

المجلس العالمي للبصمة الكربونية
GLOBAL CARBON COUNCIL



Project Verification Report

V3.1 - 2020

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COVER PAGE	
Project Verification Report Form (PVR)	
BASIC INFORMATION	
Name of approved GCC Project Verifier / Reference No. (also provide weblink of approved GCC Certificate)	LGAI Technological Center S.A. Certificate No: GCCV009/00 Date of Issue: 06/06/2022 https://www.globalcarboncouncil.com/wp-content/uploads/2022/06/GCCV009-00_LGAI-Appplus_GCC-Verifier-Certificate_06062022.pdf
Type of Accreditation	<input type="checkbox"/> Individual Track ¹ <input checked="" type="checkbox"/> CDM Accreditation <input type="checkbox"/> ISO 14065 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
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+)
Validity of GCC approval of Verifier	06/06/2022 to 05/06/2023
Title, completion date, and Version number of the PSF to which this report applies	30 MW Solar Power Plant by Aurobindo Pharma Limited Version: 04 Dated: - 01/04/2023
Title of the project activity	30 MW Solar Power Plant by Aurobindo Pharma Limited
Project submission reference no. (as provided by GCC Program during GSC)	S00500 https://projects.globalcarboncouncil.com/project/1011
Eligible GCC Project Type² as per the Project Standard (Tick applicable project type)	<input checked="" type="checkbox"/> Type A: <input type="checkbox"/> Type A1 <input checked="" type="checkbox"/> Type A2 (Sub type 1)

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


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

	<input type="checkbox"/> Type B – De-registered CDM Projects: <input type="checkbox"/> Type B1 <input type="checkbox"/> Type ³ B2			
Date of completion of Local stakeholder consultation	S. No	Capacity (MW)	Location	Meeting date
	1	30	Varisam Village, Pydibhimavaram, Ranasthalam Mandal, Srikakulam District. Andhra Pradesh	10/06/2022
Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.	Date of GSC completion: - 24/10/2022 GSC Period: - 10/10/2022 to 24/10/2022 No Comments were received https://www.globalcarboncouncil.com/global-stakeholders-consultation-4/			
Name of Entity requesting verification service <small>(can be Project Owners themselves or any Entity having authorization of Project Owners)</small>	M/s Aurobindo Pharma Limited			
Contact details of the representative of the Entity, requesting verification service <small>(Focal Point assigned for all communications)</small>	Mr. JVN Reddy M/s Aurobindo Pharma Limited Plot No 2, Maithrivihar, Ameerpet, Hyderabad, 500038 Email: jvnreddy@aurobindo.com Tel: +91 9848050898			
Country where project is located	India			
GPS coordinates of the Project site(s)	Latitude (N)		Longitude (E)	
	18.138° N (18° 08' 12.3" N) / 18.1367° N		(83° 38' 53.6 E) / 83.6482° E	
Applied methodologies <small>(approved methodologies of GCC or CDM can be used)</small>	CDM approved consolidated Methodology - ACM0002 (Version 21.0) - Grid-connected electricity generation from renewable sources.			
GHG Sectoral scopes linked to the applied methodologies	GHG-SS # 1 (Energy (renewable/non-renewable sources))			
Project Verification Criteria: Mandatory requirements to be assessed	<input checked="" type="checkbox"/> ISO 14064-2, ISO 14064-3 <input checked="" type="checkbox"/> GCC Rules and Requirements <input checked="" type="checkbox"/> Applicable Approved Methodology			

³ GCC Project Verifier shall conduct Project Verification for all project types except B₂.

