energy development. 2. **National Electricity Policy 2005** The National Electricity Policy 2005 guides the development of the electricity sector in India and promotes renewable sources of energy to reduce dependence on fossil fuels. It mandates a minimum percentage of electricity from renewable sources and requires state policies to encourage their development. It emphasizes the need for renewable energy technology development, encourages renewable energy parks and demonstration of projects, and promotes grid connectivity for renewables and their use in rural electrification programs. 3. **Tariff Policy 2006** The Tariff Policy 2006 guides electricity tariffs in India, including for renewables like solar, wind, hydro, and biomass. Tariffs are based on generation cost plus profit, and a Renewable Purchase Obligation mandates a percentage of electricity come from renewable sources. The policy incentivizes renewable development through Renewable Energy Certificates and promotes grid connectivity and rural electrification. 4. **The Electricity (Supply) Act, 1948 The Electricity (Supply) Act**, 1948 provided a legal framework for electricity supply in India but did not have specific provisions for renewable energy. It established State Electricity Boards and enabled the central government to regulate electricity development, including policies for promoting renewable energy. Although no longer in force, it played a foundational role in the development of the electricity sector in India, including renewables.

	5. **The Electricity Regulation Commission Act, 1998** The Electricity Regulatory Commission Act, 1998 establishes regulatory commissions to oversee India's electricity sector, including renewable energy integration. It empowers the commissions to specify minimum renewable energy in the grid, set purchase terms, tariffs, and REC trading frameworks. The Act promotes the renewable energy sector's growth by ensuring transparent and equitable treatment of generators. 6. **The factories act 1948** The Factories Act 1948 sets standards for working conditions in factories in India, including those using renewable energy technologies. It mandates safety, health, and welfare provisions, record-keeping, and reporting to the government. The Act protects the rights and well-being of workers in the renewable energy sector. 7. **Schedule 1 of Ministry of Environmental and Forest notification Schedule 1** of the Ministry of Environment and Forest notification lists renewable energy activities that require environmental clearance. This ensures that projects, such as wind turbines and solar plants, are developed sustainably, with assessments and measures to mitigate adverse impacts. The Project activity conforms to all the applicable laws and regulations in India: o The Indian Electricity Act, 2003/10/ (May 2007 Amendment) does not influence the choice of fuel used for power generation. o There is no legal requirement on the choice of a particular technology for power generation. The both alternatives are in compliance with laws and regulations required. There is no any mandatory requirement to implement the project activity. **Outcome of Sub-step 1b:** As per the above analysis both the alternatives enlisted above are found to comply with the mandatory laws and regulations of the host country. Since there is no law mandated the project owner to invest and implement the project activity, project owner has a choice to go for either **Alternative 1:** The proposed project activity undertaken without being registered as a GCC project activity. **Or** **Alternative 2:** No project activity is undertaken and equivalent amount of energy would have been produced by the grid electricity system through its currently running power plants and by new capacity addition to the grid i.e., Continuation of the present situation. **Step 2: Investment analysis** The project owner is required to determine whether the project activity is economically or financially less attractive than other alternatives without the revenue from the sale of Approved carbon credits (ACCs). To conduct the investment analysis, project owner has used the following sub-steps as per the applied methodology/4/: ***Sub-step 2a:*** **Determine appropriate analysis method** Since the proposed project will generate other financial/economic benefits than GCC related income, the simple cost analysis method (Option I) is not appropriate. Also, investment comparison analysis method (Option II) is only applicable to projects whose alternatives are similar investment projects. Therefore, benchmark analysis (Option III) has been opted. ***Sub-step 2b: Option III. Apply benchmark analysis***

	The project owner has selected Internal Rate of Return (post-tax Equity IRR)/3/ as financial indicator for investment analysis and benchmark analysis to demonstrate the additionality of the project activity. **Post-Tax Equity-IRR benchmark:** The expected return on equity is estimated using default values stated for various countries in the Appendix of the methodological tool of Investment Analysis/4/ and for renewable energy projects which falls under the sectoral scope 1 i.e., Energy the default value is 9.77% (group1 project) for India, in real terms. However, in line with paragraph 16 of "Methodological tool - Investment analysis" (Version 12.0)/4/, "In situations where an investment analysis is carried out in nominal terms, project owners can convert the real term values provided in the table below 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" Therefore, The central bank of host country, India i.e. RBI Inflation data in terms of the Consumer Price Index (CPI) has been considered for the nominal benchmark calculation. Consumer Price Index (CPI) inflation is the target for the period from August 5, 2016, to March 31, 2021 (Long Term Target Inflation forecast for India)[12]: Verification team found that under section 45ZA of RBI Act, 1934 has been amended and concluded on March 31, 2021, the Central Government retained the inflation target and the tolerance band for the next 5-year period – April 1, 2021 to March 31, 2026 which is 4 % since transition period from August 5, 2016 to March 31, 2021 (https://www.rbi.org.in/scripts/FS_Overview.aspx?fn=2752)_RBI Monetary Policy. Therefore, **Inflation Rate has been considered as 4.00 %** **As per EB 116 Annex 2, Tool 27**, the cost of equity [13] is determined by selecting the values provided in the Appendix, i.e., Default values for cost of equity (expected return on equity) and associated calculation is presented below: **Nominal Benchmark= {(1+Real Benchmark) * (1+Inflation rate)}-1** = {(1+9.77%)*(1+4.0%)}-1 = 14.16% (Refer benchmark calculation tab in IRR sheet) Where: Default value for Real Benchmark = 9.77 % Inflation rate = 4.0 %

[12] https://www.rbi.org.in/scripts/FS_Overview.aspx?fn=2752

[13] EB116_repan02_TOOL27_ver12 (unfccc.int)

Therefore, The Required return on equity (benchmark) for 50 MW TATA Power Renewable Energy Limited at Banda and 50 MW TATA Power Renewable Energy Limited at Prayagraj is considered to be 14.16%.

Chronology of events pertaining to project activity are provided below:
Bidding entity, TATA Power Renewable Energy Limited (TPREL) has bid for 100 MW capacity as per board decision dated 16/11/2018 to submit the bid against Request for Proposal (RfP) for "Procurement of 550 MW Power from Grid Connect Solar PV Power Projects" Through Tariff Based Competitive Bidding Process issued by Uttar Pradesh New and Renewable Energy Development Agency, (UPNEDA); Bid No. 03/UPNEDA/GRID Connect/RfP/2018 dated 12/10/2018. Letter of Award (LoA) dated 14/12/2018 has been awarded by UPNEDA to TPREL with project ID RS0000339 and RS0002542 of 50 MW each.
The Investment decision Date has been considered 12/02/2019 when PO has entered long term power purchase agreement for 25 MW Banda site solar plant and 50 MW Prayagraj Solar plant (refer chronology of milestone given in table below). This is the date when project Owner finally decided to proceed with the project, thus decision-making date i.e. 12/02/2019 is acceptable to verification team.

S. No.	Event	Banda	Prayagraj
1	Date of Request for proposal by UPNEDA (Uttar Pradesh New and Renewable Energy Development Agency, (UPNEDA)[14]	12/10/2018	12/10/2018
2	Date of Board Resolution for bid submission	16/11/2018	16/11/2018
3	Date of bid submission	03/12/2018	03/12/2018
64	Letter of Award by UPNEDA (Uttar Pradesh New and Renewable Energy Development Agency, (UPNEDA))	14/12/2018	14/12/2018
5	DPR prepared by TATA Power Solar Systems Limited	01/02/2019	
6	Date Of PPA (Date of investment decision)	1.PPA (25 MW NPCL) 13/02/2019 2.PPA (25 MW UPPCL)12/02/2019	(PPA for 50 MW signed with UPPCL) 12/02/2019
7	Amendment PPA	1.PPA (25 MW NPCL) 03/09/2019 2.PPA (25 MW UPPCL) 03/09/2019	(PPA for 50 MW signed with UPPCL) 03/09/2019
8	First Purchase order (Date Of Placement Of PO/EPC Contract)	13/11/2019	

[14] https://india-re-navigator.com/utility/download/public/tender_uploads/tender-5d07749161655.pdf

9	Date Of Commissioning issued by Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA)	03/12/2021	03/01/2022

Sub-step 2c: Calculation and comparison of financial indicators

The period considered for Post Tax Equity IRR calculations/3/ is 25 years, which corresponds to the operational lifetime of the project activity.

Depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits from which tax is calculated, is added back to net profits for the purpose of calculating the financial indicator.
All the parameters for the investment analysis are sourced from the detailed project report /8/ except the tariff, which was taken from Letter of Award /9/ before the date of signing power purchase agreement (Investment decision) by 12/02/2019.

Project owner has estimated PLF of 24.64[15]% at the time of submitting bid to UPNEDA, confirmed from approval letters/9/ (pertaining to e-reverse auction) received to project owner by government body, (UPNEDA) which is found in line with para 3 (a) of Annex 11, EB48, additionally PLF value has been approved by UPNEDA/9/ which is 24.00% (for considering during execution of PPA), close enough to the estimated value taken at the time of bidding. Therefore, Project owner has considered the estimated PLF value of 24.64% for the investment analysis.

Parameters used in the investment analysis:

Technical details	Value	Unit	Source/Assessment
Capacity	100	MW_{ac}	The Installed capacity of the project has been sourced from the Detailed Project Report[16] prepared by Tata Power Solar Systems Limited/8/ by 01/02/2019 based on which investment decision (Signing of PPA) has been concluded. Verification team has checked the Detailed Project report/8/ along-with Loan Sanction Letter/14/ to confirm the capacity of the project. Further, same has been cross-verified from actual commissioning certificate/9/ and during the site visit & interviews.
Average PLF	24.64%	%	The estimated PLF value has been sourced from approval letter/9/ (pertaining to e-reverse auction) received to project owner from government body (UPNEDA) which is found, in line with the para 3 (a) of Annex 11, EB48 . Verification team has confirmed the PLF value of 24.64% (conservative) from approval letters received for both sites i.e. Banda and Prayagraj.

[15] Conservative value from three approval letters (pertaining to e-reverse auction) received from UPNEDA

[16] Also, an Initial detailed project report (DPR) at the time of submission of bid to UPNEDA, has been prepared by Tata Power Solar, dated 14/11/2018. However, estimated financial parameters considered from DPR prepared by Tata Power Solar Systems Limited by dated 01/02/2019, before the signing of PPA (Investment Decision).

				Further, CDM & GS registered Project of Uttar Pradesh has been checked and found lower PLF than current project activity. Projects having reference number UN10594[17] & GS 5699[18] has been checked where PLF values are found 23.25% & 18.30% respectively which are lower than the current project activity. Hence, the PLF for proposed GCC Project activity is found appropriate. A sensitivity analysis has been conducted which shows variation in PLF required to reach benchmark would be increased by 44.50% which is unlikely to happen and hence the PLF value was therefore accepted by the assessment team.
	Average Annual Generation	217,781	MWh	The annual generation has been calculated using PLF of 25.64% sourced from approval letter/9/ (pertaining to e-reverse auction) received to project owner from government body (UPNEDA) which is further found, in line with the para 3 (a) of Annex 11, EB48 and by applying 0.7% degradation factor (from 2nd year of crediting period) as mentioned in DPR/8/, then-after GCC verifier cross checked the same with Manufacturer Product Warranty certificate/8/ and found acceptable. Further, CDM & GS registered Project of Uttar Pradesh has been checked with the lower PLF having reference number UN10594[19] & GS 5699[20] has been checked where PLF are 23.25% & 18.30% respectively which are observed lower than the project activity. Hence, the PLF for the proposed Project activity is found appropriate. A sensitivity analysis has been conducted which shows variation in PLF required to reach benchmark would be increased by 44.50% which is unlikely to happen and hence the PLF value was therefore accepted by the assessment team.
	Tariff rate	3.075	INR/kWh	Verification team assessed the tariff rate (average value from both the

[17] https://cdm.unfccc.int/Projects/DB/Applus1597925806.04/view
[18] https://platform.sustain-cert.com/public-project/1480
[19] https://cdm.unfccc.int/Projects/DB/Applus1597925806.04/view
[20] https://platform.sustain-cert.com/public-project/1480

				sites i.e. Banda – 3.07 INR/KWh and Prayagraj – 3.08 INR/KWh) which has been sourced from the E-reverse auction result/9/, available before the time of investment decision date (i.e. signing of power purchase agreement by dated 12/02/2019). Further, tariff rate has been cross checked with sample invoices/22/ raised by PO to the associated DISCOMs (NPCL and UPPCL) and signed PPA /17/ between project owner and UPPCL & NPCL. The Letter of Award from UPNEDA by dated 14/12/2018 /9/ also mentions the same tariff rate. Thus, applied tariff rate is in conformity with guidance Appendix of Methodological tool "Investment Analysis" Version 12. A sensitivity analysis has been conducted which shows variation in Electricity Tariff required to reach benchmark would be increased by 44.50% i.e., Electricity tariff of the proposed project activity to be INR 3.075/kWh which is unlikely to happen since, the PPA has already been signed. Hence the tariff value was therefore accepted by the assessment team. Therefore, it is concluded by verification team that the tariff rate considered in the financial analysis is correct.
	Annual O & M cost	0.4	INR million/ MW	Annual O & M cost and escalation in O & M cost (2nd year onwards) have been soured from Detailed Project report/8/ prepared by Tata Power Solar System Limited which is wholly-owned subsidiary of Tata Power Renewable Energy Limited (TPREL). This is in line with methodology tool "Investment analysis" version 12.0/4/. Estimated applied value of operation and maintenance has been cross checked by independent research https://renewablewatch.in/2019/01/19/optimising-costs/ and found acceptable. Verification team also confirmed, escalation in operation & maintenance is found in line with CERC regulations 2017[21]. The verification team further also
	Escalation in O&M (from 2nd year onward)	5.72%	%	

[21] https://cercind.gov.in/2017/regulation/Noti131.pdf

				cross-checked O&M cost and escalation in O & M Cost with other similar registered projects having reference number's, UN10594 and GS 5699 which is 1.1236 INR Mn/MW, 5.72% and 0.8 INR Mn/MW, 5.0%. which are observed to be comparable to estimated values under proposed project activity. Hence, O&M cost and its escalation considered for the proposed PA are found to be acceptable. In addition to that, verification team also checked the raised and accepted actual Sample Operation and Maintenance Purchase Order/28/ and found corresponding cost around 0.60 INR Mn/MW which is found greater than the estimated price. Thus, found acceptable to the verification team and further a sensitivity analysis has been conducted which shows even if cost of O&M services is reduced by 100% which is very unlikely to happen, the benchmark would not have been breached. Hence, the given values were assessed to be reliable and correct.
	Insurance (% of project cost)	0.15	INR Mn.	The insurance is based on the Detailed Project Report /8/ which was available at the time of investment decision. The insurance cost is considered not significant as the insurance cost is approximately 0.15% of the total project cost. Verification team checked the applied value with CERC regulation on "Determination of Benchmark Capital Cost Norm for Solar PV power projects 2016-17" and found acceptable.
	Land cost	220	INR Mn.	Estimated Land cost based on the detailed project report/8/ which was available at the time of investment decision. The Land Cost was considered during the investment decision at the rate of 2.2 Million/ MW for the project activity. Further, verification team checked the actual land lease agreement (e.g. for Prayagraj site) /29/ for the proposed solar project and found that cost was finalized at the rate of 3.44 INR Mn/MW which is greater than estimated cost. Thus, verification team observed that despite this increase, the lower land cost from the

				detailed project report still results in the post-tax equity IRR remaining below the benchmark.
	Project cost and financing structure	Value	Unit	Source/Assessment

		Project cost	5,657.40	INR million	The detailed project report/8/ states a total project cost of 5,657.40 INR million for a 100 MW capacity (i.e. 56.57 INR Mn/MW), as determined through negotiations with the supplier and initial quotations received to the Supply Chain Management Team of project owner. However, as a primary check, verification team cross checked the actual cost incurred by the project owner for proposed project activity through Loan Sanction Letter/14/ which includes combined cost for 400 MW projects taken from different banks after commissioning. Therefore, further verification team has checked the third-party CA Certificate /14/ and found cost 55.42 INR Mn/MW which is found comparable to estimated project cost. Therefore, verification team found evidence for the investment as per the requirements set forth by CDM VVS, Version 3.0, paragraph 99. By comparing with third party Charted Accountant Certificate/14/ the actual project cost is found to be slightly decreased as compared to DPR/8/. So, the project cost considered for Investment analysis under the proposed project activity is sourced from the DPR which is comparable with the submitted third party CA certificate (which is based on sanctioned loan for cumulative capacities) The verification team has also cross-checked the purchase orders /14/, for both the sites having combine cost comes to 3,999.98 INR Mn. The total project cost is the sum of all other components like land, development cost, DSRA etc., which is approximated as per third party CA Certificate (which is based on sanctioned loan for cumulative capacities) /14/, then total cost comes out to be 5,542.2 INR Mn, which is comparable to the project cost considered for the project activity and hence, the cost considered for post-tax equity IRR calculation is found to be appropriate. The verification team has also checked the same from CERC

					regulation 2016-17 [22] for "Determination of Benchmark Capital Cost Norm for Solar PV power projects". And it is found that the estimated project cost as per above source is 50.13 INR Mn/MW, which is found to be in the acceptable range. Further, verification team has also cross checked per MW cost with other similar registered projects having reference number UN10594 and GS 5699, which is comes out to be 61.18 INR Mn/MW and 86.66 INR Mn/MW which are lower than the proposed project activity. Hence, the project cost considered for proposed PA is found to be acceptable. This variation in project cost may be due to reasons such as different suppliers; varying capacity of the projects; specific location of the project activity; negotiation capability of the client; etc. A Sensitivity analysis has been conducted to show that the benchmark will be breached if the total project cost is reduced by 32.94%. However, as mentioned in section D.2 of the PSF, project is already commissioned and the project cost is fixed and do reflect the real ones. Hence, the given value was assessed to be reliable and correct.

[22] https://cercind.gov.in/2016/orders/SO17.pdf

	Debt (70 % of project cost)	3,960.18	INR million	The values have been sourced from the DPR/8/ which is available at the time of decision making. In India, infrastructure projects are generally entitled to a debt equity ratio of 70:30. However, depending on the relationship of the client with the bank, its credit rating and collaterals offered, banks consider higher debt equity ratio also. The debt equity ratio for the project is 75:25. (*confirmed form combined capacity of sanctioned loan letters approved from state bank of India dated 28/03/2022 & Kotak Mahindra Bank dated 16/02/2022*.) Therefore, proposed project constitute actual loan amount of 3,879.54 INR Mn & equity amount is 1,662.66 INR Mn, which is further also confirmed from the Third-Party CA Certificate /14/ Verification team checked the CERC tariff regulation from 2017-20[23] order for the solar power projects -regarding ratio of debt and equity ratio which was available at the time of investment decision and found that the ratio of Debt to Equity was 70:30, and same was used for the investment analysis calculation at the time of Investment decision. Thus, applied value is verified and found to be acceptable to GCC Verifier.
	Equity (30 % of project cost)	1,697.22	INR million	
	Interest rate on loan	10.47	%	The interest rate is based on Detailed Project Report/8/ which was available at the time of investment decision. However, the verification team cross-checked from the combined capacity (including proposed project of UPNEDA 100 MW) loan sanction letters/14/ given by *State bank of India, dated 28/03/2022, Axis Bank by dated 09/03/2022 and Kotak Mahindra Bank* by dated 16/02/2022, on initial interest rate's 6.70%, 6.6 % & 6.45 % (Rates are subject to variation pertaining to repo rate and terms & conditions mentioned under the approved loan sanction letters). Verification team checked above initial IRR and found that, there is no significant impact on IRR and it is well below the benchmark
	Repayment Period	48	Qtr.	

[23] https://cercind.gov.in/2017/regulation/Noti131.pdf

	Moratorium Period	4	Qtr.	Further, Verification team has checked the loan tenure and moratorium period with sanctioned loan letter and found 72 Quarter's with 4 quarters respectively. However, the actual number of quarters has been tested with the estimated IRR spreadsheet /3/ and found no significant change in project IRR and it still lies well, below the benchmark. Hence, the repayment period & moratorium period considered for IRR calculation is found to be appropriate.
	Loan Tenure	52	Qtr.	
	Working Capital			
	No. of Days Receivables	60	days	The interest rate on working capital is based on Detailed Project Report/8/ which was available at the time of investment decision which is further assessed by the verification team with CERCs renewable energy tariff regulation of "2017-20[24]" and found that working capital are considered while doing investment analysis and has been added back in the final year cashflow calculation.
	O&M Expenses (Days)	30	Days	
	Interest on Working Capital Debt	11.47	%	
	Book Depreciation (SLM Method)			
	Gross Depreciable Value (Calculated Value)	5,437.40	INR Mn	As per the CERC Regulation, Salvage value for RE project https://cercind.gov.in/2017/regulation/Noti131.pdf is 10 % and same was considered at the time of investment decision. Verification team confirmed the residual value of 10% considered in the financial analysis by the project owner and found appropriate for solar projects. Further, salvage value of 10% for solar projects has been stipulated by CERC Regulations for re projects "2017-20" which is a publicly available document published by Central Electricity Regulatory Commission and is considered to be an authentic source. 10% of the depreciable asset cost is added back as salvage value of the project reflected under the IRR spreadsheet. Verification team has confirmed that the calculation is done as per the local accounting regulations which are in accordance with latest methodological tool for Investment Analysis. Thus, it is concluded by verification team that the salvage value considered in the financial
	Salvage value (10 % of project cost)	543.74	INR Mn.	
	Net Depreciable Value (Calculated Value)	4,893.66	INR MN.	