	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Applicable Legal requirements /rules of host country <input checked="" type="checkbox"/> National Sustainable Development Criteria (if any) <input checked="" type="checkbox"/> Eligibility of the Project Type <input checked="" type="checkbox"/> Start date of the Project activity <input checked="" type="checkbox"/> Meet applicability conditions in the applied methodology <input checked="" type="checkbox"/> Credible Baseline <input checked="" type="checkbox"/> Additionality <input checked="" type="checkbox"/> Emission Reduction calculations <input checked="" type="checkbox"/> Monitoring Plan <input checked="" type="checkbox"/> No GHG Double Counting <input checked="" type="checkbox"/> Local Stakeholder Consultation Process <input checked="" type="checkbox"/> Global Stakeholder Consultation Process <input checked="" type="checkbox"/> United Nations Sustainable Development Goals (Goal No 13- Climate Change) <input type="checkbox"/> Others (please mention below)
<p>Project Verification Criteria: Optional requirements to be assessed</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Environmental Safeguards Standard and do-no-harm criteria <input checked="" type="checkbox"/> Social Safeguards Standard do-no-harm criteria <input checked="" type="checkbox"/> United Nations Sustainable Development Goals (in additional to SDG 13) <input checked="" type="checkbox"/> CORSIA requirements
<p>Project Verifier’s Confirmation: The <i>GCC Project Verifier</i> has verified the GCC project activity and therefore confirms the following:</p>	<p>The GCC Project Verifier [<i>LGAI Technological Center S.A.</i>], certifies the following with respect to the GCC Project Activity [<i>Title of the GCC Project Activity</i>].</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The Project Owner has correctly described the Project Activity in the Project Submission Form (version <i>04</i>, dated <i>01/04/2023</i>) including the applicability of the approved methodology [<i>CDM approved consolidated Methodology - ACM0002 (Version 21.0) - Grid-connected electricity generation from renewable sources.</i>] 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. <input checked="" type="checkbox"/> The Project Activity is likely to generate GHG emission reductions amounting to the estimated <i>46,395 tCO_{2e}/year</i>, 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. <input checked="" type="checkbox"/> 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: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Environmental No-net-harm Label (E+) <input checked="" type="checkbox"/> Social No-net-harm Label (S+) <input checked="" type="checkbox"/> The Project Activity is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs), complies with the

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	<p>Project Sustainability Standard, and contributes to achieving a total of [06] SDGs, with the following⁴ SDG certification label (SDG⁺):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bronze SDG Label <input type="checkbox"/> Silver SDG Label <input type="checkbox"/> Gold SDG Label <input type="checkbox"/> Platinum SDG Label <input checked="" type="checkbox"/> Diamond SDG Label <p><input checked="" type="checkbox"/> The Project Activity complies with all the applicable GCC rules⁵ and therefore recommends GCC Program to register the Project activity with above mentioned labels.</p>
<p>Project Verification Report, reference number and date of approval</p>	<p>Version 03.0 Date: 24/05/2023</p>
<p>Name of the authorised personnel of GCC Project Verifier and his/her signature with date</p>	<p>Agustín Calle de Miguel  Date: 28/06/2023</p>

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

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

1. PROJECT VERIFICATION REPORT

Section A. Executive summary

M/s Aurobindo Pharma Limited has commissioned LGAI Technological Center S.A. to perform a verification of “30 MW Solar Power Plant by Aurobindo Pharma Limited” (hereafter referred to as the project activity) in Varisam Village, Srikakulam district, Andhra Pradesh, India. This verification report summarizes the findings of the verification of the project, performed based on GCC Project Verification Standard version 3.1. M/s Aurobindo Pharma Limited has set up solar power project at Varisam Village, Srikakulam district, Andhra Pradesh, India with total capacity of 30 MW greenfield solar grid -connected Solar Project activity in Andhra Pradesh. The main purpose of the project activity is to generate electrical energy through sustainable means using solar energy and fed into the Indian grid and power generated is again used for captive consumption purposes in the Pharma unit of the Project owner. This project activity is a large-scale solar power project. The Location of the project with its commissioning date is as below: -

Sr No	SPV Name	Capacity (MW)	Location	Date of Commissioning
1	Aurobindo Pharma Limited	30	Varisam village, Srikakulam district, Andhra Pradesh	24/05/2017

Scope of Verification:

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

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 the GCC project activity meets all relevant and applicable GCC criteria.

Verification Process:

The verification of the project consisted of the following steps:

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

Appointment of the verification team:

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, Applus+ Certification has composed an assessment team in compliance with the Contract Review and Assessment Team appointment rules in the internal Quality Management System of Applus+ Certification as well as in compliance with the applicable requirements in the Accreditation Standard.

The composition of the Assessment Team (Applus+ Certification’s validation team) has been approved by Applus+ Certification during the Contract Review process ensuring that the required skills and capabilities are covered.

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

- Lead Auditor (LA).
- Auditor (A).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training).

The Sectoral Scopes / 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. Pankaj Kumar	LA/TE	Yes	Yes	Yes	Yes
Mr. Deepak Pundlik	A	Yes	Yes	NO	Yes
Mr. Denny Xue	TR	Yes	Yes	Yes	NA

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

Conclusion:

The review of the PSF, supporting documentation and subsequent follow-up actions have provided LGAI Technological Center, S.A. (Applus+ Certification) with sufficient evidence to determine the fulfilment of stated criteria. LGAI Technological Center, S.A. (Applus+ Certification) is of the opinion that the project activity “30 MW Solar Power Plant by Aurobindo Pharma Limited” as described in the final PSF version 04 meets all relevant requirements of GCC and host country (legal requirements for producing power) criteria and has correctly applied the methodology ACM0002, version 21.0. Therefore, the project is being recommended to GCC Operations Team 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	OR	Kumar	Pankaj	True Quality Certification Private Limited	Yes	NO	Yes	Yes
2.	Auditor	OR	Pundlik	Deepak	True Quality Certification Private Limited	Yes	NO	Yes	Yes

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

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

C.2. On-site inspection

Duration of remote-audit: 05/12/2022				
No.	Activity performed on-site	Site location	Date	Team member
1.	Verification team checked the implementation of the project, Baseline emission, and emission reduction calculation, technical description of	Varisam village, Srikakulam district, Andhra Pradesh	05/12/2022	Mr. Pankaj Kumar Mr. Deepak Pundlik

	the project and Onsite Monitoring practice.		
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C.3. Interviews

No.	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Solanki	Mr.Saurabh	Aurobindo Pharma Limited	05/12/2022	Project Implementation status, Project Boundary Methodology, Eligibility criteria Host country Requirements, Monitoring Plan Project activity start date and Crediting period Roles and responsibilities of the project owner Local Stakeholder Consultation Baseline Assumptions Emission reduction calculations Additionality Training to the Monitoring personnel Legal Ownership of the project activity, Double counting of the carbon credits of the project activity E+, S+, SDG+ and CORSIA aspects as per the PSF and GCC requirements	Mr. Pankaj Kumar Mr. Deepak Pundlik
2.	Rao	Mr. Amritesh	Aurobindo Pharma Limited			
3.	Meera	S.	(Consultant) Infinite Environmental Solutions LLP			
4.	Choudhary	R. S	Villager			
5.	Rao	N. Narayana	Villager			

C.4. Sampling approach

The verification team did not apply any sampling approach for the project activity. The site visit was conducted for the implemented project location as mentioned in the PSF.

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

Areas of Project Verification findings	Applicable to Project Types	No. of CL	No. of CAR	No. of FAR
Green House Gas (GHG)				
Identification and Eligibility of project type	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
General description of project activity	A ₁ , A ₂ , B ₁ , B ₂	02	02	-
Application and selection of methodologies and standardized baselines	A ₁ , A ₂ , B ₁ , B ₂	01	-	-
- Application of methodologies and standardized baselines	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
- Deviation from methodology and/or methodological tool	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
- Clarification on applicability of methodology, tool and/or standardized baseline	A ₁ , A ₂ , B ₁ , B ₂		-	-
- Project boundary, sources and GHGs	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
- Baseline scenario	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
- Demonstration of additionality including the Legal Requirements test	A ₁ , A ₂ , B ₁ , B ₂	-	01	
- Estimation of emission reductions or net anthropogenic removals	A ₁ , A ₂ , B ₁ , B ₂	-	-	-