[24] https://cercind.gov.in/2017/regulation/Noti131.pdf

			calculation is correct and appropriate.
IT Depreciation (WDV Method)			
IT Depreciation Rate	40.00	%	Depreciation rates (incometaxindia.gov.in) Assessment team noted that the project developer has adopted book depreciation rates (*Depreciation allowance as percentage of written down value)* 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.
Taxes			
Income tax rate	30.00%	%	Verification Team has checked the financial year tax rates which are publicly available data/21/. 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 assessment team. No further assessment is required as the Values are directly sourced from Income Tax Act, 1961 which is standard guideline for Tax value in India.
MAT	18.50	%	
GST	18.00	%	
Surcharge	12.00	%	
Education Cess	4.00	%	

For calculation of financial indicator, all relevant costs and revenues were found to be included in the IRR sheet/3/ provided by the PO. All assumptions and estimates used for input values were checked against the relevant sources. GCC Verifier has checked that salvage value and working capital are considered while doing investment analysis and has been added back in the final year cashflow calculation/3/. GCC verifier has also confirmed that income tax benefits for e.g. exemption under section 80IA, 80IAB, 80IAC, 80IB etc. are considered while doing investment analysis for the project activity. It is calculated based on the cash outflows and cash inflows into the project activity. Based on the result of IRR spreadsheet/3/, post-tax equity IRR is lower than the benchmark. The input assumptions and IRR outcome are assessed and found appropriate.

Based on the above values, Equity IRR has been calculated as 5.64 % without the consideration of ACC revenue. Project activity does not use any ODA or governmental incentive; however bank loan's are taken. The loan sanction letters were further cross-checked. The calculation of value 5.64% has been verified from the submitted IRR sheet/03/ and in accordance with the "Methodological tool - Investment analysis" (Version 12.0)./4/

Power Purchase Agreement/17/ for the project were signed on 12/02/2019 with Uttar Pradesh Power Corporation Limited & on 13/02/2019 with Noida Power Corporation Limited, whereas the Detailed Project Report /8/ was prepared on

01/02/2019 by "Tata Power Solar Systems Limited" and loan for the project was approved on 16/02/2022 (Initial) (as confirmed from Loan Sanction Letter/14/). The loan has been applied and sanctioned after the commissioning by utilization of equity funds which has been checked by the verification team by independent research[25] and approach was found acceptable. Further, sensitivity analysis has been tested on 100 percent equity, the post-tax equity IRR (5.64%) even though found below than the benchmark.

Based on these important supporting evidences and after allocation of Letter of Award /09/ from UPNEDA, investment decision[26] was taken by signing power purchase agreement by dated 12/02/2019 /17/. *(*Also, Initial DPR (by dated November 2018) was prepared during the bid submission to UPNEDA and decision for the same was taken on 16/11/2018 validated from signed board resolution/18/). It* was noted that investment analysis was conducted based on inputs that were available at the time of investment decision (PPA Signing) i.e. 12/02/2019). The start date of project is 03/12/2021, in line with GCC para 38 of project standard Version 3.1/6/ And also as per CDM Glossary is 13/11/2019 when purchase orders/14/ has been signed and the main plant & machinery were placed by the project owner to the suppliers. Therefore, in line with paragraph 10 of the "Methodological Tool: Investment analysis (Version 12.0)" /4/ all input values were known before the investment analysis and can therefore be considered realistic and appropriate values to be used in the financial calculation of the proposed project activity.

Post Tax Equity IRR for the project activity against the benchmark values are shown in table below. Thus, it is evident that the project is not financially attractive as the equity IRR is below the benchmark value, as confirmed from the submitted IRR sheet/3/.

Calculated post-tax equity IRR	Applicable benchmark
5.64%,	14.16%

As the GCC project activity has a less favorable indicator than the financial benchmark, then the GCC project activity cannot be considered as financially attractive for the Project owner.

Sub-step 2d: 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 owner has identified Plant Load Factor (PLF), Project cost, Tariff rate and O&M cost as critical assumptions. These critical parameters constitute more than 20% of either total project costs or total project revenues.:

Project owner has carried out the sensitivity analysis on the parameters which are likely to have material impact on post tax Equity IRR. To check the robustness of calculation, following parameters have been selected

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

The assessment team confirms that the parameters that have been subjected to the sensitivity analysis are in line with para 27 of the "Methodological tool: Investment Analysis, version 12.0"/4/ The sensitivity analysis covers a reasonable

[25] https://www.investopedia.com/ask/answers/042215/what-are-benefits-company-using-equity-financing-vs-debt-financing.asp

range of +10% and -10%, which is in conformity with para 28 of the "Methodological tool: Investment Analysis, version 12.0"./4/ .

The sensitivity analysis confirms that the post-tax equity IRR without carbon revenue is unlikely to meet the required benchmark of 14.16%. The sensitivity analysis reveals that even under more favorable conditions, the equity IRR without GCC revenue would not cross the benchmark return as given in the following table:

Parameters	-10%	Normal	10%	Variation required to reach benchmark
PLF	3.95%	5.64%	7.43%	44.50%
O&M	5.83%	5.64%	5.48%	-463.41%
Project Cost	7.42%	5.64%	4.24%	-32.94%
Tariff Rate	3.95%	5.64%	7.43%	44.50%

Value at which each sensitivity analysis hits the benchmark

parameter	Variation	Percentage change	Likelihood of occurring
PLF	PLF increases from 25.64 % to 37.05	44.50 %	The estimated PLF value has been sourced from approval letter/9/ (pertaining to e-reverse auction) received to project owner from government body (UPNEDA) which is found, in line with the para 3 (a) of Annex 11, EB48 . and thus a variation of 44.50% upwards electricity generation is highly unlikely. Since, project has been commissioned and generation data is available for few months, hence, verification team has also cross checked with the actual historical PLF achieved (16.53 % since commissioning to December 2023) and found that actual PLF is much lower than the PLF used in investment analysis. Also, the PLF considered for project activity has been compared to other projects in sub step 2(c) of current section. Hence, as per our opinion, further increase in PLF is highly unlikely scenario.
O & M	INR 40 million to INR -145.37 million	-463.41%	Even when O&M costs drop to 0, the equity IRR remains at 5.64%, well below the benchmark. Annual O & M cost and escalation in O & M cost (2nd year onwards) have been sourced from the

				Detailed Project report/8/. Also, Annual O & M cost and escalation in O & M cost is in accordance with the Central Electricity Regulation Commission (CERC), 2016/21/. Also, the O & M considered for project activity has been compared to other projects in sub step 2(c) of current section. Hence, as per our opinion, further decrease in O&M cost is highly unlikely scenario.
	Project cost	INR 5,657.40 million to INR 3793.93 million	-32.94%	The project cost has been sourced from the DPR/8/ which was the basis of investment decision making. The total project cost has been subjected to sensitivity and it can be observed from the Sensitivity analysis in IRR sheet/3/ that even if increase the 10% of project cost, the equity IRR is below the benchmark. Further, the comparison with other projects, actual EPC contracts /14/ has been discussed in sub step 2(c) of current section of PVR. Hence, as per our opinion, further the decrease in project cost is highly unlikely scenario as plant is already commissioned.
	Tariff rate	Tariff rate increases from INR 3.075/kWh to INR 4.44/kWh	44.50%	Verification team assessed the tariff rate (average value from both the sites i.e. Banda – 3.07 INR/KWh and Prayagraj – 3.08 INR/KWh) which has been sourced from the E-reverse auction result/9/, available before the time of investment decision date (i.e. signing of power purchase agreement by dated 12/02/2019). Further increase in tariff rate is highly unlikely scenario as the tariff rate is fixed for 25 years as verified from the Sample invoices and signed PPA/17/.
	Based on market trend in and document review, the project verification team was able to establish that variation considered is appropriate on identified data/parameter to perform sensitivity analysis. The benchmark is treated as the reference at which the investment project is considered to be financially attractive.			

	In all the cases, the IRR is lower than the benchmark. Therefore, it can be stated that the proposed project activity is unlikely to be financially/economically attractive (since the Equity IRR i.e. 5.64% is lower than the benchmark i.e. 14.16%). **Step 3: Barrier analysis;** The PO has opted for the investment analysis; therefore, it is not required to elaborate on barriers analysis. **Step 4: Common practice analysis.** In accordance with paragraph 57 of the "Tool for the demonstration and assessment of additionality"– (Version 07.0.0),/4/ the project has been subjected to an analysis to the extent of which the proposed project type (e.g. technology or practice) has already diffused in the relevant sector and region." The project meets the criteria of tool "Common Practice", Version 3.1/4/ as follows: • *Applicable geographical area:* As confirmed from the commissioning certificate/9/ and signed power purchase agreement /17/, the state of Uttar Pradesh in India and the policy applicable for the solar projects is regulated by UPNEDA which follows International competitive Bidding Process in accordance with Ministry of Power "Tariff based bidding Guidelines for solar PV Power Projects" are confirmed from clause 1.1.1 of Rfp document[27]. Accordingly, PPA for the project activity has been signed with NPCL and UPPCL for different capacities which confirms that proposed project connected with national gird by incorporating regional gird of state. Therefore, the projects in the geographical area **"India"** have been chosen for analysis and also considered as applicable geographical area. As more number of similar projects considered under chosen geographical area with reference to "state", thus acceptable to GCC verifier. • *Measure:* Project has been confirmed to be renewable energy generation activity, which has also been confirmed through the commissioning certificate/9/ and power purchase agreement/17/. • *Technology & Output:* As confirmed from the commissioning certificate/9/, the project Owner is generating power using solar panels. The power generated by solar panels is fed to the Indian electricity grid through to 132 KV Banda substation through Single circuit 132 kV transmission line & 132 KV Jari TPREL, Prayagraj which is located away from the project site. According to the methodological tool "Common Practice", Version 3.1/4/, the step wise demonstration of common practice analysis/13/ are verified as follows: **Step 1**: **Calculate applicable capacity or output range as +/-50% of the design capacity or output of the proposed project activity.** The size of the project activity is 100 MWac, so the applicable output range as defined in the step is +/-50% of the capacity of the proposed project activity. This output range will come in a capacity range of 50 MW to 150 MW. **Step 2**: **Identify similar projects (both CDM and non-CDM) which fulfil all of the following conditions:** (a) The projects are located in the applicable geographical area **(Host Country, India);** (b) The projects apply the same measure as the proposed project activity **(Power generation based on renewable energy);**

[27] https://upneda.org.in/MediaGallery/_RfP_for_550_MW_Solar_Power_dt_12-10-2018.pdf

	(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 **(solar);** (d) The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant; (e) The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1 **(50 MW to 150 MW);** (f) The projects started commercial operation before the start date (as per CDM glossary) of proposed project activity i.e. 13/11/2019 **(date of signing of supply agreement) /17/.** PO has chosen the host country "India" as the geographical area for the purpose of common practice analysis. In this step, the project owner aimed to list all solar power plants generating electricity within the capacity range of 50 **MW to 150 MW** and that commissioned before 13/11/2019. Number of similar projects identified by project owner which fulfil above-mentioned conditioned are considered from the Central Electricity Authority (Plant wise details of All India Renewable Energy Projects)[28]. Small projects which are found to be part of larger projects are considered as single project. N_{solar}= 135 **Step 3**: **within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number N_{all}.** Out of the above identified project in Step 2, Project is neither **registered CDM** project activities, project activities submitted for registration, nor project activities undergoing validation has been considered. 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 GCC Verifier. After excluding the registered and projects under validation the total number of projects. N_{all} = 23 Therefore, the number N_{all} from Step 3 Common practice tool would be: **N_{all} = 23** **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 N_{diff}.** As per the tool on Common Practice Analysis, the project activities have been separated from the different technologies on the basis of point (d) Investment climate on the date of the investment decision, (iv) Legal regulations. From the projects identified above, those projects which employ "different technologies" have been excluded and the number of such projects has been identified as N_{diff}.

[28] https://cea.nic.in/old/reports/others/planning/rpm/Plant-wise%20details%20of%20RE%20Installed%20Capacity-merged.pdf

	Every state and union territory of India has been vested with power and authority to formulate their own policy and schemes for benefit of their region. The project is located in Uttar Pradesh which is a separate state of India with its own administrative power and jurisdiction. So, those projects which have not bid under RfS floated by UPNEDA or signed Power Purchase Agreement (PPA) other than UPNEDA and those projects which have received funding from ODA or implemented by PSUs government can be listed as those which are governed by different investment climate. These projects come under different investment climate and have been considered under N_{diff}. N_{diff} = 22 **Step 5**: **Calculate factor F=1- N_{diff}/N_{all} representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.** As per the approach of the project verification team, the factor F is calculated using the following formula; $F = 1-N_{diff}/N_{all}$ <u>Condition 1:</u> F = 1-(22/23) = 0.04 <u>Condition 2:</u> $N_{all} – N_{diff}$ = 23-22 = 1 As the project activity does not satisfy both condition (i) & (ii). Thus, the proposed project activity is not a “common practice” within a sector in the applicable geographical area. As per methodological tool “common practice” version 3.1, the proposed project activity is a “common practice” within a sector in the applicable geographical area if the factor F is greater than 0.2 and N_{all} - N_{diff} is greater than 3. Thus, if both conditions are not fulfilled, then project activity will not be a common practice. Otherwise, the project activity is treated as a common practice. In conclusion of the overall additionality demonstration, the proposed project activity is deemed additional.
Findings	CL 02, CL 09, CL 010 and CAR 03, CAR 15 and CAR 16 were raised and resolved. .
Conclusion	The information mentioned in the PSF/1/ is duly supported by evidence quoted therein. The project verification team has described all steps taken, and sources of information used to cross-check the information contained in the PSF/1/. The project verification team determined that the evidence assessed is credible, where appropriate. Based on the assessment described above, the LGAI project verification team confirms that the project activity is additional and is demonstrated to be additional in line with the requirements of Tool for the demonstration and assessment of additionality version 7.0/4/ and according to paragraph 50 and 51 of the GCC Project standard Version 3.1/6/.

D.3.6. Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	In accordance with the applied methodology ACM0002 version 21.0,/4/ the project owner in the PSF/1/ has calculated Emission Reductions in the following manner: $ER_y = BE_y – PE_y$

	Where: ER_y = Emission reductions in year *y* (tCO_2e) BE_y = Baseline Emissions in year *y* (tCO_2e) PE_y = Project Emissions in year *y* (tCO_2e) Baseline Emissions As per the approved methodology ACM0002 (version 21),/4/ baseline emissions include only CO_2 emissions from electricity generation in power plants that are displaced by the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. Calculation of emission factor: The calculation for the operating margin and combined margin for the Indian Grid is readily available and published by the Central Electricity Authority, Government of India/30/. The project activity has referred the CEA Baseline Carbon Dioxide Emission Database/30/ is version 17 of October 2021, which was the latest version available during webhosting the PSF/1/ The PO has used the simple operating margin calculation. The simple operating margin is calculated as an average of the latest available three years (at the time of PSF submission for webhosting of the project activity) i.e. 2018-19, 2019-20 and 2020-21, which was found to be in line with the para 42 of Tool to calculate the emission factor/4/. The value for weighted average operating margin has been validated and used as 0.9522 tCO_2/MWh. The Build margin for the National grid is calculated ex-ante based on the average emission intensity of 20% most recent capacity additions in the grid based on the net generation for the year 2020-21, which was found to be in line with para 72 of Tool to calculate the emission factor/4/ and considered as 0.8653 tCO_2/MWh. The weighted average combined margin has been calculated by the PO, considering the 75% weighted for operating margin and 25% for build margin; this is in accordance with the tool/13/. The weighted average combined margin emission factor for the project activity comes to 0.9305 tCO_2/MWh. Baseline emissions are calculated as the product of the Baseline Emission Factor ($EF_{grid,CM,y}$ in tCO_2/MWh) times the electricity supplied by the Project. $BE_y = EG_{PJ,y} * EF_{grid,CM,y}$ Where: BE_y = Baseline Emissions in year *y* (tCO_2e/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 project activity in year y (MWh/yr) $EF_{grid,CM,y}$ = Combined Margin Grid Emission Factor (tCO_2e/ MWh) for grid connected power generation in year y As project activity is the installation of a Greenfield power plant, hence $EG_{PJ,y} = EG_{facility,y}$ The notation of same parameters $EG_{PJ,Y}$ can be $EG_{facility,y}$ as project activity is installation of a greenfield power plant. $EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh).

	BE_y = 217,781 MWh/year (Average of 10 years considering degradation Factor) x 0.9350 tCO_2e/MWh = 202,645tCO_2e/year (annual average) As per applied methodology ACM0002 version 21.0,/4/ project and leakage emission are 0 tCO_{2e}. Hence, PE_y and LE_y = 0 tCO_2e Hence, Emission reductions are calculated as $ER_y = BE_y - PE_y$ = 202,645- 0 = 202,645tCO_2e/year (Annual Average). Project verification team noted that degradation factor of 0.7% /8/ is applied from year 2 which reduces annual generation estimate, thus decreasing annual generation from year 2 by 0.7% every year. The ex-ante estimates given in the PSF/1/ are conservative and all input parameters have been separately verified. The project verification team confirms that estimates of baseline emissions can be replicated using the information provided in the final PSF/1/ and emission reduction spreadsheet/2/ being submitted for registration. The project verification team further confirms that assumptions have been consistently applied in both emission reduction calculations and investment analysis spreadsheet/3/.
Findings	CAR 04, CAR 05 and CAR 20 were raised and resolved. Please refer appendix 4 for more information.
Conclusion	The project verification team confirms the followings; • All assumptions and data used by the project owners are listed in the PSF/1/, including their references and sources; • All documentation used by project owner as the basis for assumptions and source of data is correctly quoted and interpreted in the PSF; • All values used in the PSF are considered reasonable in the context of the proposed project activity; • The baseline methodology/4/ and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions; • All estimates of the GHG emissions can be replicated using the data and parameter values provided in the PSF/1/. • No sampling has been applied in the project activity. Thus, it is in line with paragraph 55, 58 and 59 of the Project standard Version 3.1/6/

D.3.7 Monitoring plan

Means of Project Verification	The monitoring plan is included in Section B.7 of the PSF/1/ based on the approved monitoring methodology ACM0002 version 21.0 /4/ 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 Project Standard version 3.1, GCC Verification Standard version 3.1, GCC Environment and Social Safeguards Standard version 3.0, and Project Sustainability Standard version 3.1/6/. 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.

Parameter	Value	Source
Build Margin Emission factor ($EF_{grid, BM, y}$)	0.8653 tCO_2/MWh	Based on latest CO_2 Baseline Database for

Operating Margin emission factor ($EF_{grid,OM,y}$)	0.9522 tCO_2/MWh	the Indian Power Sector User Guide, Version 17.0, October,2021/30/.
Combined Margin CO_2 emission factor ($EF_{grid,y}$)	0.9305 tCO_2/MWh	

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 PSF and the applicable SDG parameters are given below :

1	$EG_{facility,y}$ (SDG – 7)	Quantity of net electricity supplied by the project plant/unit to the grid in year y in MWh The project activity will export annual average 217,781 MWh of net electricity to grid as verified from the DPR. The energy meters installed at the pooling substation (plant end) and at the grid substation are as follows.