- Monitoring plan	A ₁ , A ₂ , B ₁ , B ₂	-	01	-
Start date, crediting period and duration	A ₁ , A ₂ , B ₁ , B ₂	-	01	-
Environmental impacts	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
Local stakeholder consultation	A ₁ , A ₂ , B ₁	-	01	-
Approval & Authorization- Host Country Clearance	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
Project Owner- Identification and communication	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
Global stakeholder consultation	A ₁ , A ₂ , B ₁	-	-	-
Others (please specify)	A ₁ , A ₂ , B ₁ , B ₂	-	-	-
VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E ⁺)	A ₁ , A ₂ , B ₁	02	02	-
Social Safeguards (S ⁺)	A ₁ , A ₂ , B ₁	-	01	-
Sustainable development Goals (SDG ⁺)	A ₁ , A ₂ , B ₁	-	01	-
Authorization on Double Counting from Host Country (only for CORSIA)	A ₁ , A ₂ , B ₁	-	01	-
CORSIA Eligibility (C ⁺)		-	-	01
Total		05	11	01

Section D. Project Verification findings

D.1. Identification and eligibility of project type

Means of Project Verification	Verification team checked the applicable GCC criteria regarding project type definition for project activity. The project activity has identified itself as A2 category, sub type 1, which was found acceptable since the project has not been registered under any GHG program and the program operations started since 24/05/2017 which is the date of commissioning of the project activity. The commissioning document has been verified and found correct by the verification team.
Findings	No findings raised during Verification
Conclusion	<p>The project activity was found eligible as per the requirements under section 4 of the GCC Project Standard which was verified from the documents issued by the state utility. Further, found sub type of project activity (i.e., Sub-Type 1) is in line with the Clarification No. 1 issued by GCC.</p> <p>Verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry, VERRA Registry, Gold Standard (GS) Registry, and voluntary non-GHG Programs like I-REC Renewable Energy Certificate (REC) Mechanism in India for the information regarding the consistency of the title of the project activity , GPS coordinates, Legal Ownership of the Project activity and confirmed that the project was not submitted or registered under any other GHG programmes and non-voluntary non-GHG Programs.</p>

D.2. General description of project activity

Means of Project Verification	<p>The project activity is installation of a 30 MW greenfield solar grid -connected Solar Project activity in Andhra Pradesh, India. The project is a greenfield project and in the absence of the same the electricity requirement would have been met from fossil fuel intensive national grid. Therefore, the grid connected power plants has been selected as the baseline appropriately. During assessment, the verification team observed that the project installation was complete, and the project installation was carried out in accordance with the detailed project report. The detailed information related to the project site’s location is mentioned above in section A of this report. The location and GPS co-ordinate were checked during site visit with the help of GPS Software i.e., Google maps.</p> <p>The project activity consists of solar power plant located near Varisam village, of Srikakulam district in Andhra Pradesh state, India. Details are as follows: -</p> <table border="1"> <thead> <tr> <th>Sr No</th> <th>SPV Name</th> <th>Capacity (MW)</th> <th>Location</th> <th>Date of Commissioning</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Aurobindo Pharma Limited</td> <td>30</td> <td>Varisam village, Srikakulam district, Andhra Pradesh</td> <td>24/05/2017</td> </tr> </tbody> </table> <p>The power generated by above power plants fed to the national grid via state utility board substations. The power generated is again used for captive consumption purposes in the Pharma unit of the Project owner. The operational lifetime of the solar modules installed in the project activity is 25 years as per the technical specification provided by the manufacturer. Technical specification of installed solar modules in the project activity is provided in section A.3 of the final PSF. Same is verified and confirmed by verification team.</p> <p>The Project Owners have fixed the crediting period of 10 years which is in accordance with the GCC program manual and will generate an estimated 46,395 tCO₂e emission reductions annually.</p> <p>The project activity is described as Type A2 (Sub-Type 1) and falls into the Large-scale category as per CDM methodology and hence has applied ACM0002, version 21.0, which is appropriate.</p> <p>No sampling approach was applied, as it was not required by the applied methodology, with regard to verification of project description in accordance with the “Standard for sampling and surveys for CDM project activities and programme of activities” version 9.0. In addition to generating emission reductions, the project activity also qualifies for other voluntary certification labels as per GCC requirements.</p> <p>In addition to generating emission reductions, the project activity also qualifies for other voluntary certification labels as below:-</p> <table border="1"> <thead> <tr> <th>Voluntary Labels</th> <th>Applied by the project</th> <th>Score/label</th> </tr> </thead> <tbody> <tr> <td>Achieving the United Nations Sustainable Developmental Goals (SDG+)</td> <td>Yes</td> <td>+06</td> </tr> <tr> <td>Environmental No-net harm (E+)</td> <td>Yes</td> <td>+07</td> </tr> <tr> <td>Social No-Net harms (S+)</td> <td>Yes</td> <td>+03</td> </tr> </tbody> </table>	Sr No	SPV Name	Capacity (MW)	Location	Date of Commissioning	1	Aurobindo Pharma Limited	30	Varisam village, Srikakulam district, Andhra Pradesh	24/05/2017	Voluntary Labels	Applied by the project	Score/label	Achieving the United Nations Sustainable Developmental Goals (SDG+)	Yes	+06	Environmental No-net harm (E+)	Yes	+07	Social No-Net harms (S+)	Yes	+03
Sr No	SPV Name	Capacity (MW)	Location	Date of Commissioning																			
1	Aurobindo Pharma Limited	30	Varisam village, Srikakulam district, Andhra Pradesh	24/05/2017																			
Voluntary Labels	Applied by the project	Score/label																					
Achieving the United Nations Sustainable Developmental Goals (SDG+)	Yes	+06																					
Environmental No-net harm (E+)	Yes	+07																					
Social No-Net harms (S+)	Yes	+03																					