Energy meter details for Banda Site (At pooling as well as main substation)	**Substation End** Type: Make: Accuracy class: Main meter (Sr. no): Check meter (Sr. no): **Plant End** Type: Make: Accuracy class: Main meter (Sr. no): Check meter (Sr. no):	 ABT Meter Genus 0.2s UP -5099-A UP -5101-A Apex 150 Secure 0.2s UPP 68962 UPP 68963
Energy meter details for Prayagraj Site (At pooling as well as main substation)	**Substation End** Make: Model: Main meter: Check meter: **Plant End** Make: Model: Main meter (Sr.no): Check meter (Sr.no):	 Secure APEX 150 3441A 3442 A Secure APEX 150 UPP 68959 UPP 689660

Above stated meter Sr. Nos. were verified at the time of physical visit. Further, Project verification team noted that Meter make, serial numbers are subject to change during the project life time due to various reasons beyond the control of PO. This shall not be considered as Post Registration Change in project

			design. The energy accounted is taken from the Monthly Energy Account readings which is generated based on metering done at the receiving end of Substation and at the pooling substation using ABT compliant energy meters. There will be Main Meter and a Check Meter arrangement. In the event Main Meter is not in service then the Check Meter shall be used for such duration. The Net electricity supplied to the grid by the project activity will be calculated as a difference of electricity exported to the grid and electricity imported from the grid as recorded from the joint meter reading and/or apportioning certificates/credit notes issued by state authority as per below equation: $EG_{facility,y} = EG_{Export,} - EG_{Import,}$ The monitoring parameter will be recorded for emission reduction/2/ on monthly basis. The calibration of the meters will be in line with the national/local standards and will be maintained by government authority which is beyond the control of the PO as checked during site visit.
	2	Solid waste Pollution from end-of-life products/ equipment (EL06)	This parameter is monitored on continuous basis based on the waste generated from the solar power plant components and the balance of system components at the end of life such as Inverters, Modules, generators, transformers and cables which could not be reused in the project activity. As per the Solid waste Management Rules, 2016[29] the waste shall be stored or replaced in the host country. The project owner is in the process of devising an internal policy for the same based on the best practice followed domestically/internationally. 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.
	3	Solid waste pollution from E wastes (EL04)	As per monitoring plan E-waste generated from the project activity shall be stored and disposed-off as per the guidance of E-waste management Amendment rules, 2018[30] in the host country. As per the guidance the E-waste generated from the project activity (e.g., Cables, electronics cards, etc.,) will be collected by the dealer of producer or dismantler or recycler or through the designated take back service provider of the producer to authorized dismantler or recycler. This will be monitored by means of the records maintained by the project owner at the installation site. And logbook records maintained when E waste will be disposed of or sent for refurbishment. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices followed by the project owner are appropriate in

[29] https://cpcb.nic.in/uploads/MSW/SWM_2016.pdf
[30] https://tspcb.cgg.gov.in/GOs/E-Waste%20(Management)%20Amendment%20Rules%202018.pdf

			relation to project activity and its acceptable to assessment team.
	4	CO_2 Emissions Reduction (SDG 13 and EA03)	The project activity involves electricity generation from solar modules which is a renewable source of energy displacing equivalent energy that would have been generated using fossil fuel fired plants. Thus, the project activity reduces CO_2 emissions from fossil fuel fired plants. The parameter is calculated based on the net electricity generation from the project activity and grid emission factor. Reduction of CO_2 emissions due to implementation of project activity that would otherwise be emitted by thermal power plants. The CO_2 emission reductions will be monitored and calculated using approved CDM methodology applied which is checked and found acceptable. The electricity generation and emission reductions records will be maintained for emission reduction verification.
	5	SDG 8- The number of jobs created by the project activity and the average earnings of females and male employees engaged in the project and segregate d by age and persons with disabilities	The data being assessed includes the number of jobs created by the project activity and the average earnings for both female and male employees engaged in the project, segmented by age and individuals with disabilities. The purpose is to substantiate the practice of providing equal remuneration to all employees, irrespective of their gender. The parameters to be monitored including average earning and policy for non-discrimination and equal pay for the work of equal value. These will be assessed annually, ensuring compliance with minimum wage regulations as per the Labour Act. Additionally, employee performance will be reviewed annually, and corresponding wage increments will be implemented as appropriate. As location & nature of the project activity being installed in remote area, hiring disable person and women employment is not possible at the site due to their safety concerns. However, they are encouraged to apply and employed in head office for coordination and administrative activities, which will be verified during the subsequent verification, confirmed by the project owner during the onsite visit & interviews
	6	Replacing Fossil Fuels with renewable sources of energy. (ENR07)	The parameter is calculated based on the net electricity generation from the project activity. The monitoring parameter will be continuously monitored by means of energy meters as mentioned above monitoring parameter $EG_{facility,y.}$

	7	Solid waste pollution from batteries (EL05)	This parameter is monitored on continuous basis based on the project activity may result in battery waste at the end of its lifetime. As per the Battery waste management rules,2022[31] waste shall be stored or replaced in the host country. The incidents will be recorded annually and at the end of lifetime of batteries. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and monitoring practices followed by the project owner at site which is further found appropriate in relation to the project activity and its acceptable to the assessment team.
	8	Long-term jobs (> 10 year) created (SJ01)	The Project Activity will generate long term job opportunities (more than 10 year of employment period) which will be monitored and recorded by PO/12/. The data records will be available during subsequent emission reduction verification.
	9.	Land use change (change from cropland /forest land to project land) (EL08)	The land for the project activity is plain land and does not involve any restricted area, forest area or ecologically sensitive area. PO has confirmed type of land for the proposed project activity is implemented on two sites i.e. Banda and Prayagraj. Project activity was installed on barren land at Prayagraj and on agriculture land at Banda confirmed from the submitted land lease/sale records /29/. The project activity being a solar plant operation does not involve any chemical or hazardous activities and does not disturb the Topography of the land, solar project operations have negligible impact on land use. Moreover, the impact on the land use due to the project operation is reversible and post – decommissioning land shall be reverted to its state confirmed during onsite visit observations and interviews. Project owner has applied for the land use change for Banda site in-line with "The Uttar Pradesh Solar Energy Policy 2022[32]" and was allowed to install the renewable energy project on the private agriculture land which will be monitored once during the project lifetime confirmed from the onsite visit and interviews at site.

[31] https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf
[32] https://www.upneda.org.in/MediaGallery/Uttar_Pradesh_Solar_Energy_Policy2022_English_.pdf

	10	Specialized training/ education to local personnel (SE01)	This parameter is monitored based on the training provided to the employees related to operation of the project activity. This will be verified based on the training records maintained by the project owner. The data will be archived for a period of 2 years beyond the end of the crediting period. The number of trainings conducted for the employees can be verified using training records and same will be maintained until the crediting period. 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.
	11	Reducing/increasing accidents/ Incidents/ fatality (SHS03)	The data or parameter being considered is related to the reduction or increase in accidents, incidents, or fatalities. The purpose is to effectively manage and mitigate the risks associated with accidents, incidents, or fatalities occurring at the project site. The project owner conducts Environmental, Health, and Safety (EHS) training sessions, conducts toolbox talks on various occupational safety aspects, and ensures the provision of Personal Protective Equipment (PPE) kits to employees as part of their commitment to enhancing on-site safety practices and minimizing the risk of accidents. The project owner, responsible for reducing the number of accidents occurring at the site, PO will maintain records of accidents and incidents on-site. This monitoring will be continuous, and records will be updated as accidents occur. Key performance indicators include the count of incidents and accidents, the number of HSE training sessions conducted, and the compliance with Personal Protective Equipment (PPE) use. Monitoring is conducted on a continuous basis, and the data is aggregated annually. Monitoring will continue throughout the crediting period. 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 are appropriate in relation to the project activity and its acceptable to the assessment team.
	12	Exploitation of Child Labour (human rights) (SW08)	Project activity provides employment in the region. However, project owner adheres to The Child Labour (prohibition and regulation) Act, 1986[33] under article 24 of the Indian constitution ensuring there is no exploitation of child labor. The child labor and forced labor are strictly prohibited by the law. The project owner will strictly monitor and ensure that no child labor is working at the site and no forced labor is working at the site. The project owner maintaining comprehensive records of employees at the site. This parameter will be monitored on continuous basis and reported annually. 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 are found appropriate in relation to the project activity and its acceptable to the assessment team.

[33] https://labour.gov.in/sites/default/files/act_2.pdf

	13	Water Consumption from ground and other sources (EW02)	The parameter will record the consumption of water due to the project activity. The data will be monthly recorded *(Number of water tankers utilized for solar module cleaning)* and can be checked through plant records. Since, the power plant is implemented in a barren/agricultural private land, this parameter is implemented to analysis the consumption of water due to the project activity and as an environmental safeguarding in-line with ground water regulation[34]. 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 are found appropriate in relation to the project activity and its acceptable to the assessment team.
	14	Solid waste Pollution from Hazardous wastes (EL02)	The PO has claimed that the hazardous waste produced during the operations by the Project activity will be regulated and disposed to the authorized waste handlers. The compliance to the Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016[35] says that the waste will be disposed to licensed third party vendor in compliance with all the local laws and hazardous waste management rules. However, the used oil or lubricant from the transformer will be monitored and disposed as per the law. The frequency of monitoring is on annual basis. The site will maintain records of hazardous waste, and continuous monitoring will ensure that waste is disposed of promptly upon generation. This was conffirmed through interviews with the project activity's monitoring personnel during our on-site visit, and the monitoring practices adopted by the project owner were found to be suitable and deemed acceptable by the assessment team.
	The project verification team confirmed that all the above listed parameters are sufficient to calculate the emission reductions including the contribution towards environmental (detailed in Appendix 5 below) and social safeguards (detailed in Appendix 6 below) and sustainable development goals (elaborated in Appendix 7 below) in accordance with the methodology and are correctly reported in the PSF/1/. The data will be archived and maintained by PO for entire crediting period + 2 years or till issuance of last ACCs, whichever is later and is acceptable.		
Findings	CAR 06 and CAR 21 were raised and resolved. Please refer appendix 4 for more information.		
Conclusion	The project verification team confirms that: The monitoring plan described in the PSF is complying with the requirements of the selected methodology/4/. Based on detailed review, the monitoring arrangement described in the monitoring plan is feasible within the project design. The project verification team confirms that the project owner will be able to implement the described monitoring plan. 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 are verifiable and thereby satisfying the requirement of Verification Standard/6/. The monitoring plan will give opportunity for real measurements of achieved emission reductions.		

[34] https://cgwb.gov.in/ground-water-regulation
[35] https://cpcb.nic.in/rules/

	There are no host country requirements pertaining to monitoring of any sustainable development indicators. Therefore, there are no such parameters identified in the PSF/1/.

D.4 Start date, crediting period and duration

Means of Project Verification	Project Owner has selected fixed crediting period of 10 years. The commissioning of the projects are in two phases as follows: **Project Owner** / **Capacity (MW)** / **Location** / **Commissioning** Tata Power Renewable Energy Limited / 50 MW / Village Bijora Bijuria, block- Khutar, Tehsil Powayan, District Shahjahapur, Uttar Pradesh, India / 03/12/2021 50 MW / Village Khan Semra ,Tehsil Bara, District Prayagraj, Uttar Pradesh, India / 03/01/2022 The start date of the crediting period is considered as 03/12/2021 (Earliest Date Commissioning) which is also the start date of commercial operation of the project activity/9/. Expected lifetime of the project activity is 25 years, 00 months which is verified based on technical specification of manufacturer/8/ and signed power purchase agreement /17/
Findings	No findings were raised.
Conclusion	The start date of the project activity indicated has been checked based on commissioning certificates submitted/9/. The expected operational lifetime of the project activity indicated in the PSF/1/ is deemed reasonable based on sectoral expertise of the assessment team.

D.5 Environmental impacts

Means of Project Verification	The Project Activity is located in the host country – India. In India, the nodal agency – Ministry of Environment, Forest and Climate Change (MoEF & CC)/10/ has clarified[36] that the provisions of Environmental Impact Assessment (EIA notification 2006[37]) are not applicable to Solar PV project. For Solar PV projects, following environmental Acts and rules are applicable to which PO is complying; • The Air (Prevention and Control of Pollution) Act, 1981 including Rules 1982 and 1983 and amendment(s) • The Water Prevention and Control of Pollution), Cess Act, 1977 including Rules 1978 and 1991 • Solid Waste Management Rules, 2016 • E-waste (Management) Rules 2016 and amendment(s) • Batteries (Management and Handling) Rules, 2001 and Battery waste management rules,2022 and amendment(s).
Findings	No findings were raised.
Conclusion	Assessment team confirms that the proposed project does not need to carry out Environment Impact Assessment (EIA) however, it abides by all applicable acts and rules/10/ as applicable during the project implementation and operation stages. During site visit, assessment team confirmed that the project has no negative environmental impacts.

[36] https://mnre.gov.in/img/documents/uploads/4912cd8c044042cf80b00c4e756e16b2.pdf
[37] http://www.environmentwb.gov.in/pdf/EIA%20Notification,%202006.pdf

D.6 Local stakeholder consultation

Means of Project Verification	Project Owner has carried out the stakeholder consultation/16/ for this project by date 08/06/2022 and 15/06/2022 respectively for Banda and Prayagraj site. Involved stakeholders during imparted meetings were Local administrative officials, business groups, community representatives, village heads, panchayat members, landowners, local villagers, local youth and women group were part of the consultation. The stakeholder meetings were carried out through a means of Focus Group Discussions (FGD) held with local villagers, and landowners. The assessment team confirms that the consultation was performed to meet the requirement of the GCC since there is no Host country requirement to conduct consultation for such projects. The local stakeholder consultation/16/ process was performed by the project owner before the submission of the project activity for global stakeholder consultation which is accepted. The objectives of the process were; • Promote public awareness and improve understanding of the local people about the proposed project; • Assessment of possible requirement of improvements; • Solicit the views of affected communities/individuals on environmental and social problems; • Improve environmental and social soundness; • To settle problems with mutual consent; and • Create accountability and sense of local ownership during project implementation. PO has submitted MoM of Stakeholder Consultation/16/ to the assessment team. The team reviewed the same and confirms that the summary of stakeholders' comments reported in PSF/1/ is adequate and LSC label features (E+, S+, SDG+) of projects were also discussed and their views and opinions were also sought during the meeting. There was no negative feedback received. The verification team noted that group of stakeholders that were invited for the meeting includes local community, institutional stakeholders, government bodies, other external influencers, etc. Thus, verification team is of the opinion that the group invited for Local stakeholder consultation were adequately covering all the stakeholders that could have impact due to implementation of the project. Further, the stakeholders who were interviewed by the team during physical visit informed that there had not been any complaints and that the meeting had concluded on a positive note.
Findings	No finding was raised in this section.
Conclusion	The verification team confirms that the summary of stakeholders' comments reported in PSF is complete. In the opinion of the team, the local stakeholder consultation process was adequately conducted by the project owner considering the ongoing pandemic to receive unbiased comments from the all the stakeholders. The project verification team confirms that the local stakeholder consultation/16/ 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/6/, the submission of HCA on double counting is required by CORSIA labelled project after 31/12/2020 as verified under section D.13 of this report. For carbon credits issued during 01/01/2016 to 31/12/2020 the Host Country approval is not required.
Findings	FAR 01 was raised. Please refer appendix 4 for more information.

Conclusion	The project verification team confirms that no HC approval is required for CORSIA labelled project activity and the HCA will be required during the first or subsequent verification, when the issuance of carbon credit is considered.

D. 8 Project Owner- Identification and communication

Means of Project Verification	The information and contact details of the representation of the project owner and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF which was checked and verified by the verification team from Letter of Nomination/18/ signed by the project owner dated 16/12/2023. The legal owner of project activity M/s TATA Power Renewable Energy Limited (TPREL) and same has been demonstrated by the project owner through the Letter of Award/14/, power purchase agreement/17/, commissioning certificates/09/ and EPC contract/14/ of the project. Also, it was evident that, as per para 6 of Letter of Nomination's statement regarding the ownership of the carbon credits generated from the project activity only be issued and received in the account of project owner (TATA Power Renewable Energy Limited). Hence as per GCC requirement the project owner has filled and submitted the "Declaration by Authorized Project Owner and Focal Point at Initial Submission and Request for Registration of GCC Project activity" for further process which is acceptable to the verification team
Findings	CAR 22 was raised and resolved. Please refer appendix 4 for more information.
Conclusion	The project verification team confirms that the information of the project owner has been appended as per the template and the information regarding the project owners stated in the PSF/1/ and Letter of Nomination /18/ is found to be consistent.

D.9 Global stakeholder consultation

Means of Project Verification	Global stakeholder consultation was held by making PSF/1/ available through the dedicated interface on the GCC website. The duration of the same was from 08/09/2022 to 22/09/2022. No comments were received during this period. Minor comment raised by GCC for updating version no of "Environmental and Social Safeguard Standard". PO has updated the recent environmental and social safeguard standards i.e. version 3.0 in revised PSF.
Findings	CL 04 was raised and resolved. Please refer appendix 4 for more information.
Conclusion	The PSF had been made public for receiving stakeholder feedback and no comments were raised during the GSC process. Further, assessment team confirms that minor comment of GCC raised during listing related to version no "Environment and Social Safeguards Standard" has been taken into account and solved,

D.10 Environmental Safeguards (E+)

Means of Project Verification	The assessment of the impact of the project activity on the environmental safeguards has been carried out in section E.1 of the PSF/1/. Out of all the safeguards no risks to the environment due to the project implementation were identified and following have been indicated as positive impacts. **1. Positive Impact**: Environment (Air) – CO_2 emissions: The project will replace the fossil-fuel based power plants for generation of electricity thus saving CO_2 emissions. These saved emissions will be calculated and monitored as a part of monitoring plan described in the PSF/1/ and section D.3.7 of this report. **Negative Impacts identified as 'Harmless' as regulatory complied OR mitigated:** 1. Environment (Land) – Solid waste pollution from hazardous waste, this is

	covered to monitor impact from disposal of transformers and transformer oil if not stored properly will have negative impact on the environment (water & soil). PO will abide local applicable rules –Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 to store/dispose wastes as per directives provided in the applicable laws./10/ Records of the same will be maintained for entire emission verification period. 2. Environment (Land) – Solid waste pollution from E-waste: The project activity utilizes mobiles, laptops and other electronic items which when damaged, if not stored properly will have negative impact on the environment (water & soil). PO will abide local applicable rules – E-waste (Management) Rules 2016 and amendment(s) in 2018 to store/dispose damaged electronic waste as per directives provided in the applicable laws./10/ Records of the same will be maintained for entire emission reduction verification period. 3. Environment (Land) – Solid waste pollution from end-of-life products/equipment: Waste generated after end of lifecycle of a product shall be discarded in accordance with host country regulation. The parameter is being monitored and validated under section D.3.7 of this report. Proper mitigation action has been implemented for waste management. 4. Environment (Land) – Solid waste pollution from Batteries: The project activity utilizes batteries for storage purpose only and maintained their records at project site . After the useful life of the batteries, it will be sold to the supplier for recycling & refurbishment purpose in-line with batteries (Management and Handling) Rules, 2001 And Battery waste management rules, 2022 and amendment(s). 5. Environment (Land) – Land use change (change from crop land/forest land to project land): The project activity only used the barren land for prayagraj site and agricultural land for Banda site. Therefore, Project owner has applied for the land use change for Banda site in-line with “The Uttar Pradesh Solar Energy Policy 2022” allowed to install the renewable energy project on the private agriculture land for the installation of the project activity which were not priorly used for any farming purpose, same has been confirmed form the stake-holders and interview with representatives of project owner during the onsite visit. The parameter is being monitored and validated under section D.3.7 of this report. Proper mitigation action has been implemented for waste management. 6. Environment (Water) – Water Consumption from ground and other sources: The project activity only uses modest amount of water for the solar panel’s spraying purpose whose records are maintained by the operation team for the project activity (dry-cleaning mechanism followed as project site for major cleaning purpose), which is in-line with Ground Water Regulation. However, the quantity of water used for solar panel cleaning is quite insignificant while comparing baseline power plants 7. Environment (Natural Resources) – Replacing fossil fuels from renewable sources of energy: The parameter is calculated based on net electricity generation from the project activity. The monitoring parameter will be continuously monitored by means of energy meters. This parameter will be monitored through the monthly power generation from the proposed project activity 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. The detailed matrix has been included in appendix 5 of the report. .The detailed matrix has been included in appendix 5 of the report

Findings	CAR 07 and CAR 23 were raised and resolved. Please refer appendix 4 for more information.
Conclusion	Based on the documentation review the project verification team can confirm that Project Activity is not likely to cause any negative harm to the environment but would have a positive impact, hence, is eligible to achieve additional E+ certifications.

D.11 Social Safeguards (S+)

Means of Project Verification	The assessment of impact of the project activity on the Social Safeguards has been carried out in section E.2 of the PSF/1/. 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 **Impacts identified as 'Harmless' as regulatory complied OR mitigated:** 1. Social – Jobs: Long-term jobs (> 10 year) created/ lost: Project owner has confirmed that during operational life time of the project activity, long term jobs (>10 year) will be created and the records of the same will be maintained for entire emission reduction verification period and detailed monitoring discussed for the same under section D.3.7 of this report. 2. Social – Jobs: Avoiding discrimination while hiring people from different race, gender, ethnics, religion, marginalized groups, people from disabilities: The project activity employed people for both male and female with different religion and caste which will be verified from the cross check of employment register and payroll records. This parameter can be monitored through the company policies on non-discrimination practices and Number of complaints received on discrimination practices. It is verified under section D.3.7 of this report 3. Social – Education: specialized training/education to local personnel: Project owner through job related training, educate local personnel regarding data monitoring and record segregation. PO will keep records of such type training records of specialized training for entire emission reduction verification period./12/. The parameter will be monitored and verified as per details provided under section D.3.7 of this report. 4. Social – Welfare - Exploitation of Child Labor: the parameter having positive impact to monitor there is no child labor happening. This will be monitored continuously and records will be maintained. It is verified as per detail incorporated in section D.3.7 of this report. 5. Social – Health & Safety - Reducing / increasing accidents/Incidents/fatality: Project owner through HSE related training, educate working personnel regarding various types of health hazardous and risks during the operations of the project activity. The parameter will be monitored and verified as per detailed provided under section D.3.7 of this report. Negative Impacts: No negative impacts identified or verified for the project activity, which cannot be mitigated. PO has described an appropriate monitoring plan to monitor all these elements. The detailed matrix has been included in appendix 6 of this report.
Findings	CAR- 08, CAR 24 & CL – 03 were raised and resolved. Please refer appendix 4 for more information.
Conclusion	Based on the documentation review the project verification team can confirm that Project Activity is not likely to cause any negative harm to the society but would have a positive impact, hence, is eligible to achieve additional S+ certifications.