	CORSIA (C+)	Yes	ACCs Generated during the crediting period
	<p>In the baseline scenario the main source of emission was found to be CO₂ as electricity was generated mainly through fossil-fuel based power plants whereas, in project scenario the electricity is generated by Solar Power plant thereby reducing the CO₂ emissions.</p> <p>Thus, non-application of GWP in this project activity was found to be acceptable as the project boundary does not include any of the GHG emissions in the project scenario as per the applied methodology.</p> <p>The description in the PSF includes sufficient details and provides clarity on the project activity. Further, verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry, VERRA Registry, Gold Standard (GS) Registry, and voluntary non-GHG Programs like I-REC Renewable Energy Certificate (REC) Mechanism in India for the information regarding the consistency of the title of the project activity , GPS coordinates, Legal Ownership of the Project activity to determine if the project was part of any other GHG Program prior to commencement of this verification. It was confirmed that the involved project owners have not submitted the project under any other GHG program apart from GCC.</p>		
Findings	CL01, CL04, CAR 01 & CAR 02 were raised and closed successfully. Please refer to the appendix 4 for further details.		
Conclusion	Based on the review of documents and by means of remote inspection, the details provided in the PSF about the project description is found acceptable and complete.		

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

D.3.1 Application of methodology and standardized baselines

Means of Project Verification	Project owner has applied CDM methodology, ACM0002, version 21.0 and no standardized baseline is used. Applicability of the methodology is verified as below;		
	Applicability Conditions as per ACM0002	Applicability to this Project Activity	Verification by Verification team
	<ul style="list-style-type: none"> 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 plant(s)/unit(s); (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 grid connected renewable power generation from solar energy.	Verification team, through technical specification review and remote audit verified that the project activity is greenfield grid connected solar power plant. Hence this criterion is fulfilled.
	In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Integrate BESS with a Greenfield power plant; (b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic or wind power plant(s)/unit(s); (c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s); (d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s).	This condition is not relevant, as the project activity does not involve the integration of a BESS,	The applicability criterion is met as the project activity includes generation of electricity from a renewable source of energy (solar power) and is a green field project which neither includes integration of a BESS This has been verified during site visit and commissioning certificate issued by state utility. Hence this criterion is not applicable.
The methodology is applicable under the following conditions: (a) 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 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 (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);	This condition is not relevant, as the project activity is not the installation of a hydro power plant.	Verification team, through technical specification review and remote audit verified that the project activity is greenfield grid connected solar power plant. Hence this criterion is not applicable.	

	<p>a. (d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies 2 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 a monitoring period. During the time periods (e.g. week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period.</p>		
	<p>(a) 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/m² ; 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/m² ; 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/m² , 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/m² ; (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</p>	<p>This condition is not relevant, as the project activity is not the installation of a hydro power plant.</p>	<p>Verification team, through technical specification review and remote audit verified that the project activity is greenfield grid connected solar power plant.</p> <p>Hence this criterion is not applicable.</p>

	<p>power plant(s) with power density lower than or equal to 4 W/m² shall be: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.</p>		
	<ul style="list-style-type: none"> In the case of integrated hydro power projects, project participants 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. 	<p>The project activity does not involve any of the given criteria hence methodology is applicable for the project activity.</p>	<p>Verification team, through technical specification review and remote audit verified that the project activity is greenfield grid connected solar power plant.</p> <p>Hence this criterion is not applicable.</p>

	<p>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, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units.</p>	<p>The project activity is a new solar power plants. Also, no replacement, modification and retrofit measures are implemented here. Hence, this criterion is also not relevant to the project activity.</p>	<p>Verification team, through technical specification review and remote audit verified that the project activity is greenfield grid connected solar power plant. Hence this criterion is not applicable.</p>
	<p>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".</p>	<p>This condition is not relevant, as the project activity is not retrofits, rehabilitations, replacements, or capacity additions.</p>	<p>Verification team, through technical specification review and remote audit verified that the project activity is greenfield grid connected solar power plant. Hence this criterion is not applicable.</p>

Applicability of the Tool 07 “Tool to calculate the emission factor for an electricity system”, is verified as below;

Applicability Conditions as per Tool 07	Applicability to this Project Activity	Verification by Verification team
<p>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).</p>	<p>This condition is applicable. OM, BM, and CM are estimated using the tool under section B.6.1 for calculating baseline emissions. Only grid connected plants have been considered for the calculation of OM and BM calculations. “CEA CO₂ Database, version 18.0” published by Central Electricity Authority which outlines Operating, Build and Combined Margin Emission Factors for Indian Grid was used for the calculations. In reference of link provided, it can be seen that EF calculation is based on grid connected plants only.</p>	<p>This project involves generation electricity through solar power plant where generated electricity is delivered to the grid. Thus, the applicability criteria were found to be met.</p>

	<p>Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, the conditions specified in “Appendix 2: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.</p>	<p>Since the project activity is grid connected, this condition is applicable, and the emission factor has been calculated accordingly. The emission factor for the project electricity system is calculated for grid power plants only.</p>	<p>The project activity is grid connected and thus emission factor is calculated and thus OM, BM and CM are estimated using the tool under section B.6.2 of the PDD for calculating baseline emissions.</p>
	<p>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.</p>	<p>The project activity is located in India, a non-Annex I country. Therefore, this criterion is not applicable for the project activity</p>	<p>The project activity is located in India, a non-Annex I country. Therefore, this criterion is not applicable for the project activity</p>
	<p>Under this tool, the value applied to the CO₂ emission factor of biofuels is zero.</p>	<p>The project activity is a grid connected solar power project and not a hydro power plant. Therefore, this criterion is not applicable for the project activity.</p>	<p>The project activity is a grid connected solar power project and not a hydro power plant. Therefore, this criterion is not applicable for the project activity</p>

Applicability of the Tool 01: Tool for the demonstration and assessment of additionality; Version 7.0.0,

Applicability Conditions as per Tool 01	Verification by Verification team
<p>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</p>	<p>The project is using ACM0002 version 21.0 and doesn't propose any new methodology. The assessment of additionality has been discussed in detail in section D.3.5 of this report.</p>
<p>Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.</p>	<p>The tool is included by ACM0002 version 21.0)/11/ and which is the applied methodology. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met.</p>