D.12 Sustainable development Goals (SDG+)

Means of Project Verification	The assessment of the contribution of the project activity on United Nations Sustainable Development Goals/7/ has been carried out in section F of the PSF/1/ Out of the 17 Goals project activity has no adverse effect on any of the goal and contribute to 3 SDGs/7/: • 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 plants/ units to the grid in the monitoring plan and is found adequate. This has been discussed under section D.3.7 of this report. • 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 employment: The project activity achieves minimum of 05 full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value. This has been discussed under section D.3.7 of this report. • Goal 13. Take urgent action to combat climate change and its impacts: SDG Target 13.a, the contribution towards SDG goal is being monitored by the parameter 'CO2 emissions' in the monitored 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 all the elements. The detailed matrix has been included in appendix 7 of this report.
Findings	CAR- 25 & CL – 03 were raised and resolved. Please refer appendix 4 for more information.
Conclusion	Based on the documentation review and site visit, project verification team confirms that the project is contributing towards the United Nations Sustainable Development Goals/7/ and would have a positive impact and confirms that initiatives taken by PO are beyond legal compliances of CSR under companies act, 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 and A.6 of the PSF/1/ has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 03/12/2021 to 02/12/2031. As confirmed during the audit, the Project Owner intends to use/sell/transfer/retire the approved carbon credits (ACCs) generated by the Project Activity for offsetting purposes to Airlines under ICAO's CORSIA requirements and complies with the following: • Environment and Social Safeguards Standard/6/ as elaborated in section D.10 and D.11 of this report to ensure that the Project Activity does not cause any net harm to the environment or society and provides an opportunity to demonstrate this achievement by obtaining the additional certification labels *E+* and *S+*. • Project Sustainability Standard /6/ as elaborated in section D.12 of this report to ensure that the Project Activity demonstrates the level of contribution towards achieving the United Nations Sustainability Development Goals (SDGs)/7/ and provides an opportunity to demonstrate this achievement by obtaining the additional *SDG+* label (Silver). The host country attestation for the same will be obtained during the first issuance of ACCs and accordingly, it shall be confirmed that the project activity will not lead

	to double counting.
Findings	CAR- 09 was raised & resolved and FAR 01 is raised. Please refer appendix 4 for more information.
Conclusion	The project owner has clarified the intent of use of carbon credits for CORSIA hence, no double counting will take place.

D.14 CORSIA Eligibility (C+)

Means of Project Verification	A declaration under section A.5 and A.6 of the PSF/1/ has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 03/12/2021 to 02/12/2031. The project owner has chosen to apply for CORSIA and the host country attestation will be obtained during the first issuance of ACCs and accordingly, it shall be confirmed that the project activity will not lead to double counting.
Findings	FAR 01 is raised.
Conclusion	The project owner has clarified the intent to use of carbon credits for CORSIA hence, no double counting will take place This is in line with Standard on avoidance on double counting version 1. Para 16./6/ /15/

SECTION E Internal quality control

The draft verification report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by LGAI are duly followed and the verification report/opinion is reached in an objective manner and complies with the applicable GCC requirements/6/. 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 independent technical reviewer may approve or reject the draft verification report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before the request for issuance is submitted to GCC. The final decision is taken by the Technical Manager.

SECTION F Project Verification opinion

The GCC Project Verifier, LGAI Technological Center S.A., has verified and certified that the GCC Project Activity – '100 MW solar power project in UP by Tata Power Renewables Energy Limited' has correctly described the Project Activity in the Project Submission Form (version 7.0),/1/ dated 15/03/2024 including the applicability of the approved methodology ACM0002 version 21.0./4/ and meets the methodology applicability conditions, is additional and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reduction /2/ estimates correctly and conservatively; is likely to generate GHG emission reductions amounting to the estimated 202,645 tCO_2e annual average, as indicated in the PSF/1/ 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 14064-3/5/ and therefore requests the GCC Program to register the Project Activity; is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard/6/, and therefore requests the GCC Program to register the Project Activity, which is likely to achieve the requirements of the Environmental No-net-harm Label (E+) and the Social No-net-harm Label (S+); and is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs)/7/, CORSIA requirements, comply with the Project Sustainability Standard/6/ and contribute to achieving a total of 3 SDGs, which is likely to achieve the Silver[38] SDG certification label (SDG+).

[38] SDG Certification labels: Bronze (level 1): contributes to 2 out of 17 SDGs; Silver (level 2): contributes to 3 out of 17 SDGs; Gold (level 3): contributes to 4 out of 17 SDGs; Platinum (level 4): contributes to 5 out of 17 SDGs; and Diamond (level 5): contributes to more than 5 SDGs.

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Methodology for SSC Projects
BE	Baseline Emission
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CH_4	Methane
CL	Clarification Request
CM	Combined Margin
CO_2	Carbon dioxide
CP	Crediting Period
DNA	Designated National Authority
DR	Desk Review
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GCC	Global Carbon Council
GHG	Green House Gas
GW	Giga Watt
GWh	Giga Watt hour
IPCC	Intergovernmental Panel on Climate Change
LGAI	LGAI Technological Center S.A.
KW	kilo Watt
KWh	kilo Watt hour
LSC	Local Stakeholder Consultation Process
MoV	Means of Verification

MP	Monitoring Plan
MW	Mega Watt
MWh	Mega Watt hour
N_2O	Nitrous Oxide
OM	Operating Margin
PSF	Project Submission Form
PE	Project Emission
PLF	Plant Load Factor
PO	Project Owner
PS	Project Standard
RFR	Request for Registration
SDG	Sustainable Development Goal
tCO_2e	Tonnes of Carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
V	Version
VS	Verification Standard

Appendix 2. Competence of team members and technical reviewers

Name	SHORT CV. BACKGROUND INFORMATION
Mr. Jitendra Mohan Singh	**Mr. Jitendra Mohan Singh**, has done Advanced MSc in Sustainable Energy Systems and Management from International Institute of Management, University of Flensburg, Germany and B.Tech. in Agricultural Engineering from Allahabad University, India. He has more than 22 years of working experience in different organisations like IARI, IIT Delhi, ICAR, IRADe, CAPART, SMEC and Perenia Carbon and M B Power (Madhya Pradesh) Ltd. in the area of Agriculture, Energy & Environment and Climate Change. He also worked on contract basis (adhoc) as a RIT expert in UNFCCC from 2010 to 2013. Currently, he is associated with True Quality Certifications Private Limited and is empanelled with Applus+ Certification to carry out validation and verification related to GHG reductions projects. Mr. Jitendra Mohan Singh is based in Ghaziabad (Uttar Pradesh), India.
Mr. Denny Xue	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.

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	PO	Project Submission Form	Version 2.0 dated 01/09/2022 Version 7.0 dated 15/03/2024	PO
/2/	PO	Emission reduction worksheet (Corresponding to Project Submission Form version and date)	Version 2.0 dated 01/09/2022 Version 7.0 dated 15/03/2024	PO
/3/	PO	Financial additionality (IRR) worksheet (Corresponding to Project Submission Form version and date)	Version 2.0 dated 01/09/2022 Version 7.0 dated 15/03/2024	PO
/4/	UNFCCC	CDM Methodology - ACM0002: Grid-connected electricity generation from renewable sources Methodological Tool- Tool 01: Tool for the demonstration and assessment of additionality Methodological Tool- Tool 07: Tool to calculate the emission factor for an electricity system Methodological Tool- Tool 24: Common practice Methodological Tool- Tool 27: Investment analysis CDM Validation and Verification Standard	Version 21.0 Version 7.0.0 Version 7.0 Version 3.1 Version 12.0 Version 3.0	UNFCCC
/5/	ISO	ISO 14064-2 & ISO 14064-3		ISO
/6/	GCC	Project Standard Verification Standard Environment and Social Safeguards Standard Project Sustainability Standard Standard on Avoidance of Double Counting Project Submission Form Project Verification Report Program Manual Clarification No 1	Version 3.1 Version 3.1 Version 3.0 Version 3.1 Version 1.0 Version 3.2 Version 3.1 Version 3.1 Version 1.3	GCC
/7/	UN	Sustainable Development Goals (SDGs)	https://sdgs.un.org/goals	UN
/8/	PO	• Technical specifications/nameplate of technology as implemented on site and confirmed during site visit. • Module manufacture product warranty certificate (Ji Energy) • UPPTCL approved Single Line Diagram	https://cercind.gov.in/2011/Whats-New/PERFORMANCE%20OF%20SOLAR%20POWER%20PLANTS.pdf	PO

No.	Author	Title	References to the document	Provider
		• Sample Meter Sealing Certificates • Detailed Project Report (DPR) prepared by Tata Power Solar Systems Limited	Dated 01/02/2019	
/9/	UPNEDA	• Letter of Award /Intent (LoA) • Letter of approval from UPNEDA (pertaining to e-reverse auction) • Commissioning Certificates for Project Activity issued by UPNEDA (UP New & Renewable Energy Development Agency)	For Banda by dated 14/12/2018 For Prayagraj by dated 14/12/2018 For Banda: • 25 MW (PPA with PO & NPCL) • 25 MW (PPA with PO & UPPCL) For Prayagraj: • 50 MW (PPA with PO & UPPCL) Prayagraj Site 1) For 50 MW (COD-03/01/2022) Banda Site 2) For 50 MW (COD-03/12/2021)	PO
/10/	MOEF & CC And GoI	• Environmental (Protection) Act, 1986 and amendment(s) • Environmental Impact Assessment (EIA) Notification, 2006 and amendment(s) • The Air (Prevention and Control of Pollution) Act, 1981 including Rules 1982 and 1983 and amendment(s) • The Water Prevention and Control of Pollution), Cess Act, 1977 including Rules 1978 and 1991 • Solid Waste Management Rules, 2016 • E-waste (Management) Rules 2016 and amendment(s)	https://www.indiacode.nic.in/bitstream/123456789/4316/1/ep_act_1986.pdf https://cleantechnica.com/2017/08/30/india-exempts-solar-power-parks-environmental-assessment-rules/ https://cpcb.nic.in/openpdffile.php?id=TGF0ZXN0RmlsZS9fMTU2NzgzOTg1OF9tZWRpYXBob3RvMTk2MDYucGRm https://cpcb.nic.in/water-pollution/ https://cpcb.nic.in/rules-2/ https://greene.gov.in/wp-content/uploads/2018/01/EW	MOEF & CC

No.	Author	Title	References to the document	Provider
		• Batteries (Management and Handling) Rules, 2001 • Electricity Act 2003	M-Rules-2016-english-23.03.2016.pdf https://cpcb.nic.in/uploads/hwmd/battery%20management%20&%20handling%20rules%202001.pdf https://www.indiacode.nic.in/bitstream/123456789/2058/1/A2003-36.pdf	
/11/	CEA	CO_2 Baseline database for the Indian Power Sector	Version 17.0 https://cea.nic.in/wp-content/uploads/baseline/2022/02/database_17_.zip	CEA
/12/	PO	Latest available data (verified on site) • Employment records • Attendance records • Social welfare program register • Corporate Social Responsibility register		PO
/13/	PO	Common practice analysis sheet	Dated 16/01/2024	PO
/14/	PO	Loan Sanction Letter (Axis Bank Limited, State Bank of India & Kotak Mahindra) CA (Charted Accountant) certificate (N Kantan & Associates) Purchase Order (Project Owner to Vendor Tata Power Solar Systems Limited)	State Bank of India, dt. 28/03/2022 Axis Bank Limited, dt. 09/03/2022 Kotak Mahindra Bank, dt 16/02/2022 Dated 18/06/2022 Banda site by dated 09/11/2019 Prayagraj Site by dated 09/112019	PO
/15/	GCC	Self-declaration on double counting (Dated 06/12/2022)	Standard on Avoidance of Double Counting, V1.0 – 2022 https://www.globalcarboncouncil.com/wp-content/uploads/2022/03/Standard-on-Avoidance-of-Double-Counting-V1.pdf	GCC
/16/	PO	Stakeholder consultation report (ESIA report) for consultation carried out on 08/06/2022 and 15/06/2022	-	PO

No.	Author	Title	References to the document	Provider
/17/	PO	Power Purchase Agreement 1. 25 MW- UPPCL (Banda) 2. 25 MW- NPCL (Banda) 3. 50 MW- UPPCL (Prayagraj)	 Dated 12/02/2019 Dated 13/02/2019 Dated 12/02/2019	PO
/18/	PO	Letter of Nomination (LoN) Company Board Resolution Document (Decision to go for bid submission to UPNEDA)	Dated 16/12/2023 Dated 16/11/2018	PO
/19/		Reference assumptions available on public domain Ministry of New and Renewable Energy	 4912cd8c044042cf80b00c4e756e16b2.pdf (mnre.gov.in)	Publicly Available
/20/		Renewable Energy Regulations in India	https://law.asia/renewable-energy-regulations-india/	Publicly Available
/21/		Monetary Policy _ Reserve Bank of India CEA – Renewable Project Monitoring Division Environmental Clearence Rules for Solar Power Benchmark Capital Cost Norm for Solar PV power projects FY 2016-17 Rates of Depreciation (for Income Tax) Provisions relates to Direct Taxes (Financial Year 2018)	https://www.rbi.org.in/scripts/FS_Overview.aspx?fn=2752 - monitoring/?lang=en - https://www.livemint.com/Politics/QW4cJ9yjhmvUtOZCPyOt3J/Govt-eases-environment-clearance-rules-for-solar-projects.html - https://cercind.gov.in/2016/orders/SO17.pdf Depreciation rates (incometaxindia.gov.in) https://incometaxindia.gov.in/budgets%20and%20bills/2018/memo-2018.pdf	Publicly Available
/22/	PO	Sample copy of JMR (share certificate)/Invoices	Banda and Prayagraj	PO
/23/	Govt of India (Ministry of Power)	Power Sector at a Glance all India	https://powermin.gov.in/en/content/power-sector-glance-all-india	Publicly Available
/24/	Govt of India (Ministry of Power)	National Electricity Policy 2005 The Electricity (supply) Act, 1948	https://powermin.gov.in/en/content/national-electricity-policy https://indiankanoon.org/doc/701121/	Publicly Available
/25/	CERC	Electricity Regulation Commission Act, 1998	https://www.indiacode.nic.in/repealed-	Publicly Available

No.	Author	Title	References to the document	Provider
		Factories Act 1948	act/repealed_act_documents/A1998-14.pdf https://labour.gov.in/sites/default/files/factories_act_1948.pdf	
/26/	MoEFCC	Schedule 1 of Ministry of Environment and Forest notification	https://arunachalpwd.org/pdf/NOTIFICATION%20dated%2014th%20September,%202006.pdf	Publicly Available
/27/	Ministry of Power MNRE	Tariff Policy 2006 National Solar Mission	https://www.iea.org/policies/4731-tariff-policy-2006 https://mnre.gov.in/solar-overview/	Publicly Available
/28/	PO	Sample Actual Operation & Maintenance Purchase Order		PO
/29/	PO	Land Lease Document • Prayagraj Site (Lease final document) • Banda Site (Sale Document)		PO
/30/	CEA	Central Electricity Authority CEA, Database for CEA Carbon Dioxide Emission Reduction	https://cea.nic.in/ https://cea.nic.in/wp-content/uploads/baseline/2022/02/database_17_.zip	Publicly 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.2	**Date:** 27/10/2022
Description of CL				
Project Owner to clarify and justify with the evidence: • Under Section A.3 of submitted PSF, details mentioned under "Technical detail of the Equipment" are observed to be inconsistent with information interpreted under "commissioning certificate" dated on 03/12/2021. • Completion Date of PSF is observed to be inconsistent with GCC's project portal submitted documents.				
Project Owner's response				**Date:** 18/11/2022
1. The commissioning certificate details on technical specifications are now incorporated in the PSF's section A.3. 2. The completion date is revised as per revised submissions1				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 29/11/2022
1. "Technical Details of the Equipment" has now been incorporated under section A.3 of the revised project submission report. However, verification team further observed that the details are mixed for both the sites i.e Banda and Prayagraj which is uncleared as well. PO's further requested to encapsulate two clear & separate the table's for both the sites. Therefore, this observation is currently open. 2. Under the revised project submission report the complete date of PSF is revised. However the version of the PSF is observed to be same as previous. Therefore, PO's further requested to clarify the same. **Hence, this observation (CL – 01) is currently open.**				
Project Owner's response				**Date:** 05/12/2022

1. The tables of technical specification are separated for both the Banda and Prayagraj project activity in section A.3 of revised PSF Version 3. **2.** The completion date of PSF and Version number is revised in the PSF submission version3.0
Documentation provided by Project Owner
Revised PSF version,3.0
GCC Project Verifier assessment **Date:** 11/02/2023
1. Technical specification tables for both the sites i.e. Banda and Prayagraj project has now been separated under section A.3 of revised PSF Version 03. 2. Revised PSF, version – 03 now encapsulates the completion date of the PSF and submission version number which is further checked and verified by the verification team. **Hence, finding (CL – 01) is closed now**

CL ID	02	**Section no.**	D.3.5	**Date:** 27/10/2022
Description of CL				
Project Owner to clarify and justify with the evidence: 1. Under section B.5, “Demonstration of Additionality” the source of data for “Parameters of IRR Calculation” is given as DPR. However, the verification team observed that, the details of values applied under the table are missing in submitted DPR. Therefore, PO requested to clarify the same 2. Under section B.5, “Demonstration of Additionality” the source of data for “Parameters of IRR Calculation” of Plant Load factor (PLF) is given as DPR. However, submitted Detailed Project Report (DPR) is missing the information about PLF. 3. Under submitted CPA (Common Practice Analysis) excel sheet, following inconsistencies were observed: • Under Tab “sheet 2”, considered geographical area observed to be Rajasthan • Under Tab “sheet 1” the start date information and capacity of the project observed to be inconsistent during assessment.				
Project Owner’s response				**Date:** 18/11/2022
1.The DPR with financial inclusions is submitted with this submission 2. The third party DPR is submitted with PLF value with this submission 3. CPA –location is Uttar Pradesh revised and the start date from the registered project is given in the revised submissions				
Documentation provided by Project Owner				
DPR,Revised PS,version 2F,ER ,CPA and IRR Sheet				
GCC Project Verifier assessment				**Date:** 29/11/2022
1. Detailed Project Report along with the financial inclusions has now been submitted which further checked and verified by the verification team and found acceptable. Therefore, this observation is closed now. 2. Plant Load Factor value i.e. 25.28 % has now been verified with third party DPR (Enincon). However, PLF value under the Revised Estimated Emission Reduction sheet and throughout the revised Project submission report observed to be inconsistent. Therefore, further requested to clarify the same. Observation is currently open**.** 3. CPA locations of the project activities has now been revised and the start date is observed to be consistent with attached web link given for the projects. Therefore, this observation is closed now. **Hence, this finding is (CL – 02) is currently open.**				
Project Owner’s response				**Date:** 05/12/2022
2 The ER is made consistent in the whole PSF with PLF 25.28% and revised ER, IRR and PSF version 3 submitted.				
Documentation provided by Project Owner				
ER sheet,IRR Revised PSF version 3.0				
GCC Project Verifier assessment				**Date:** 11/02/2023
2 The Plant Load Factor value is now revised under the submitted project submission report, version 03 which is further checked and verified by the verification team & observed consistent with revised ER and IRR sheet. **Hence, finding (CL – 02) is closed now.**				

CL ID	03	Section no.	D.11	Date: 27/10/2022
Description of CL				
Under section E.2, “Social Safeguards” for parameter “Women Empowerment”, PO mentioned women empowerment as Not Applicable as same has been claimed under SDG 5.				
Project Owner’s response				**Date:**18/11/2022
1.The woman employment is included in the social standards and SDGs and monitored in the revised PSF.				
D Documentation provided by Project Owner				
Revised PSF Version 2 is submitted				
GCC Project Verifier assessment				**Date:** 29/11/2022
1. The “Women Empowerment” details have now been included under “Social Safeguards” of revised project submission report. However, for the same parameter under “Do-No-Harm Risk Assessment” mentioned as harmless therefore, PO’s further requested to clarify how the social impacts are considered as harmless. **Hence, this finding (CL – 03) is currently open.**				
Project Owner’s response				**Date:** 05/12/2022
1.Since the project activity gives positive impact and further it is monitored parameter and hence it is mentioned harmless and given +1 as per the section 6 of the Environmental and social , Version3.0 (if the social impact is positive with respect to the pre-project or baseline scenario, and parameters can be have been monitored to substantiate the claim a score of +1 can be assigned. In case the impact cannot be or has not been measured and monitored, a zero score (0) shall be assigned to the parameter.)				
Documentation provided by Project Owner t				
Revised PSF version 3.0				
GCC Project Verifier assessment				**Date:** 11/02/2023
Justification provided by the project owner for parameter “Women Empowerment” under “Social Safeguards” for considering it as “Harmless” under “Do-No-Harm Risk Assessment” is acceptable to the assessment team. Therefore, this observation is closed now. **Hence, finding (CL – 03) is closed now**				

CL ID	04	Section no.	D.9	Date: 22/03/2023
Description of CL				
PO is requested to confirm GCC and GSC comments (if any) have been taken into account during listing and webhosting period. Also, submit the supporting for the same.				
Project Owner’s response				**Date:23/03/2023**
There are no major comments arise during listing and one minor comment from GCC website on using the recent environmental and social safeguard standards 3.0 and that has been already incorporated in the PSF				
Documentation provided by project Owner				
Screenshot of listing document				
GCC Project Verifier assessment				**Date:** 23/03/2023
Assessment team has checked screen shot of project listing webpage and confirms that there were no comment received from global stakeholder during the commenting period. Also, minor comment raised by GCC related to version of environmental and social safeguard standards. PO has used recent of environmental and social safeguard standards i.e. version 3.0 in revised PSF**. CL closed**.				