	<p>Tool 24: Common Practice version 3.1</p> <table border="1"> <thead> <tr> <th data-bbox="392 362 963 394">Applicability Conditions as per Tool 24</th> <th data-bbox="970 362 1524 394">Verification by Verification team</th> </tr> </thead> <tbody> <tr> <td data-bbox="392 398 963 667"> <p>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.</p> </td> <td data-bbox="970 398 1524 667"> <p>Project activity applies “Tool for the demonstration and assessment of additionality”. Hence this tool is applicable.</p> </td> </tr> <tr> <td data-bbox="392 672 963 972"> <p>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.</p> </td> <td data-bbox="970 672 1524 972"> <p>Applied methodology ACM0002 version 21.0 doesn't specify any approach for the demonstration of common practice analysis. As per the methodology the additionality including common practice analysis has been demonstrated as per the Tool 01: Tool for the demonstration and assessment of additionality” version 7.0.0 and Tool 24: Common Practice Analysis version 3.1. Hence Justified.</p> </td> </tr> </tbody> </table>	Applicability Conditions as per Tool 24	Verification by Verification team	<p>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.</p>	<p>Project activity applies “Tool for the demonstration and assessment of additionality”. Hence this tool is applicable.</p>	<p>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.</p>	<p>Applied methodology ACM0002 version 21.0 doesn't specify any approach for the demonstration of common practice analysis. As per the methodology the additionality including common practice analysis has been demonstrated as per the Tool 01: Tool for the demonstration and assessment of additionality” version 7.0.0 and Tool 24: Common Practice Analysis version 3.1. Hence Justified.</p>
Applicability Conditions as per Tool 24	Verification by Verification team						
<p>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.</p>	<p>Project activity applies “Tool for the demonstration and assessment of additionality”. Hence this tool is applicable.</p>						
<p>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.</p>	<p>Applied methodology ACM0002 version 21.0 doesn't specify any approach for the demonstration of common practice analysis. As per the methodology the additionality including common practice analysis has been demonstrated as per the Tool 01: Tool for the demonstration and assessment of additionality” version 7.0.0 and Tool 24: Common Practice Analysis version 3.1. Hence Justified.</p>						
<p>Findings</p>	<p>CL02, CAR 03 was raised and closed successfully. Please refer to the appendix 4 for further details.</p>						
<p>Conclusion</p>	<p>The verification team confirms that; It has critically assessed each applicability condition listed in the selected methodology and the relevant information contained in the PSF against these criteria. The selected CDM methodology and tool for the project activity is found applicable and appropriately described in the PSF which was checked and found correct.</p>						

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

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

D.3.3 Project boundary, sources and GHGs

Means of Verification	Project	<p>As per the applied methodology ACM0002 version 21.0, the project boundary is the spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that the project power plant is connected to. The components of the project boundary mentioned in the PSF were found to be in compliance with para 22 of the applied methodology.</p> <p>The verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified. The verification team confirmed that all GHG sources required by the methodology have been included within the project boundary. It was assessed that no emission sources related to project activity will cause any deviation from the applicability of the methodology or accuracy of the emission reductions.</p> <p>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 the site visit and was found appropriate.</p>
Findings		No findings were raised
Conclusion		<p>The verification team was able to assess that complete information regarding the project boundary has been provided in PSF and could be assured from the line diagram.</p> <p>The verification team confirms that the identified boundary, selected emissions sources are justified for the project activity.</p>