Finding raised during completeness check by GCC

CL ID	05	Section no.	D.2	Date: 25/09/2023
Description of CL				

Under Section A.1 of the PSF:

- PO should clarify that the electricity generated will be sold to DISCOMs or will be sold to dedicated consumers. In case project is supplying electricity to dedicated consumers in that case methodology is not applicable to project activity, PO is requested to refer CDM clarification 297 https://cdm.unfccc.int/UserManagement/FileStorage/FO0XP8572QKYDIGLZ63VBNU1EHCSM4
- PO should clarify why the electricity generation figure provided in PSF is different than the value available on company website https://www.tatapower.com/media/PressReleaseDetails/1910/tata-power-renewables-successfully-commissions-100-mw-solar-pv-projects-in-uttar-pradesh
- Kyoto protocol crediting period is already over PO is requested to clarify the followings (a) Confirm this initiative (S+) are beyond CSR compliance mandated under Companies act. (b) These will be organized once on regular basis.
- PO should justify that there policies in place and initiative taken by PO to promote women employment.

PO should justify the SDG claim for long term employment creation considering the capacity of project

Project Owner's response	**Date:** 16/12/2023

- The project activity supplies power only to the Uttar Pradesh state grid. The details are given in the section A.1 of the revised PSF.
- The average power generation from the project activity is 216,284 MWh/Annum (without degradation factor) and 209,712 MWh as per the actual scenario with the actual PLF determined by the plant, that is worked based on actual PLF of 24.69% PV Syst report) with 0.70% degradation factor from 2 nd year onwards and found more conservative emissions are obtained from the project activity when compared with the power generation as mentioned in the website, that is around 221.26 million units. The same is included in the revised PSF.
- The wrong sentence on the Kyoto-protocol is removed in the revised PSF.
- The SDG -3on woman employment and SDG -5 is removed as it is in compliance with the CSR initiatives.

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 12/02/2024

- Detail's under section A.1 of the updated PSF has now been revised which is further checked and verified by the assessment team & found in-line with signed Power Purchase Agreement between Project Owner and State DISCOM. Thus, conclude that electricity supply to regional state grid which is further connected to national grid. Observation is closed.
- Response not inline with details provided under updated PSF. **OPEN**
- Statement pertaining to Kyoto Protocol has now been removed from the PSF, further checked and verified by the GCC Verifier & found acceptable. Observation is closed.
- SDG 3 and SDG 5 has now been removed from the project submission report accordingly details has now been updated under the PSF report. Further, GCC Verifier has checked & found the details related to women employment and long-term employment has been updated under section B.7.1 and section E.2., which is acceptable. Observation is closed.

Hence, CL remains OPEN

Project Owner's response	**Date:** 14/02/2024

2.PO wants to clarify in ER and IRR sheet the electricity generation has been calculated based on the PLF that is available at the time of decision making. Electricity generation data that is given in the web portal is on 17 January 2022, which is after the commissioning. So may be there are chances that the data that is available on web portal would have estimated based on the actual generation.

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 15/02/2024

- Justification provided for the estimated electricity generation found to be acceptable which is further checked and verified by the GCC Verifier & found acceptable.

Hence, CL is closed now

CL ID	06	Section no.	D.2	Date: 25/09/2023
Description of CL				
Under section A.1 of the PSF: 1. As per project level SDGs indicated under Section A.1 of PSF, PO is requested to clarify the followings: a) confirm this initiative are beyond CSR compliance mandated under Companies act. Refer comment in Section F of PSF also. b) Generation data observed to be inconsistent in PSF and ER spreadsheet 2. PO should justify the SDG claim for long term employment creation considering the capacity of project. Corrections has be made in Section F also.				
Project Owner's response				**Date:** 16/12/2023
1. SDG-3 and 5 is removed by the PO in the revised PSF 2. This section has been revised in the PSF and The details are given in the section A.1 and B.7.1 of the revised PSF				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 12/02/2024
1. Under section A.1 (a) SDG 3 and SDG 5 has now been removed from the project submission report accordingly details has now been updated under the PSF report. Further, GCC Verifier has checked & found acceptable. (b) Generation data has now been made consistent throughout the PSF and ER spreadsheet which is verified by the GCC Verifier and found acceptable. (b) Long-term employment and their monitoring plan has now been updated under section B.7.1 and section E.2., which is checked and found acceptable to GCC verifier. **Hence, CL is Closed.**				

CL ID	07	Section no.	D.3.1	Date: 25/09/2023
Description of CL				
1. In section B.2, justification about how bundling requirement as mentioned in section 6 of GCC clarification is met. 2. As per Section B.2 of the PSF, project is supplying electricity to dedicated consumer. Kindly clarify how ACM0002, methodology applicable in light of Meth clarification 297 https://cdm.unfccc.int/UserManagement/FileStorage/FO0XP8572QKYDIGLZ63VBNU1EHCSM4				
Project Owner's response				**Date:** 16/12/2023
1. Now GCC Clarification no 01 is included in the PSF under section B.2 2. The project activity is electricity supply to the Grid and the same is included in the revised PSF under section B.2				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 12/02/2024
1. Justification and application for applying GCC Clarification no 1, version 1.3 has now been incorporated, further checked and verified by the assessment team and found inline with the bundling requirement mentioned under section 4 of the clarification. Thus, observation is closed. 2. Statement has been modified, is further checked and verified by the assessment team & found in-line with signed Power Purchase Agreement between Project Owner and State DISCOM. Thus, conclude that electricity supply to regional state grid which is further connected to national grid not to dedicated consumer. Thus, observation is closed. **Hence, CL is Closed now**				

CL ID	08	Section no.	D.3.4	Date: 25/09/2023
Description of CL				

Under section B.4 of the PSF: • How it has been concluded that the new sources will be thermal generation? This is not in line with baseline scenario defined in applied version of the methodology. • Please justify if the project is adding additional capacity and not greenfield plant.
Project Owner's response **Date:** 16/12/2023
1. Now section B.5 has been revised and baseline scenario in line with applied version of the methodology. 2.Section B.5 has been revised and the Project activity is a new –Greenfield installation and not a capacity addition.
Documentation provided by Project Owner
GCC Project Verifier assessment **Date:** 12/02/2024
Under section B.4 of updated PSF: • Observation pertaining to Section B.4, Further corrective action required. OPEN • Same as above. OPEN. **Thus, observation remains OPEN**
Project Owner's response **Date:** 14/02/2024
1. Now section B.4 has been revised and baseline scenario in line with applied version of the methodology 2. Section B.4 has been revised and the Project activity is a new –Greenfield installation and not a capacity addition.
Documentation provided by Project Owner
GCC Project Verifier assessment **Date:** 15/02/2024
1. Justification provided by project owner is found to be acceptable and found in-line with para 24 of applied methodology, version 21.0. Thus, observation is closed now. 2. Statement has now been re-structured in line with the requirement of baseline scenario, and mentioned as Greenfield New Project Plant, further checked and verified by the GCC Verifier & found acceptable. **Hence, CAR is Closed**

CL ID	09	**Section no.**	D.3.5	**Date:** 25/09/2023
Description of CL				
Under section B.5 of the PSF: • How it has been justified that the value in Nov 2018 DPR is still relevant in November 2019. • Loan is applied after the project commissioning. Justification required along with supportive. • Why lending rate of year 2018 is considered when the loan is applied in 2022 as per information encapsulated under section B.5 of the project. • Why in excel sheet loan and interest is considered for March 2021 while loan is applied in March 2022.				
Project Owner's response				**Date:** 16/12/2023

1. At the point of taking a decision to restart implementation of a project as a CDM project activity, the key issue of interest to an investor is the costs and revenues including the incentives from the CDM accruing from continuation of the investment."
   Hence the project activity has considered all the parameters from the DPR dated February 2019.

2. Yes, the loan is applied after the project commissioning. As per the project owner, the loan can be availed in two methods, before commissioning and another is through, the utilization of equity funds and then using the loan component. The PO has followed approach two in the project investment decision making.
3. As per paragraph 16 of investment analysis, tool 27, "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 return on equity is calculated as per the rationale from point no 11, "At the point of taking a decision to restart implementation of a project as a CDM project activity, the key issue of interest to an investor is the costs and revenues including the incentives from the CDM accruing from continuation of the investment. "Hence the project activity has considered all the parameters from the DPR dated February 2019 and the long –term CPI inflation rate for India is considered from the RBI, for 5 years period from the RBI document. The return on equity benchmark for the decision-making time(post tax equity IRR) is 4.0% for 5 years39,with the RBI, the central bank of decision making in India projects a 5 year inflation forecast for the Indian condition, the benchmark arrived to be around 14.16%.

4. The Investment analysis is considered with assumptive values, during decision making-time and hence March 2021 is the assumptive one.

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 12/02/2024

1. **Not Acceptable**, kindly revise the response as current project is GCC Project activity. Also, elaborate why DPR 2018 is framed and for which purpose. OPEN.

2. Justification provided by the Project Owner found acceptable, further incorporated information has been checked with available public domain (https://www.investopedia.com/ask/answers/042215/what-are-benefits-company-using-equity-financing-vs-debt-financing.asp) for types project financing in India. Thus, observation is closed.

3. PO shall revise the response and interpret transparently in-line with the requirement of para 16. Also, clarify why inflation rate for the year 2016 to 2021 has been taken which prior to the Investment decision. OPEN

4. As per decision making document (signed power purchase agreement), the decisión date of 12/02/2019, then how March 2021 value is the assumptive. Kindly revsie the response clearly as per the information incorporated under the PSF and IRR spreadsheet. Thus, observation is OPEN.

Hence, CL remains OPEN

Project Owner's response	**Date:** 14/02/2024

[39] https://www.rbi.org.in/scripts/FS_Overview.aspx?fn=2752

1.DPR dated 14/11/2018 was used for the bid submission and at the time of investment decision, DPR dated 01/02/2019 was available to the PO. So, there is not a significant gap between these two dates, Therefore, the same has been considered for the investment analysis.

3.PO wants to clarify that PO has opted the Targeted Inflation Rate as per Para 16. Kindly refer 'heading The Monetary Policy Framework' in Reserve Bank of India - Function Wise Monetary (rbi.org.in) which describes "The Central Government, in consultation with the RBI, determines the inflation target in terms of the Consumer Price Index (CPI).Consumer Price Index (CPI) inflation as the target for the period from August 5, 2016, to March 31, 2021 (Long Term Target Inflation forecast for India) the Central Government retained the inflation target and the tolerance band for the next 5-year period – April 1, 2021 to March 31, 2026.

4. PO wants to clarify that IRR sheet is based on the assumptions (for parameters) that is available at the time of decision making, So, at the time of decision making PO has estimated the commissioning and based on the commissioning, Revenue starts and PO is able to repay the Loan Amount. So based on the Commissioning, loan repayment starts. Hence both the dates are assumptions. In the other hand PO has applied the Actual loan on March 2022, which can not be match with the IRR sheet.

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 15/02/2024

1. Justification provided by the project owner is found acceptable, both reports (DPR) prepared by tata power solar systems limited which is wholly- owned subsidiary of Tata Power Renewable Energy Limited (TPREL) which has been checked by the GCC Verifier and found that PPA prepared after receiving LoA (letter of award) in 01/02/2019 which is also applicable in the same financial year 2018-2019 in which investment decision (date of signing PPA) has been taken. Thus, applied values for investment analysis are found appropriate. **Thus, observation is closed**.

3. Justification provided by the project owner has now been accepted which is further checked by the GCC Verifier and found that under section 45ZA of RBI ACT, 1934 has been amended and concluded that "On March 31, 2021, the Central Government retained the inflation target and the tolerance band for the next 5-year period – April 1, 2021 to March 31, 2026 which is 4 % for the since transition from August 5, 2016 to March 31, 2021 (https://www.rbi.org.in/scripts/FS_Overview.aspx?fn=2752)_RBI Monetary Policy.

4. Justification provided by the project owner has been checked and found acceptable to the GCC verifier and Thus, **observation is closed now.**

Hence, CL is Closed now.

CL ID	10	**Section no.**	D.3.5	**Date:** 25/09/2023

Description of CL

GCC Verifier should clarify why the electricity generation figure used for investment analysis is different than the value available on company website.
https://www.tatapower.com/media/PressReleaseDetails/1910/tata-power-renewables-successfully-commissions-100-mw-solar-pv-projects-in-uttar-pradesh

Project Owner's response	**Date:** 16/12/2023

The average power generation from the project activity is 216,284 MWh/Annum (without degradation factor) and 209,712 MWh as per the actual scenario with the actual PLF determined by the plant, that is worked based on actual PLF of 24.69% PV Syst report) with 0.70% degradation factor from 2 nd year onwards and found more conservative emissions are obtained from the project activity when compared with the power generation as mentioned in the website, that is around 221.26 million units. The same is included in the revised PSF.

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 12/02/2024

Response not inline with details provided under updated PSF. **OPEN**

Hence, CL remains OPEN

Project Owner's response	**Date:** 14/02/2024
PO wants to clarify in ER and IRR sheet the electricity generation has been calculated based on the PLF that is available at the time of decision making. Electricity generation data that is given in the web portal is on 17 January 2022, which is after the commissioning. So maybe there are chances that the data that is available on web portal would have estimated based on the actual generation.	
Documentation provided by Project Owner	
GCC Project Verifier assessment	**Date:** 15/02/2024
• Justification provided for the estimated electricity generation found to be acceptable which is further checked and verified by the GCC Verifier & found acceptable. **Hence, CL is closed now**	

CL ID	11	**Section no.**	D.12	**Date:** 25/09/2023
Description of CL				
• For SDG 3: PO is requested to clarify the followings: a) Confirm these initiative are beyond CSR compliance mandated under Companies act. b) These will be organized once and on regular basis. • For SDG 5: PO should justify that, there policies in place and initiative taken by PO to promote women employment. • For SDG 8: PO should justify the SDG claim for long term employment creation considering the capacity of project and also PO should justify why there is parity in payment for both the same and how it complies with principles of equal pay for same job. • PO shall justify the claim of SDG 9 as this SDG is for manufacturing industry as indicator for goal 9.4.1 is CO_2 emission per unit of value added measured in terms of GDP or Manufacturing value added.				
Project Owner's response				**Date:** 16/12/2023
• SDG-3 is removed by the PO in the revised PSF • SDG-5 is removed by the PO in the revised PSF • This section has been revised in the PSF and the details are given in the section A.1 and B.7.1 of the revised PSF • SDG-9 is removed by the PO in the revised PSF				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 12/02/2024
• SDG 3 has now been removed from the project submission report accordingly details has now been updated under the PSF report. Further, GCC Verifier has checked & found acceptable. • SDG 5 has now been removed from the project submission report accordingly details has now been updated under the PSF report. Further, GCC Verifier has checked & found acceptable. • SDG 8, information pertaining to long term job has now been revised under section A.1, B.7.1 and Section F. Further, PO has confirmed that at least 2 numbers of permanent employment will be provided during the operation of the project activity and also information has been incorporated associated to "Equal Pay" and requirement of minimum wages which is checked and verified by the GCC Verifier & found acceptable. • SDG 9 has now been removed from the project submission report accordingly details has now been updated under the PSF report. Further, GCC Verifier has checked & found acceptable. **Hence, CL is Closed**				

Table 2. CARs from this Project Verification

CAR ID	01	**Section no.**	D.2	**Date:** 27/10/2022

Description of CAR	
1. Under the cover page following inconsistencies were observed: • Nomenclature (GHG-SS #) as required by GCC Program Definition is missing • Web Link "2" is not working, po requested to provide a valid & Working Link. • Applied methodology is observed to be inconsistent under “CDM Rules” 2. Under section A.1 of PSF, “Purpose and general description of project activity”, PO shall specify average annual electricity generation and associated average annual emission reductions. Further, also incorporates emission reduction value for the entire crediting periods as well. 3. Under section A.2 of PSF, “Location of Project Activity” Pictorial representation of the project location along with MAP is missing, PO shall incorporate the same. 4. Under section A.3 of PSF, the technical details of the equipment are observed to be inconsistent the observations during site visit & details incorporated under the commissioning certificate. Therefore, Project Owner is requested to incorporate correct details into the table are as follows: • Make and wattage of modules installed • No. of installed solar modules with reference to each wattage type. • Total no of Inverter, make of inverter and capacity of each type of inverter installed. • Total no of transformers installed along with their capacity. etc	
Project Owner’s response	**Date:** 18/11/2022
1 Under cover page, • The nomenclature is changed as GHG-SS in the cover page • Web link 2 is revised and submitted with the revised submissions in PSF 4 • The applied methodology is made consistent under CDM tool 2 Average annual electricity generation and average emission reductions along with the total emission reductions are given in the revised PSF. 3 The pictorial representation with map is given in the revised PSF Under locations section A.2. 4 The technical details as per the commissioning certificate is incorporated in the revised PSF for Banda.	
Documentation provided by Project Owner	
PSF Version 2, Revised ER sheet	
GCC Project Verifier assessment	**Date:** 29/11/2022
1. Under the cover page of revised project submission report following information has been checked and verified: • The nomenclature has now been revised as per the applicable GCC guidelines • Web-Link 2 under the footnote of revised PSF is now working. • Applied CDM methodology version 20 is no more valid now, therefore PO’s requested to revise the PSF with latest valid version of methodology. Therefore, this observation is currently open. ***2.*** Under the revised PSF, average annual electricity generation and average emission reductions along with the total emission reduction values are now been incorporated. However, the average annual electricity observed to be inconsistent with Estimated Emission Reduction sheet. Therefore, this observation is currently open. ***3.*** Pictorial representation of the project location along with the MAP is now incorporated under section A.2 of revised PSF. However, uncleared Single Line Diagram are also attached, PO’s requested to remove the same. Observation is currently open. ***4.*** Technical details under section A.3 of Revised PSF is uncleared, PO’s further requested to separate the table for both the sites and remove excess blank tables from the section. Observation is currently open. **Hence, this finding (CAR – 01) is currently open**	
Project Owner’s response	**Date:** 05/12/2022
1. The methodology is changed into Version 21 in the revised PSF version 3 and applicability criteria is detailed as per the VERSION 21. 2. The annual electricity figure is made consistent with the ER sheet in the revised submissions PSF version 3 3. Technical specifications are given in separate table in revised PSF,Version 3.0	
Documentation provided by Project Owner	
Revised PSF version 3 is submitted,	
GCC Project Verifier assessment	**Date:** 11/02/2023

1. Project Submission Form, version 03 now incorporates the latest version of ACM0002, methodology along with latest version of applicable tool of investment analysis version 11. 2. The annual electricity value now revised under the submitted project submission report, version 03 which is further checked and verified by the verification team and found consistent with estimated ER sheet. 3. Technical specifications are now revised and separated under the section A.3 of revised project submission report, version 03. **Hence, finding (CAR-01) is closed now.**

CAR ID	02	**Section no.**	D.3.1	**Date:** 27/10/2022
Description of CAR				
Under section B.1 of PSF, "Reference to methodologies" PO shall incorporate the details of all the applied tools, further correct tool no's along with their references under the footnote were observed to missing. Also, PO shall demonstrate the applicability compliances for all the associated tools under ACM0002, Version 20.				
Project Owner's response				**Date:** 18/11/2022
Reference to Methodologies, the tool list have been revised and submitted in the revised submissions.				
Documentation provided by Project Owner				
PSF Version 2				
GCC Project Verifier assessment				**Date:** 29/11/2022
The tool list's are now updated under the section B.1, "Reference to methodologies" of revised project submission report. However, the applied version of methodologies is no more valid now, Therefore PO's further requested to revise the section and entire report as per the latest version of CDM Methodologies. **Hence, this finding (CAR – 02) is currently open.**				
Project Owner's response				**Date:** 05/12/2022
Methodology is changed into Version 21, ACM0002 in the revised PSF ,Version 3				
Documentation provided by Project Owner				
PSF version 3.0				
GCC Project Verifier assessment				**Date:** 11/02/2023
The latest tool of investment analysis version 11 and ACM0002, methodology, version 21 has now been incorporated under the revised project submission report, submission version 03 which is further checked and verified by the verification team & found acceptable. Therefore, this observation is closed now. **Hence, finding (CAR – 02) is closed now**				

CAR ID	03	**Section no.**	D.3.5	**Date:** 27/10/2022
Description of CAR				
Under section B.5 of PSF, "Demonstration of Additionality" the source of data for "Parameters of IRR Calculation" the degradation value applied for solar modules observed to be missing in submitted DPR. Further, project owner requested to submit "Module Manufacturer product performance warranty certificate" and encapsulate correct source of data for degradation value of solar modules.				
Project Owner's response				**Date:** 18/11/2022
1. The source of input parameter for the IRR calculation is sourced from third party certified Detailed project report. The degradation % is taken from the DPR				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 29/11/2022
The detailed project report (DPR) encapsulating degradation % of solar modules now provided with submitted set of documents. However, "Module Manufacturer product performance warranty certificate" is still missing under the submitted set of documents. **Hence, this finding (CAR – 03) is currently open.**				
Project participant response				**Date:** 05/12/2022
Module manufacture performance warranty certificate of JAA solar is attached with this submission				
Documentation provided by Project Owner				
Module manufacture certificate				
GCC Project Verifier assessment				**Date:** 11/02/2023

The module manufacture warranty certificate of JAA solar along with modules data sheet has now been submitted which is further checked & verified by the verification team & found acceptable. **Hence, finding (CAR – 03) is closed now.**

CAR ID	04	**Section no.**	D.3.6	**Date:** 27/10/2022
Description of CAR				
1. Under section B.6, "Estimation of Emission Reductions" following observations are assessed: - • Sample calculation for baseline emissions and project emission observed to be missing. PO further requested to incorporate the information consistent with applied methodologies ACM0002, version 20. • Applied value for "Electricity generation $EG_{pj,y\ (MWh/yr)}$", observed to be inconsistent with submitted ER sheet. PO requested to make necessary corrections. 2. Under section B.6.2, "Data and Parameters Fixed ex ante" • The reference web link for CEA data source is observed to be missing. PO requested to attach valid working link. And, also requested to incorporate the tables for Operating Margin (OM) and Build Margin (BM) as well.				
Project Owner's response				**Date:** 05/12/2022
1.Under section B.6, sample baseline and Project emissions are included in the revised PSF. The information pertaining to the project activity as per ACM0002, Version 20 is alone included in the section. The EG pj,y is revised as per the ER sheet. 2. The reference for OM, BM, CM is given separately with CEA link in the revised PSF.				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 29/11/2022
1. Sample calculation for baseline emissions and project emissions are still missing from the referred section B.6, PO's further requested to incorporate sample calculation or refer section where it has been calculated. Therefore, this observation is currently open. 2. The latest updated & working CEA data source web-link has now been incorporated under section B.6.2 of revised project submission report. Therefore, this observation is closed now. **Hence, this finding (CAR – 04) is currently open.**				
Project Owner's response				**Date:** 05/12/2022
Sample Baseline calculations are given in the revised PSF, Version 3.0 section B.6 and the PE is 0 for the project activity.				
Documentation provided by Project Owner				
PSF version 3.0				
GCC Project Verifier assessment				**Date:** 11/02/2023
Project submission report, version 03 now incorporates the sample baseline calculation under section B.6 which is further checked and verified by the assessment team. Therefore, this observation is closed now. **Hence, finding (CAR – 04) is closed now.**				

CAR ID	05	**Section no.**	D.3.6	**Date:** 27/10/2022
Description of CAR				
Under section B.7.1, "Data and parameters to be Monitored" PO shall incorporate the details of referenced regulatory guidelines & specific body for calibration of energy meters.				
Project Owner's response				**Date:**18/11/2022
Reference regulatory guidelines for all the monitoring parameter is included in the revised section B.7.1 along with the calibration details are provided in the revised PSF				
Documentation provided by Project Owner				
PSF version 2				
GCC Project Verifier assessment				**Date:** 29/11/2022

Section B.7.1 of revised project submission report now incorporating the details of referenced regulatory guidelines and specific body (i.e state DISCOM) for calibration of energy meters which is further checked and verified by the verification team. **Hence, this finding (CAR – 05) is closed now.**

CAR ID	06	**Section no.**	D.3.7	**Date:** 27/10/2022
Description of CAR				
Under section B.7.4, "Other elements of monitoring plan" PO shall incorporate structure for data monitoring, collection, data archiving and calibration of equipment's for this project activity along with associated team members details and their responsibility with the help of flow diagram.				
Project Owner's response				**Date:** 18/11/2022
1.The data monitoring structure, roles and responsibilities of team, calibration details are given in the revised section B.7.4.				
Documentation provided by Project Owner				
PSF Version 2				
GCC Project Verifier assessment				**Date:** 29/11/2022
Under section B.7.4, of revised project submission report, information encapsulating details regarding data monitoring, collection, data archiving and calibration of equipment's for this project activity are now revised. **Therefore, this finding (CAR – 06) is closed now.**				

CAR ID	07	**Section no.**	D.10	**Date:** 27/10/2022
Description of CAR				
1. Under Section E.1 of PSF "Environmental Safeguards" • For "Solid Waste Pollution from Hazardous Wastes & E-Wastes", PO shall cross check the "Do-No-Harm Risk Assessment" status and incorporate the actual status of the parameter. • For "Solid waste Pollution from end of life products/ equipment", PO shall cross check the "Do-No-Harm Risk Assessment" status and incorporate the actual status of parameter. 2. The revised Environment and Social Safeguards Standard (V3.0), Sustainability Standards (V3.0) and PSF (V4.0) have been adopted and published. Therefore, PO requested to revise the PSF and applicable report sections accordingly.				
Project Owner's response				**Date:** 18/11/2022
1. The Solid waste pollution from E waste/End of life of product/Equipment is monitored at the end-of-life time and it does not cause any harm. The same is revised in the section E1 of the PSF 2. The revised version of PSF (V 4.0) and Social and Environmental Safeguards (V.3) is included in the PSF.				
Documentation provided by Project Owner				
PSF Version 2				
GCC Project Verifier assessment				**Date:** 29/11/2022
1. Section E.1 of revised project submission report, now incorporating the correct details of "Do-No-Harm Risk Assessment" which is further checked and found acceptable. Therefore, this observation is closed now. 2. Revised Project submission report along with latest version of Environment and Social Safeguards Standard (V3.0), Sustainability Standards (V3.0) and PSF (V4.0) has now been submitted. Therefore, this observation is closed now. **Hence, finding (CAR-07) is closed now.**				

CAR ID	08	**Section no.**	D.10 & D.11	**Date:** 27/10/2022
Description of CAR				
The revised Environment and Social Safeguards Standard (V3.0), Sustainability Standards (V3.0) and PSF (V4.0) have been adopted and published. Therefore, PO requested to revise the PSF and applicable report sections accordingly.				
Project Owner's response				**Date:** 18/11/2022
The revised PSF in version 4, and environmental and sustainability standard in Version 3.0 is incorporated in the revised submissions.				
Documentation provided by Project Owner				
PSF Version 2				
GCC Project Verifier assessment				**Date:** 29/11/2022

The revised version of Environment and Social Safeguards (V3.0), Sustainability Standards, (V3.0) has now been incorporated under revised project submission report (V4.0), which is further checked and verified by the verification team therefore, this observation is closed now. **Hence, this finding (CAR – 08) is closed now.**

CAR ID	09	**Section no.**	D.13	**Date:** 27/10/2022
Description of CAR				
Under section A.5 of PSF, Confirmation regarding ACC's from the project shall not be double counted is missing, PO further requested to incorporate the necessary details under this section.				
Project Owner's response				**Date:** 18/11/2022
The declaration that no double counting due to the ACC's are included in the section A.5 of the revised PSF.				
Documentation provided by Project Owner				
PSF Version 2				
GCC Project Verifier assessment				**Date:** 29/11/2022
Confirmation regarding ACC's from the project shall not be double counted is now incorporated under section A.5 of revised project submission report which is further verified by the verification team. **Hence, this finding (CAR – 09) is closed now.**				

Findings during completeness check by GCC

CAR ID	10	**Section no.**	D.2	**Date:** 25/09/2023
Description of CAR				
Under the PSFs cover page: • Please retain the template. B.6, page number etc. • M/s is not included in PO name in GCC portal and LOA. kindly correct • Update this to version 3.1 of the project sustainability standard • Date of signature cannot be before the date of final version of the PSF This is not base-line scenario defined in applied version of the methodology. Kindly review and revise.				
Project Owner's response				**Date:** 16/12/2023
• The table is updated and the changes are made retaining the format in the cover page of the PSF • In line with the LOA, the M/s is removed in the project owner detail in the revised PSF • The version number is updated in revised PSF • Changed the date in the cover page • The baseline scenario is revised as per the methodology applicability for greenfield power plant.				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 12/02/2024
Under the cover page of updated project submission report: • Index has now been revised along with section B.6 , page number further checked and acceptable to GCC Verifier. • Correction made and name observed to be consistent with GCC project web page. • Project sustainability standard, version 3.1 has now been incorporated, further checked and acceptable to GCC Verifier. • Date of signature and date of final version of PSF have been made in-line and consistent, checked and acceptable to GCC Verifier. • Baseline scenario is revised as per para 24, of ACM0002, version 21.0 of applied methodology which is checked and found acceptable to GCC Verifier **Hence, CAR is closed**				

CAR ID	11	**Section no.**	D.2	**Date:** 25/09/2023
Description of CAR				

Under section A.5 of the PSF:

- Demonstrate this (Section) in line with definition of type A2 subtype 1 defined in GCC Clarification no 01 version 1.3 section.
- PO has to incorporate the details for GHG/ non GHG program (I-REC or domestic REC Scheme) consistent with GCC clarification No 01 requirement.

Project Owner's response	**Date:** 16/12/2023

Section A.5 has been revised and incorporate the details like GHG/ non GHG program in the section A.5

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 12/02/2024

Under section A.5 of revised PSF

- Information has now been encapsulated pertaining to definition of type A2 subtype 1 of applied GCC Clarification no 01 version 1.3 section. Further checked and acceptable to GCC verifier.
- Declaration for no double counting and confirmation for the same has now been included under section A.5 of the PSF, which is checked and found acceptable to GCC Verifier

Hence, CAR is Closed.

CAR ID	12	**Section no.**	D.3.1	**Date:** 25/09/2023

Description of CAR

Under section B.2 of the PSF:

- Include GCC Clarification no 01 in section B.2 and justify how bundling requirement as mentioned in section 6 of GCC clarification is met.
- Applicability of all applicable tools are not discussed for e.g. tool 024, tool 27 and tool 05 version 03 as per paragraph 49 of applied methodology $EG_{PJ,y} = EG_{facility}$, and as per paragraph 73 $EG_{facility}$ will be calculated as per tool 05.
- Project activity involves two units of 50 MW each located at two different locations PO should refer GCC Clarification no 01 and explain how project activity is homogenous in nature and why it should not be considered as bundled project activity

Project Owner's response	**Date:** 16/12/2023

1. Now GCC Clarification no 01 is included in the PSF under section B.2
2. The applicability criteria of the relevant tool is mentioned in the revised PSF under section B.2
3. Now GCC Clarification no 01 is included in the PSF under section B.2 and explained the above details in that section.

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 12/02/2024

Under section B.2 of the updated PSF:

- GCC Clarification no 1, version1.3 has now been included and their applicability has been defined for bundling of the projects consistent with requirement of section 4. Thus, observation is closed .
- Applicability of all applicable tools to proposed project activity i.e. Tool 024, Tool 27, Tool 05 version 03, Paragraph 49 of applied methodology, Para 73 of applied Tool 5 has now been demonstrated in section B.5 and other sections updated PSF. Further, checked and found acceptable to GCC Verifier.
- Homogenous nature of the project activity has now been demonstrated with Level 1 requirement of section 4, of applied GCC Clarification No 1, Version 1.3. Thus, observation is closed.

Hence, CAR is Closed.

CAR ID	13	**Section no.**	D.3.3	**Date:** 25/09/2023

Description of CAR

Under section B.3 of the PSF, PO shall review and revise to meet the requirement of paragraph 22 of applied version of the methodology.

Project Owner's response	**Date:** 16/12/2023

Now PO has revised the section B.3 of the PSF and meet the requirement of paragraph 22 of applied version of the methodology.

Documentation provided by Project Owner	
GCC Project Verifier assessment	**Date:** 12/02/2024
Project boundary has now been revised under section B.3 of PSF which is checked and found in line with the requirement of para 22 of applied methodology, ACM0002, version 21.0. Thus, observation is checked and closed. **Hence, CAR is closed.**	

CAR ID	14	**Section no.**	D.3.4	**Date:** 25/09/2023
Description of CAR				
Under section B.4 of the PSF: • In line with requirement of para 63-65 of CDM Project Standard, PO shall demonstrate relevant national and/or sectoral policies, regulations and circumstances shall be taken into account in the establishment of the baseline scenario. • Review the statement (the baseline is coal based thermal generation system in the Indian National grid) and include supporting evidence link for such statement made in PSF. Hence there is more possibility that in the absence, the power will be from fossil fuel-based power plant through National grid. The energy generation ratio during project planning stage and even now for India, shows that the fossil fuel-based power plant shares the major power generation share as it does not involve any capital cost of installation for the project owners. • PO shall explain relevant national and/or sectoral policies and circumstances which are taken into account while determining baseline scenario and include reference and cross reference of the same. And also remove those which are not linked to generation of electricity from section B.4 and B.5 as both				
Project Owner's response				**Date:** 16/12/2023
• Section B.4 has been revised and in line with requirement of para 63-65 of CDM Project Standard. • Now section B.4 has been updated and revised the statement. • Section B.4 has been revised and relevant national and sectoral policies are mentioned in the section B.4 and Section B.5 of the revised PSF.				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 12/02/2024
• PO shall include information in-line with 63-65 of CDM Project Standard, and demonstrate the same (E+ and E- policies). **Thus, Observation is open**. • Statement has now been revised consistent with the requirement of para 24, of ACM0002, Version 21.0 of applied methodology which is checked and found **acceptable to GCC Verifier.** • Relevant national and/or sectoral policies and circumstances which are taken into account while determining baseline scenario has now been encapsulated under section B.4 and B.5 and unnecessary information has now been removed which is checked and found **acceptable to GCC Verifier** **Hence, CAR remains OPEN**				
Project Owner's response				**Date:** 14/02/2024
1.Now in section B.4 included the details for 63-65 of CDM VVS, and demonstrate the (E+ and E- policies) in revised section B.4 in PSF.				
Documentation provided by Project Owner				
1.Revised PSF				
GCC Project Verifier assessment				**Date:** 15/02/2024
• PO has now been demonstrated section B.4 in line with the requirement for E+ and E- policies, as per para 63-65 of CDM project standard version 3.0 and para 81 (a) and (b) of CDM VVS, version 3.0. **Thus, this observation is closed now.** **Hence, CAR is Closed.**				

CAR ID	15	**Section no.**	D.3.5	**Date:** 25/09/2023
Description of CAR				

Under section B.5 of the PSF:

1.Review of paragraph as per applied version of methodology para 24 continuation of current situation is baseline:

- Continuation of the current situation supply of equal amount of electricity by the newly built grid connected power plants. Continuation of the current situation is not considered as a realistic alternative due to increasing electricity demand therefore new power plants should be constructed which includes mainly thermal power plants. Implementation of the project is additional to the baseline scenario which is an alternative 2 above and therefore reduces the emissions.

Project Owner's response	**Date:** 16/12/2023

1. The baseline scenario is revised as per the methodology applicability and the project standard para 64 and 65, following the state policies and conditions in-line with the requirement in the revised PSF under section B.5

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 12/02/2024

- Baseline scenario is revised as per para 24, of ACM0002, version 21.0 of applied methodology which is checked and found acceptable to GCC Verifier and information pertaining to current project activity also demonstrated under section N.5 of the project submission form which is checked and found acceptable to GCC Verifier.

Hence, CAR is Closed.

CAR ID	16	**Section no.**	D.3.5	**Date:** 25/09/2023

Description of CAR

Under section B.5 of the PSF:

1. PO is requested to include chronology of events and weblink of RFP documents and bid results
- when the RFP was floated
- when was the last date of submission for applying in bid
- when the bid was opened and when reverse auctioning took place
- when LOA was issued

2. Chronology of the events provided in Section B.5 are confusing. Kindly revisit and provide the chronology of the events starting taken place.
3. Include reference only as source of input parameter (financial).
4. PO should demonstrate the use of IMF value as targeted inflation for host country is available on RBI website. Kindly review and revise.

Project Owner's response	**Date:** 16/12/2023

1. The revised chronology with bidding details are given in the revised PSF and also provided information for point a,b,c,d.
2- Chronology of the events is revised in the PSF
3- Reference source is detailed in the submission.
4- The IMF value is removed and RBI value is used in the revised PSF.

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 12/02/2024

1. Chronology of event's has now been included in tabularized format along with sequential date and document names. Further, checked and found acceptable to GCC Verifier.
2. Chronology of event's has now been revised sequential manner, checked and verified by the GCC verifier.
3. Source of reference of incorporated financial parameter's has now been included under section B.5. which is checked and found acceptable to GCC Verifier.
4. Inflation rate's reference has now been included as per para 16, requirement of Investment Analysis, Tool 27.0. **Thus, observation is closed now.**

Hence, CAR is Closed.

CAR ID	17	Section no.	D.3.5	Date: 25/09/2023

Description of CAR

Under section B.5 of the PSF:

1. Please provide detailed information on the project origination i.e. project is grid connected or a captive wheeling through the grid.
2. How is tariff is determined before PPA?
3. Under sensitivity analysis, for "Breaching Value Variation", PO has to include justification why such variation in parameter is not feasible. in doing so provide comparison with actual values and comparison with similar projects registered with other GHG program.
4. Elaborate and justify this as project activity is implemented based on competitive bidding from UPNEDA and competitive bidding guidelines issued by MNRE is same for all states, hence PO should justify why state has been considered as geographical state and explain clearly state wise policy difference by comparing state policy with neighbouring states policies.
5. Under Common Practice Analysis, PO has to provide data source based on which N solar value has been arrived.

Project Owner's response **Date:16/12/2023**

1. The project activity is the grid connected power plant and the PPA details are also included in the section A.1 of the PSF.
2. As per Letter of Award which is before PPA.
3. Now detail has been include in the revised PSF under section B.5.
4. The project activity is located in the state Uttar Pradesh in India and the policy applicable for the solar projects is regulated by MNRE because it is a bidding project of MNRE. Therefore, the projects in the geographical area India have been chosen for analysis. Now PO has revised the CPA sheet accordingly and also revised the section B.5.
5. N solar value is provided in the revised CPA sheet and CPA sheet has been submitted along with this submission.

Documentation provided by Project Owner

5.CPA sheet

GCC Project Verifier assessment **Date:** 12/02/2024

1. Project orgination information like bidding details, PPA signing details are now included under section B.5 of the Project submission report which checked and found acceptable to GCC Verifier.

2. Letter of Award along with approval letter from UPNEDA which is based upon the results of E-reverse auction of the project. Further, documents has been checked and found acceptable to GCC Verifier.

3. Breaching value column along with justification for parameters included under sensitivity analysis has now been included under the PSF and submitted IRR spreadsheet as well. Thus, observation is closed.

4. Applicable geographical area has now been revised to host country India, based on tariif guidelines followed by the UPNEDA in line with MNRE and regional state gird's further has been connected to central grid. Further, details has been checked and found acceptable to GCC Verifier.

5. N solar value, has now been revised based on host country India, source of reference weblink has now been included under the footnote and also the details of included plants are added back in project submission report under appendix 10 which is checked and found acceptable to GCC Verifier.

Hence, CAR is Closed.

CAR ID	18	Section no.	D.3.5	Date: 25/09/2023

Description of CAR

Under section B.5 of the PSF:

1. Justification required to incorporate under section B.5 of PSF, why project implemented in parts (50 MW in Banda and 50 MW in Sajahanpur of state Uttar Pradesh).
2. PO shall cross check and confirm the PLF value used for investment analysis is the same value mention in PPA or in PPA minimum CUF value has been provided along with justification.
3. For applied value of O & M and Escalation, PO shall provide details of value provided in CERC regulation as the value used is different than value provided in CERC order.
4. PO shall include details on Working capital, land cost and salvage value has been added back in final year cash inflow or not

Project Owner's response	**Date:** 16/12/2023

1. Now details has been included in the revised PSF under section B.5.
2. The PLF is cross- checked with the PPA and it is not same .
3. The CERC value and the actual value from the O and M cross- checked and it is not same.
4. The details on the equity –IRR calculation is mentioned. the values are added in the cash inflow for the equity IRR calculation ,Refer Tab, "Cash flow cell " of the Excel

Documentation provided by Project Owner

2.PPA and PLF report

GCC Project Verifier assessment	**Date:** 12/02/2024

1. Bidding details including two sites and their signing PPAs details has now been included under section B.5 of the project submission report which is checked and acceptable.
2. PLF value (25.64 %) has been reference from approval letter from UPNEDA which is based in e-auction results, same has been checked and found in-line with para 3 (a) requirement of Annexure 11 for Plant load Factor & found acceptable.
3. Working CERC regulation weblink has now been attached for the O & M escalation at the rate of 5.72 % and also for estimating O & M cost the weblink reference of public domain has now been included which is checked and found acceptable to GCC Verifier.

Hence, CAR is closed.

CAR ID	19	**Section no.**	D.3.5	**Date:** 25/09/2023

Description of CAR

Under section B.5 of the PSF:

PO shall elaborate and justify this as project activity is implemented based on competitive bidding from UPNEDA and competitive bidding guidelines issued by MNRE is same for all states, hence PO should justify why state has been considered as geographical state and explain clearly state wise policy difference by comparing state policy with neighbouring states policies.

Project Owner's response	**Date:** 16/12/2023

- The project activity is located in the state Uttar Pradesh in india and the policy applicable for the solar projects is regulated by MNRE because it is a bidding project of MNRE. Therefore, the projects in the geographical area India have been chosen for analysis. Now PO has revised the CPA sheet accordingly and also revised the section B.5.

Documentation provided by Project Owner

GCC Project Verifier assessment	**Date:** 12/02/2024

Information pertaining to competitive bidding from UPNEDA and bidding guidelines has now been demonstrated under the common practice analysis of section B.5 of project submission report which is checked and found acceptable to GCC Verifier.

Thus, observation is closed now.

CAR ID	20	**Section no.**	D.3.6	**Date:** 25/09/2023

Description of CAR

Under section B.6 of the PSF:

1. Sept. 2022 is mentioned in ER sheet (for CEA Emission Factor, Version 18). Kindly check and rectify the same.

Values are not matching (PSF & ER sheet). Please check and correct.

Project Owner's response	**Date:** 16/12/2023
1.Section B.6 has been revised and value is now consistent with the ER sheet in the revised PSF.	
Documentation provided by Project Owner	
GCC Project Verifier assessment	**Date:** 12/02/2024
Under section B.6 of revised 1. CEA Emission factor has now been revised under the project submission report with same version (V17.0) applicable at the time of PSF submission to GCC. Therefore, pertaining correction under the ER spreadsheet, PSF and IRR sheet has now been provided which is checked and verified by the GCC Verifier and found acceptable. **Hence, CAR is Closed.**	

CAR ID	21	**Section no.**	D.3.7	**Date:** 25/09/2023
Description of CAR				
Under section B.7.1 of the PSF: 1. Monitoring Parameter should be EG facility and calculation of this parameter will be done in line with requirement of tool 05 version 03. Review and revise table as per requirement of tool 05. 2. No performance indicator has been defined for claimed SDG (08) parameter. Correction Required. Under section B.7.2 of the PSF: 1. This section should include only harmful parameter. Corrective action required.				
Project Owner's response				**Date:** 16/12/2023
1. The monitoring Parameter EG facility is done in-line with the requirement of Tool 05, Version 03 2. The performance indicator is mentioned in the section, SDG -08 of the revised PSF 3. The non-harmful Parameter is removed from the revised PSF section B-7-2.				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 12/02/2024
Under section B.7.1 of the updated PSF: 1. Nomenclature has now been revised consistent with para 49 requirement of applied methodology and reference to Tool 5 as per para 73 has now been provided which is checked and found acceptable to the GCC Verifier. 2. Performance indicator 8.5.1 has now been included under the monitoring table of SDG 08, which is checked and found acceptable to the GCC Verifier. Under section B.7.2 of the updated PSF: 1. Justification acceptable as harmless parameter along with pertaining regulatory guidelines has now been included under the monitoring table of the claimed parameters. Thus, observation is closed now. **Hence, CAR is closed.**				

CAR ID	22	**Section no.**	D.8	**Date:** 25/09/2023
Description of CAR				
Compliance required for submitted LoN (Letter of Nomination): 1. All pages of LoN should be signed by Legal owner and focal points appointed by PO. Organisation stamp is observed to be missing from the pages of LoN				
Project Owner's response				**Date:** 16/12/2023
1. The LON is revised and submitted along with this submission.				
Documentation provided by Project Owner				
LON				

GCC Project Verifier assessment	Date: 12/02/2024
1. Updated letter of Nomination dated 16/12/2023 has now been submitted which is checked and found acceptable to the GCC verifier. **Thus, observation is closed now.** **Hence, CAR is Closed.**	

CAR ID	23	Section no.	D.10	Date: 25/09/2023
Description of CAR				
Under section E.1 of the PSF: 1. Parameters are identified as harmless then why it is kept under section B.7.2. Corrective action shall be required along with justification. 2. Under section D & E there is no mention of ESIA. 3. No description of disposal of waste water generated from cleaning of solar panel is not described. 4. Wrong applicable host country regulation has been mentioned for claimed parameters. Corrective action shall be required. 5. Risk Mitigation plan observed to be missing for claimed parameters. Corrective Action required.				
Project Owner's response				**Date:** 16/12/2023
1. Under Section E.1, the harmless parameters are removed in the section B-7-2. 2. ESIA is removed as it is irrelavant. 3. The disposal of waste wáter generated is described in the revised PSF under section E.1 4. The host country regulation is revised in the PSF under section E.1 5. The risk mitigation plan is provided in the revised PSF				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 12/02/2024
1. Section E.1 and pertaining section B.7.2 has now been updated as per Environment and Social Safeguard Standard, Version 3.0 which is checked and found acceptable to the GCC verifier. 2. Reference to ESIA report has now been removed from section D and E same has been checked and found acceptable to GCC Verifier. Thus, observation is closed. 3. Details pertaining waste water generation has now been included, which mentions no waste water generated during cleaning of the solar panels as only sprays of clean water will be used instead of any harmful chemical, thus information has been checked and found acceptable to GCC verifier. 4. Information pertaining to risk mitigation plan has now been included under section E,1 of the PSF, which is checked and found in-line with Environment and Social Safeguard Standard, Version 3.0 & Thus, **acceptable to the GCC verifier.** Hence, CAR is Closed.				

CAR ID	24	Section no.	D.11	Date: 25/09/2023
Description of CAR				
Under section E.2 of the PSF: 1. For monitoring parameter (SHS-03), has been mentioned as "Not applicable", which observed to be inconsistent with "Appendix 1" of GCC standard requirement. Corrective Action Shall be Required. For monitoring parameter (SHS-08), scoring is not done as per the Appendix 1 requirement of GCC standard for social safeguard.				
Project Owner's response				**Date:** 16/12/2023
1. SHS-03 is revised in section E.2 and SHS-08 now is scored in the revised PSF.				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:** 12/02/2024
1. Monitoring details for parameter SHS-03 and SHS-08 has now been included under section E.2 of the updated PSF and in section B.7, which is checked and found acceptable to the GCC verifier. **Hence, CAR is Closed**.				

CAR ID	25	Section no.	D.12	Date: 25/09/2023
Description of CAR				

Under section F of the PSF: 1. PO shall demonstrate that these initiatives taken by PO are beyond legal compliances of CSR under companies act (For SDG 03). Information for employment data provided for SDG 05, not consistently provided throughout the PSF, PO should also clarify how this is beyond legal requirement and business as usual scenario.
Project Owner's response **Date:** 16/12/2023
1. The SDG -03 and SDG-05 is removed from the revised PSF.
Documentation provided by Project Owner
GCC Project Verifier assessment **Date:** 12/02/2024
Section F of the PSF: SDG 3 and SDG 5 has now been removed from section F and other parts of the project submission report same has been checked and found acceptable to GCC Verifier, Thus, observation is closed now. **Hence, CAR is closed.**

Table 1. FAR from this verification

FAR ID	01	**Section No.**	D.7, D.13, D.14	**Date:** 29/11/2022
Description of FAR				
Project Owners shall demonstrate the compliance to CORSIA requirements for the credits claimed beyond 31 December 2020 with respect to double counting and HCLOA requirements and also future CORSIA requirements applicable time to time for the project activity. The ER verifier should certify CORSIA LABEL (C+) till 31 Dec 2020. PO needs to submit host country letter of authorization for the ACC issuances after 31st December 2020. Once the Host Country Authorization is provided later, this can be verified in first or subsequent verifications.				
Project Owner's response				**Date:** 05/12/2022
The HCA will be provided during subsequent verifications				
Documentation provided by project participant				
-				
DOE assessment				**Date:** DD/MM/YYYY
-				

Appendix 5. Environmental Safeguards assessment

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**								**Project Owner's Conclusion**		**GCC Project Verifier's Conclusion** **(To be included in Project Verification Report only**
		Description of Impact *(positive or negative)*	**Legal/ voluntary corporate requirement / regulatory/ voluntary corporate threshold Limits**	**Do-No-Harm Risk Assessment (choose which ever is applicable)**			**Risk Mitigation Action Plans for aspects marked as Harmful**		**Performance indicator for monitoring of impact**	***Ex-ante* scoring of environmental impact**	***Explanation of the Conclusion***	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational Controls**	**Program of Risk Management Actions**	**Monitoring parameter and frequency of monitoring**	**Ex- Ante scoring of the environmental impact (as per scoring matrix Appendix -02)**	**Ex- Ante description and justification/explanation of the scoring of the environmental impact**	**Verification Process**
Environmental Aspects on the identified categories[40] indicated below.	*Indicators for environmental impacts*	*Describe and identify anticipated and actual significant environmental impacts, both positive and negative from all sources (stationary and mobile) during normal and abnormal/emergency conditions, that may result from the construction and operations of the Project Activity, within and outside the project boundary, over which the Project Owner(s) has/have control.*	*Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified risks of environmental impacts.*	*If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If environmental impacts exist but are expected to be in compliance with applicable national regulatory /stricter voluntary corporate requirements and will be within legal/ voluntary corporate limits by way of plant design and operating principles,*	*If negative environmental impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to*	*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*	*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*	*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*	*-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.*

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

					then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as ***Harmless*** */If the project has a positive impact on the environment mark it as "harmless" as well.*	*cause harm (may be un-safe) and shall be indicated as* ***Harmful***	*legal/regulatory requirements or industry best practice or stricter voluntary corporate requirements*	*or eliminate the risk of impacts that have been identified as* ***Harmful****.*	*the data source.*			
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 13 (e) (ii)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 22*		*Paragraph 24 and Paragraph 26 (a) (i)*
Environment - *Air*	*SO_x emissions (EA01)*	The solar power project does not cause any SOx emissions in the project scenario. (Positive impact)	Air (Prevention & Control of Pollution) Act 1981[41]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	In the baseline scenario (grid) some of the fossil fuel power plants may have emitted SOx emissions, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	Not Applicable
	NO_x emissions (EA02)	The solar power project does not cause any NOx emissions in the project scenario. (Positive impact)	Air (Prevention & Control of Pollution) Act 1981[42]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	In the baseline scenario (grid) some of the fossil fuel power plants may have emitted NOx emissions, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	Not Applicable

[41] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf
[42] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf

	CO_2 emissions (EA03)	In absence of the project activity the stated amount of generated electricity would be generated by the operation of grid - connected power plants which emits CO_2 emissions due to use of fossil fuel. Project activity utilizes Solar energy which doesn't releases any CO_2 emissions from the operation of the plant. (Positive impact)	The baseline activity generates CO_2 emission and the anticipate emissions will be accordance with the Air (Prevention & Control of Pollution) Act 1981 [43] stipulates thresholds for both ambient air quality as well as stack emissions.	-	Harmless- as no emissions occur in the project scenario wrt baseline scenario and therefore is not expected to or does not cause any harm.	Not Applicable	Not Applicable	Not Applicable	The generated electricity by the project activity will be continuously measured and the related CO_2 emission reduction will be calculated according to the underlying methodology ACM0002 version 21. Refer PSF section B.7.1	+1	CO_2 emissions from the grid connected power plants is expressed as grid emission factor, i.e. tCO_2/MWh of generated grid electricity, due to fossil fuel-based grid power plants. Therefore, the non - fossil fuel, zero emission - generated electricity by the project activity will substitute the grid electricity and related CO_2 emissions, i.e., CO_2 emission reduction = generated electricity by the project activity x grid emission factor. Therefore, this parameter is scored.	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 B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.
	CO emissions (EA04)	The solar power project does not cause any CO emissions in the project scenario. (Positive impact)	Air (Prevention & Control of Pollution) Act 1981[44]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	In the baseline scenario (grid) some of the fossil fuel power plants may have emitted CO emissions, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	Not Applicable
	Suspended particulate matter (SPM) emissions (EA05)	The solar power project does not cause any SPM emissions in the project scenario. (Positive impact)	Air (Prevention & Control of Pollution) Act 1981[45]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not applicable	In the baseline scenario (grid) some of the fossil fuel power plants may have emitted SPM emissions, on which data is not available and can't be quantified and therefore the emission reductions	Not Applicable

[43] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf
[44] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf
[45] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf

											cannot be quantified and therefore this parameter will not be scored.	
	Fly ash generation (EA06)	The solar power project does not cause any Fly ash emissions in the project scenario. (Positive aspect)	Air (Prevention & Control of Pollution) Act 1981[46]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	In the baseline scenario (grid) some of the fossil fuel power plants may have emitted fly ash emissions, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	Not Applicable
	Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)	The solar power project does not cause any VOC emissions in the project scenario. (Positive impact)	Air (Prevention & Control of Pollution) Act 1981[47]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	In the baseline scenario (grid) some of the fossil fuel power plants may have emitted VOC emissions, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	Not Applicable
	Odor (EA08)	The solar power project does not cause any odor in the project scenario. (Positive impact)	Air (Prevention & Control of Pollution) Act 1981[48]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	In the baseline scenario (grid) some of the fossil fuel power plants may have Odor, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	Not Applicable

[46] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf
[47] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf
[48] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf

	Noise Pollution (EA09)	The solar power project does not cause any noise pollution in the project scenario. (Positive impact)	Noise (Regulation and Control) Rules 2000 amended in 2010)[49]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	In the baseline scenario (grid) some of the fossil fuel power plants may have caused Noise pollution, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	Not Applicable
	Others (EA10)	The solar power project does not cause any other emissions in the project scenario. (Positive impact)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Add more rows if required	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Environment - *Land*	*Solid waste Pollution from Plastics (EL-01)*	Not Applicable	Plastic Waste (Management and Handling) Rules, 2016[50]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	No significant plastic waste is expected from the project activity during operational phase Hence, this parameter will not be scored.	Not Applicable
	Solid waste Pollution from Hazardous wastes (EL02)	Project anticipates generating hazardous waste like transformer oil disposal at the end of lifetime. (Negative impact)	Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016[51]	Not applicable as Project owner will dispose the hazardous waste through recycling through the licensed hazardous waste vendor bound by law	Harmless	Not Applicable	The Project owner will follow and implement the national rules formulated by CPCB to ascertain best practice prevailing in the industrial practices	Not applicable	Hazardous waste quantity generated and disposed will be continuously and monitored and recorded in the hazardous waste with register annual monitoring. Refer B.7.2	+1	The project owner undertakes to manage the hazardous waste in an appropriate manner and in compliance to the prevailing laws and regulations. As per MoEFCC notification dated 01.03.2019 (G.S.R. 178(E) the Occupier (developer) is not required to obtain authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Amendment, Rules,	The Transformer oil or any other hazardous waste will be disposed as per applicable laws and regulations in the host country. Hence, there is no impact consideration for the project activity however to ensure to compliance of the laws and regulations the project owner monitored the same through-out the crediting period by means of records of oil disposed /replaced from the project activity. The monitoring plan provided is provided in section B.7.2 is

[49] Noise (Regulation and Control) Rules 2000
[50] https://cpcb.nic.in/rules-4/
[51] https://cpcb.nic.in/rules/

											2019 to be sent back to the manufacture or an authorized recycler but as a voluntary initiative in order to meet the compliances, it is being monitored by the project owner	appropriate and acceptable to the project verification team.
	Solid waste Pollution from Bio-medical wastes (EL03)	Not Applicable	Bio-medical Waste Management Rules, 2016[52]	Not Applicable	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable.	Not Applicable.	No significant bio-medical waste will be generated from the project activity. Hence, this parameter will not be scored.	Not Applicable
	Solid waste Pollution from E-wastes (EL04)	E-Waste shall be generated in the form of damaged electronic and communication equipment; computer accessories and any other electronic components (eg. Cables, electronics cards etc.) being used in the operation of the project activity.	E-waste (Management and Handling) Rules 2016 [53] amendment 2018[54]	Not Applicable	Harmless	Not Applicable.	Records all electrical & electronics waste of projects sites and filling of return.	Project Owner is esponsible o maintain ecords and filling of returns as per applicable law and as stated by Tata Power Renewable Energy Limited.	Quantity of E-waste discarded at the end of life time will be monitored and recorded.	+1	Project Owner is responsible to maintain records of returned equipment's as per applicable law and have no significant impact. Therefore, this parameter will not be scored	The e waste generated from the Project activity will be disposed as per prevailing laws and regulations applicable in the host country. however, monitoring plan is provided in section B.7.2 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)	The project does not deploy batteries for storage. there are few batteries are used in control room and for the standby power used during the project lifetime.	Batteries (Management and Handling) Rules, 2001[55] and 2022 & amendments	Not applicable.	Harmless.	NA	Not Applicable	Not Applicable	Not Applicable.	+1	This project does not have any battery storage facility to store the generated power. However, there are few batteries are used to start the inverters and for the standby power used during the project lifetime. The parameter monitored will be as Quantity of battery waste generated and disposed. This will be continuously monitored and made available annually during the	The e waste generated from the Project activity will be disposed as per prevailing laws and regulations applicable in the host country. Monitoring plan is provided in section B.7.2 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.

[52] https://cpcb.nic.in/rules-3/
[53] https://greene.gov.in/wp-content/uploads/2018/01/EWM-Rules-2016-english-23.03.2016.pdf
[54] https://tspcb.cgg.gov.in/GOs/E-Waste%20(Management)%20Amendment%20Rules%202018.pdf
[55] https://cpcb.nic.in/batteries-rules-2001/

											verification. Please refer to the section B.7.2.	
	Solid waste Pollution from end-of-life products/ equipment (EL06)	The project activity may create solid waste from end-of-life products/ equipment. Project activity may result in the waste from the panels and other scrap products at the end of its lifetime. (Negative but monitored)	Solid waste management rules, 2018[56]	Not Applicable	Harmless	Not Applicable	Not Applicable	Not Applicable	Quantity of waste discarded at the end-of-life time will be monitored and recorded by the project owner. Refer B.7.2	+1	Lifetime of the project activity is 25 years. Project Owner will collect, store and dispose the equipment's in compliance to the Solid Waste Management Rules, 2018	Project owner provided mitigation plan to reduce the risk is not likely to cause any harm to the environment The appropriate monitoring plan has been put in place to monitor the risks identified due to the implementation of the project activity This will be monitored as per monitoring plan in the PSF section B.7. 2 and assessment of the same is provided section D.3.7 of the Project Verification Report.
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	land use change (change from cropland /forest land to project land) (EL08)	Land use change of the project site may have negative impact if the land was a forestry or agricultural land previously. (Negative impact)	Uttar Pradesh Solar Energy Policy 2022[57]	Not Applicable	Harmless	No Action Required	Not Applicable	Not Applicable	The conversion of the land use will be monitored once in a lifetime of the project based on the land use change application letter and land lease documents. Refer B.7.2.	+1	The project activity is implemented on 2 sites, Banda and Prayagraj. Project activity was installed on barren land at Prayagraj and on agriculture land at Banda. Project owner has applied for the land use change for Banda site. The Uttar Pradesh Solar Energy Policy 2022 allowed to install the renewable energy project on the private agriculture land. Therefore, the	Verification team assessed that impact on the land use due to the project operation is reversible and post – decommissioning land shall be reverted to its state confirmed at onsite visit and interviews Permanently occupied land can be fully recovered after the demolition of the project activity. There will be no significant impact on land use change which is applied for Banda site as per regulation "Uttar Pradesh Solar Energy

[56] https://cpcb.nic.in/uploads/MSW/SWM_2016.pdf
[57] https://www.upneda.org.in/MediaGallery/Uttar_Pradesh_Solar_Energy_Policy2022_English_.pdf

											parameter is assessed to be harmless however, the conversion of the land use will be monitored once in a lifetime of the project based on the land use change application letter and land lease documents. Therefore, the parameter will be scored.	Policy 2022", which allows installation of renewable plant on private agricultural land considering that the area was already anthropized. Further, monitoring details discussed 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.
	Others (EL09)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Add more rows if required	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Environment - *Water*	*Reliability/ accessibility of water supply (EW01)*	Depletion of Water resources and Water contamination	The Water (Prevention & Control of Pollution) Act 1974[58]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	During construction phase, mitigation measures are implemented prevent the depletion of Regular inspection for identification of water leakages and preventing wastage of water from water supply tankers is necessary for efficient utilization of water; Recycling/reusing to the extent possible; In case of accidental/un-intended spillage, the contaminated soil will be immediately collected and stored as hazardous waste The amount of water required for module cleaning will be in limited quantity and also the wastage of water will be avoided. Thus, there will be no negative impact of water consumption in	Not Applicable

[58] https://cpcb.nic.in/water-pollution/

	Water Consumption 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.	Permission for abstraction of Ground water under Environmental (Protection) Act 1986[59]	Not Applicable	Harmless	No Action Required	Not Applicable	The lifetime of the project activity is 25 years. The project Owner will not such a Ground water compliance Ground water under Environmental (Protection) Act 1986	Currently, waster requirement is met through the water tankers from the authorized vendors and there is no groundwater used in the project activity. Records will be maintained for the ground water if used in future.	+1	No ground water will be consumed in all sites of the project activity & necessary permission to be obtained from concerned local authority in case use ground water in future and the same has been monitored. Therefore, the parameter has been scored.	Significant amount of water might be used for cleaning the solar panels. Therefore, the monitoring of this parameter will be done as per section B.7.2 of PSF and section D.3.7 of project verification report.
	Generation of wastewater (EW03)	The project activity uses sprays to clean the SPV cells and hence no waste water is generated from plant operation and the quantity of water used will be less and hence not monitored (Positive impact)	The Water (Prevention & Control of Pollution) Act 1974[60]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	The project activity does not create any waste water and the waste water generated through other manual use in plant offices are effectively managed by septic tanks and soak pits. The waste water generated through the panel washing will be mainly consist of dust which will be soaked by the ground. However, in the baseline scenario (grid) some of the fossil fuel power	Not Applicable

[59] http://cgwb.gov.in/ground-water-regulation#:~:text=At%20the%20central%20level%2C%20Central,of%20groundwater%20development%20and%20management.

[60] https://cpcb.nic.in/water-pollution/

											plants may have emitted water consumption emissions, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	
	Wastewater discharge without/with insufficient treatment (EW04)	The project activity uses sprays to clean the SPV cells and hence no waste water is generated from plant operation	The Water (Prevention & Control of Pollution) Act 1974[61]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	The project activity does not create any waste water and the waste water generated through other manual use in plant offices are effectively managed by septic tanks and soak pits. The waste water generated through the panel washing will be mainly consist of dust which will be soaked by the ground and does not require wastewater treatment. However, in the baseline scenario (grid) some of the fossil fuel power plants may have emitted water consumption emissions, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.	Not Applicable
	Pollution of Surface,	The project activity uses sprays to clean	The Water	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

[61] https://cpcb.nic.in/water-pollution/

	Ground and/or Bodies of water (EW05)	the SPV cells and hence no surface water pollution is generated from plant operation.	(Prevention & Control of Pollution) Act 1974[62]									
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	The project activity uses sprays to clean the SPV cells and hence does not discharge any harmful toxic wastes	The Water (Prevention & Control of Pollution) Act 1974[63]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Others (EW07)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Add more rows if required	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Environment – *Natural Resources*	*Conserving mineral resources (ENR01)*	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Protecting / enhancing plant life (ENR02)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Protecting/ enhancing species diversity (ENR03)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Protecting/ enhancing forests (ENR04)	Not Applicable	The Forest (Conservation) Act 1980 & 1981[64]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Protecting/ enhancing other depletable natural	This is a renewable energy power project generating power through the solar	National Forest Policy (Revised) 1988[65]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

[62] https://cpcb.nic.in/water-pollution/
[63] https://cpcb.nic.in/water-pollution/
[64] https://prsindia.org/files/bills_acts/bills_parliament/2005/bill53_2007010153_Handbook_of_Forest_Conservation_Act_1980_and_Forest_Conservation_Rules_2003.pdf
[65] https://forest.rajasthan.gov.in/content/raj/forest/en/footernav/forest-resource/forest-in-rajasthan/national-forest-policy.html

	resources (ENR05)	energy which is renewable source of energy and hence there is no impact.										
	Conserving energy (ENR06)	There is no scope for energy conservation since it is a solar power plant generating and supplying electricity through the grid.	Energy Conservation Act 2001[66]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Replacing fossil fuels with renewable sources of energy (ENR07)	The project utilizes renewable solar resource to generate electricity which will replace the electricity generated by fossil fuel plants. (Impact as positive)	Energy Conservation Act 2001 [67] and further ammendments.	Not Applicable	Harmless	No Action Required	Not Applicable	Not Applicable	Continuous measuring for electricity generation will be done	+1	The project is expected to supply an average of 217,781 MWh per year renewable electricity to grid.	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 $EG_{facility,y}$ and assessment of the same is provided section D.3.7 of the Project Verification Report
	Replacing ODS with non-ODS refrigerants ENR08)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Others (ENR09)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Add more rows if required	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Net Score:				+8								

[66] https://beeindia.gov.in/en/the-energy-conservation-amendment-act-2022-no-19-of-2022
[67] https://beeindia.gov.in/en/the-energy-conservation-amendment-act-2022-no-19-of-2022

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. Social Safeguards assessment

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**							**Project Owner's Conclusion**		**GCC project Verifier's Conclusion** **(To be included in Project Verification Report only)**
		Description of Impact (*positive or negative)*	**Legal requirement /Limit, Corporate policies / Industry best practice**	**Do-No-Harm Risk Assessment** **(choose which ever is applicable)**			**Risk Mitigation Action Plans (for aspects marked as Harmful)**	**Performance indicator for monitoring of impact.**	**Ex-ante scoring of environmental impact**	**Explanation of the Conclusion**	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational / Management Controls**	**Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)**	**Ex- Ante scoring of social impact of the project**	**Ex- Ante description and justification/explanation of the scoring of social impact of the project**	**Verification Process** **Will the Project Activity cause any harm?**
Social Aspects on the identified categories[68] indicated below.	*Indicators for social impacts*	*Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all source during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control*	*Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts*	*If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If social impacts exist, but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Harmless****), project having positive impact on society wrt. To the BAU /*	*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*	*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*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source*	*-1* *0* *+1*	*Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/regulatory limits (if any) including basis of conclusion*	*Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful aspects how has the project owner adopted Risk Mitigation Action /*

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

					*baseline scenario must also mark their aspect as **"harmless"***	*cause harm and shall be indicated as **Harmful***	*identified as **Harmful**.*				*management actions plans and policies to mitigate the risks of negative social impacts to levels that are unlikely to cause any harm.* *Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.*
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 23*		*Paragraph 24 and Paragraph 26 (a) (ii)*
Social - *Jobs*	*Long-term jobs (> 10 year) created/ lost (SJ01)*	The project activity generates long term job opportunities during the operation the project activity in both the project sites. (Positive impact)	Host country minimal wage requirements. Regulations on Minimum Wage for Employees working by Labor Contract[69].	Employment generation gives positive impact that is monitored and hence not applicable.	Harmless	Not Applicable	Harmless and therefore no risk mitigation is required	Annual pay slips/declaration from the client can be used to monitor this parameter. Till date 2 no's are permanently employed in both the project activity.	+1	Although there is no mandatory law to generate permanent employment from the project activity, however, project owner has been decided to employ people long term. Therefore this parameter will be scored. Since the project activity is already operational the project activity has already resulted in employability, 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 monitored as per monitoring plan in the PSF section B.7.1 and

[69] https://thukyluat.vn/vb/decree-90-2019-nd-cp-2019-based-minimum-wages-applied-to-employees-under-labour-contracts-68a65.html#VanBanTA

											assessment of the same is provided section D.3.7 of the Project Verification Report
	New short-term jobs (< 1 year) created/ lost (SJ02)	Project has created short term job opportunity which is less than a year to the skilled and unskilled people in the project region during the construction of the project activity through EPC contractor Project has created short term job opportunity which is less than a year to the skilled and unskilled people in the project region during the construction of the project activity through EPCcontractor.	The impact is unlikely to cause any harm.	Not applicable	Harmless This is a positive impact	Not Applicable	Not Applicable	Local employments had been provided during the construction of the project activity. This employment is temporary and provided during the construction of the project activity. Project is already commissioned and in operation. Hence this has been already achieved and need not be monitored further.	0	There is no mandatory law to generate employment from the project activity, however, Project Owner has decided to generate temporary employment in construction phase for local people. Since the employment is temporary and provided during construction phase only, therefore it will not be monitored throughout the crediting period. Therefore, this parameter will not be scored.	No Risk Identified.
	Sources of income generation increased / reduced (SJ03)	The project creates job opportunities for local people.	There is no legal requirement from local authority to create permanent employment from the project activity	Not Applicable	No Action Required	No Action Required	Not Applicable	Not Applicable	0	Employment will be provided to local people wherever possible, However, this parameter will not be scored.	No Risk Identified.
	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04)	Avoiding discrimination while hiring people results in avoiding conflicts between employees and	IFC Performance Standard-2: Labour and	Not Applicable	No Action Required	No Action Required	Not Applicable	Not Applicable	0	The project owner will not make employment decisions based on personal characteristics unrelated to inherent job requirements.	No Risk Identified

the	Working conditions[70]							The project will base the employment relationship on the principle of equal opportunity and fair treatment and will not discriminate with respect to any aspects of the employment relationship. The project will take measures to prevent and address harassment, intimidation, and/or exploitation, especially regarding women. Therefore, this parameter will not be scored.	
a ed ration rough nergy clean does any or the There	In compliance with the EHS policy if require	Not Applicable	Harmless	Not Applicable	Not Applicable	At plant site no harmful gases or chemicals that would negatively affect the surrounding environment or livelihoods.	0	The solar plant site does not release any harmful gases or chemicals that would negatively affect the surrounding environment or livelihoods. As a result, the project owner does not need to consider this parameter as it does not pose any impact.	No Risk Identified
a of zards sites uman or ailure cy	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
owner the the aining	EHS policy of Project Owner	-	Harmless	-	Project owner provided all the	Fatal and non-fatal occupational	+1	The project owner will provide regular safety training to their	The Project owner will provide

		(Negative impact)					on the power station to ensure the security.	Refer section B.7.2.		avoiding accidents at site. The parameter can be measured and quantify yearly therefore is eligible to score.	encouraging to do the work with always with PPE kits for avoiding the accident s at the project site which is assessed as positive. Impacts of the project activity. Monitoring plan is provided in section B.7.2 of the PSF and Section D.3.7 of this report to ensure the compliance of the regulation which will be harmless during entire crediting period of the project activity which is appropriate and acceptable
	Reducing / increasing crime (SHS04)	The project activity is the installation of solar power plant. There is no possibility of crime due to the operation of the project activity.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Reducing / increasing food wastage (SHS05)	The project activity is the installation of solar power plant. There is no possibility of food	The compulsory food waste	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

		wastage due to the project activity	reductio n bill, 2018[71]								
	Reducing / increasing indoor air pollution (SHS06)	This is a renewable energy power generation project through solar power and supplying electricity to the national grid. Hence there is no impact on indoor air pollution	The Air (Prevention & Control of Pollution) Act 1981[72]	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Efficiency of health services (SHS07)	The project activity is the installation of solar power plant. There is no involvement of health services due to the project activity.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Sanitation and waste management (SHS08)	The Project Owner has used Proper Practices for the Sanitation and waste management. (Positive impact)	Hazardous and Other Wastes (Management and Transboundary Movement) Amendment Rules, 2016 and WHO guidelines on Sanitation and Health[73]	Not Applicable	No Action Required	No Action Required	Not Applicable	Sanitation and Waste management Facilities Provided by the Project Owner	0	As per MoEF&CC notification dated 01.03.2019 (G.S.R. 178(E)) the Occupier (developer) is not required to obtain authorization under Hazardous and Other Wastes (Management and Transboundary Movement) Amendment, Rules, 2019 if they are exempted from obtaining consent under Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and	No Risk Identified

[71] http://164.100.47.4/billstexts/RSBillTexts/AsIntroduced/food-E-21619.pdf
[72] https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf
[73] https://iris.who.int/bitstream/handle/10665/274939/9789241514705-eng.pdf?sequence=25

										Control of Pollution) Act, 1981. However, Project Owner should ensure proper 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 Board guidelines. Septic tank and soak pits will be provided onsite for treatment and disposal of sewage, thereby minimizing the impacts of wastewater discharge. Planning of toilets, soak pits and septic tanks, waste collection areas should be away from natural drainage channels. PO abide by the WHO guidelines ensures that the dignity and privacy of women and other worker is maintained through separate and protected provision for Sanitation Facilities during operation phase of the project. The parameter is creating positive impact but can't be measured therefore, score of 0 has been assigned.	
	Other health and safety issues (SHS09)	The project activity is the installation of solar power plant. There is no involvement other health and	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

		safety issues due to the project activity.									
Social - *Education*	*specialized training / education to local personnel (SE01)*	The project owner provides job related training according to the positions	There is no legal requirement from local authority to provide training to local people	Not Applicable	Harmless As the impact is positive in nature	Not Applicable	Not Applicable	Training records/evidence for the training would be maintained by the project owner.	+1	The project Owner will provide regular safety training to their workers about the accident hazards and risk related to specific works and preventive measures for avoiding accidents at site Therefore this parameter will be scored.	The job related training provided to the project personnel are the routine training program for daily operation & maintenance and safety practices to be followed as per industry norms. Monitoring plan is provided in section B.7.1 of the PSF and section D.3.7 of Verification report to ensure the compliance of the regulations which will be harmless during entire crediting period of the project activity which is appropriate and acceptable
	Educational services improved or not (SE02)	The project activity is the installation of solar power plant. There is no involvement educational services due to	EHS policy of Project Owner	Not Applicable	No Action Required	No Action Required	Not Applicable	Not Applicable	0	Project Owner should take initiative for Promotion of education, including special education and employment enhancing vocation skills especially	No risk Identified

		the project activity.								among children, women, elderly and the differently abled and livelihood enhancement projects. This parameter will not be scored.	
	Project-related knowledge dissemination effective or not (SE03)	Project activity transfers knowledge on new renewable energy technology.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Other educational issues (SE03)	The project activity is the installation of solar power plant. There is no involvement other educational issues due to the project activity.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Social - *Welfare*	*Improving/ deteriorating working conditions (SW01)*	The project activity is the installation of solar power plant. There is no possibility of deteriorating working condition due to the project activity.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Community and rural welfare (indigenous people and communities) *(SW02)*	The project activity is the installation of solar power plant which creates positive impact on community and works for rural welfare.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Poverty alleviation (more people above poverty level) (SW03)	The project activity involves the generation of employment which results in poverty alleviation.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

roject olves on of .	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
roject the of plant. no of ue to roject	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
ctivity equal to	National Gender policy for women empowerment 2001[74]	Not Applicable	No Action Required	No Action Required	Not Applicable	Not Applicable	0	Project Owner will take initiative for Promoting gender equality, empowering women, and such other facilities for senior citizens and measures for reducing inequalities faced by socially and economically backward groups etc. Therefore, this parameter will not be scored.	No risk identified
roject the of plant. no of estion roject	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
roject the of plant. no	The Child Labour (Prohibition and	-	Harmless	-	The project owner does not employ children	The project owner does not employ children (below age 14) in any	+1	The project owner does not employ children in any manner that is economically	The monitoring of this parameter is mandatory

	(SW08)	involvement of child labour due to the project activity. (Negative impact)	Regulation) Act, 1986[75]				(below age 14) in any manner.	manner. However, the number of children employed in the project activity will be monitored yearly.		exploitative or is likely to be hazardous or to interfere with the child's education, or to be harmful to the child in any way. National laws related to employment of minors are to be followed. No person under the age of 14 is to be allowed to work on the site according to Indian Child Labour Law. However, the parameter will be measured thus eligible to score.	by Environmental and social Standard. No child labor at site has been observed during the site visit which also confirmed by checking sample from the roster /attendance records available at the site for working personnels. Monitoring details are discussed under section B.7.2 of the PSF and D.3.7 of the Project verification report.
	Minimum wage protection *(human rights) (SW09)*	The project activity is the installation of solar power plant. Employees are paid as per minimum wage rule during the construction and operation phase of the project activity.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Abuse at work place (with specific reference to women and people with special disabilities / challenges)	Avoiding of abuse at workplace ensures safe working	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

[75] https://labour.gov.in/sites/default/files/act_2.pdf

	(human rights) (SW10)	environment for all the workers.									
	Other social welfare issues (SW11)	The project activity is the installation of solar power plant. There is no involvement of other social welfare issues due to the project activity.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Avoidance of human trafficking and forced labour *(human rights)* *(SW12)*	Avoiding of human trafficking and forced labour at workplace ensures safe working environment for all the workers.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs *(human rights)* *(CW13)*	Avoidance of forced eviction results in community welfare.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Provisions of resettlement and human settlement displacement *(human rights)* *(CW14)*	Avoidance of resettlement and human displacement results in community welfare.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Social Inequality	Social inequality in work place effects the employees working at the site.	HR Policy	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Social inequality is strictly avoided as per HR policy of the company. Social inequality in work place effects the employees working at the site. Since the impact is neutral compared to the baseline scenario this parameter will not be scored.	Not Applicable

	Threatened Livelihood	Increased economic and infrastructure activity may leads to increase levels of pollution to air, water, and land, and consume finite resources in a manner that may threaten people and the environment.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	There is no loss or threat to the local livelihood or endangered species or environment due to the implementation of the project activity. Since the impact is neutral compared to the baseline scenario this parameter will not be scored.	Not Applicable
	Communal Harmony	The project activity has several positive impacts such as improving living conditions and promote community involvement via economic development, revenue generation and improved infrastructure	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	The project activity has several positive impacts such as improving living conditions and promote community involvement via economic development, revenue generation and improved infrastructure. Since the impact is neutral compared to the baseline scenario this parameter will not be scored.	Not Applicable
	Add more rows if required										

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

Appendix 7. United Nations Sustainable Development Goals assessment

UN-level SDGs	UN-level Target	Declared Country-level SDG	Defining Project-level SDGs					GCC Project Verifier's Conclusion (To be included in Project Verification Report only)	
			Project-level SDGs	Project-level Targets/Actions		Contribution of Project-level Actions to SDG Targets	Monitoring	Verification Process	Are Goal/ Targets Likely to be Achieved?
Describe UN SDG targets and indicators *See: https://unstats.un.org/sdgs/indicators/indicators-list/*	*Describe the UN-level target(s) and correspo-nding indicator no(s)*	*Has the host country declared the SDG to be a national priority? Indicate Yes or No*	*Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column ofr guidance.*	*Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).*		*Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets*	*Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG indicator and its correspondi ng target, frequency of monitoring and data source*	*Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s).*	*Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or no)*
Goal 1: End poverty in all its forms everywhere	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 3. Ensure healthy lives and	NA	NA	NA	NA	NA	NA	NA	NA	NA

promote well-being for all at all ages									
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 5. Achieve gender equality and empower all women and girls	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 6. Ensure availability and sustainable management of water and sanitation for all	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix. 7.a By 2030, enhance international cooperation to facilitate access to clean energy research	Yes (Voluntary national review of the republic of India on the implementation of the 2030 agenda for sustainable development)[76]	The project activity provides 100 MW installed capacity of renewable energy and will deliver up to 217,781 MWh/y (ex-ante estimation) zero emission electricity annually. Quantity of net electricity supplied to the grid by project activity in year y	From the start of operation onwards the project activity will deliver **217,781** MWh renewable energy per year to the grid to increase the share of renewable energy in the national grid.	the project Activity is expected to achieve the project-level SDG 7.2 from 03/12/2021	The Project activity contributes directly to achieve the SDG target, because the project activity delivers renewable energy, which would otherwise generate by fossil fuel dominated grid connect power plants. Contribute renewable energy share in total grid	The net electricity supplied to the grid by the project activity is continuously monitored through energy meter (main and check meter) installed at the sub-station. The meters remain under the custody of state utility.	This project is renewable solar power project and the installations started operation from 03/12/2021 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 the energy meters installed at the	Yes

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

	and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology. 7.b by 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed					energy consumption		site and included in the monitoring plan in the PSF	

	countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support								
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	**Target 8.5:** By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and	Yes	Average earning of females and male employees engaged in the project and segregated by age and persons with disabilities.	Average earning of the employees will be more than minimum wage requirement as per minimum wage rule of Uttar Pradesh [77] and as amended with time.	At the start of crediting period.	Project creates new employment and generates income for people during operational phase of the project and ensures equal pay for equal work.	Average earning of the employees will be monitored through salary records at the time of each issuance. Refer section B.7.1 for the monitoring parameter.	Project owner operates the plant since 03/12/2021 and complies with targeted SDGs so far, Providing the minimum 2 permanent employment. Also, Sample salary slips has been checked during the site visit and found inline minimum wage requirement of	Yes

77 https://upload.indiacode.nic.in/showfile?actid=AC_UP_88_477_00033_00033_1648191481818&type=rule&filename=up_minimum_wages_rules_1952.pdf

						State Uttar Pradesh[78]	
	NA	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA
	NA	NA	NA	NA	NA	NA	NA

Goal 13. Take urgent action to combat climate change and its impacts	13.2 Integrate climate change measures into national policies, strategies and planning	Yes (same as Goal 7)	Emission reductions achieved per year	202,645 tCO_2	Emission reductions is expected to achieve the project-level SDG 13 from 03/12/2021.	Emission reduction achieved per year	Electricity produced by the renewable generating unit multiplied by an emission factor	This is direct positive impact of the project which will avoid around 202,645 tCO_2 /year. The generated power from the project activity is the clean energy and continuously monitored by the energy meters installed at the site and included in the monitoring plan in the PSF	Yes
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and	NA	NA	NA	NA	NA	NA	NA	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	NA	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY	**Targeted**	**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

Site Visit Photographs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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: o Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC); o Considered and addressed comments raised by the Steering Committee: ➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and ➢ electronic consultations EC01-Round 04 (17.08.2020 – 22.08.2020). ▪ Feedback from the Technical Advisory Board (TAB) of ICAO on GCC submissions for approval under CORSIA[79];
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

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

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