D.3.4 Baseline scenario

Means of Verification	Project	<p>The baseline scenario as per paragraph 47 of the applied methodology, prescribed the baseline scenario of the project activity. The project activity will displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit i.e., in the absence of the project activity. As per paragraph 47, Baseline emissions for other systems are the product of amount electricity displaced with the electricity produced by the renewable generating unit and an emission factor.</p> <p>Determination of Grid Emission Factor ($EF_{grid,CM,y}$) The project owner used the “Tool to calculate the emission factor for an electricity system”, version 07.0 to determine the emission coefficient as per 23 (a) of the indicatives simplified baseline and monitoring methodology for selected large scale CDM project activity ACM0002, version 21.0. “Tool to calculate the emission factor for an electricity system” states that, electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected</p>
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	<p>power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations. In this case the Combined Margin (weighted average of Simple Operating Margin and Build Margin) is estimated based on three years average (2019-20, 2020-21 & 2021-22) of Simple Operating Margin and Build Margin of current year (2021-22) is in line with steps of “Tool to calculate the emission factor for an electricity system”, version 07.0. Both the value of Simple Operating Margin and Build Margin are selected under ex-ante approach. The grid boundary with respect to the connected grid is Indian national electricity grid.</p> <p>In accordance with “Tool to calculate the emission factor for an electricity system” Dispatch Data Analysis” is the first methodological choice out of four options of calculating OM emission factor. Nevertheless the “Dispatch data analysis operating margin” is ruled out in India due to lack of necessary dispatch data of the grids. The same fact is also considered by the Central Electricity Authority (Ref the user guide for CO₂ Baseline Database for the Indian Power Sector version 18.0, Sept’2022⁶).</p> <p>Out of other 3 options of calculating OM Project Owner have rightly selected simple OM emission factor calculation as the share of low cost / must run resources of the selected grid over the five most recent years (2019-20, 2020-21 & 2021-22) which is less than 50% of the gross grid generation. For wind and solar projects, “Tool to calculate the emission factor for an electricity system” allows the usage of the default weights are as follows: $W_{OM} = 0.75$ and $W_{BM} = 0.25$. Using the above values, the combined margin emission factor is valued at 0.9310 tCO₂/MWh.</p> <p>The calculation of $EF_{grid,CM, y}$ is current and publicly available and published by the Central Electricity Authority on its web-site. The verification team is convinced of the result of the emission coefficient calculation. It is deemed to be adequate and transparent.</p> <p>The baseline scenario in the PSF is reported as the supply of electricity to grid and thereby displacement of electricity from the electricity distribution system connected to the Indian Grid. The baseline scenario applied in the PSF was compared with the requirements of the baseline described in the applied methodology and found consistent.</p>
Findings	CL02, CAR 03, CAR08 was raised and closed successfully. Please refer to the appendix 4 for further details.
Conclusion	<p>The verification team confirms the following;</p> <ul style="list-style-type: none"> • All assumptions and data used by the project participants are listed in the PSF, including their references and sources; • All documentation used by project participants as the basis for assumptions and source of data for establishing the baseline scenario is correctly quoted and interpreted in the PSF; • The verification team also concluded that the identified baseline scenario reasonably represents what would occur in the absence of the project activity

D.3.5 Demonstration of additionality

⁶ <https://cea.nic.in/cdm-co2-baseline-database/?lang=en>

<p>Means of Project Verification</p>	<p>During the board meeting for board of Directors by the project owner Aurobindo Pharma Limited, they had decided to go ahead their project activity of installing 30 MW Solar power plant for captive consumption at their Pharma unit. In continuation to the board decision, PO issued the purchase order for the supply of Solar modules.</p> <p>For demonstrating additionality under GCC the project activity is required to undergo the following tests;</p> <p>As per paragraph 45 of project standards, 45. The GCC applies the following approach for demonstrating additionality, consisting of two components:</p> <p>(a) A Legal Requirement Test; and (a) Legal Requirement Test</p> <p>Type A projects shall be deemed non-additional if their implementation is required by a law that is enforced.</p> <p>The project is not enforced by law. Since voluntary commitments/agreements within a sector or by an entity does not constitute the legal requirement, thus, the project is additional as per paragraph 46 of GCC Project Standard Version v3.1.</p> <p>Based on the available literature on Electricity Market Law in India, it was confirmed that there are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions or other legally binding mandates requiring its implementation, or requiring the implementation of a similar technology/measure that would achieve equivalent levels of GHG emission reductions.</p> <p>b) Additionality Tests: As per para (5) of the methodology ACM0002, version 21, simplified procedure to demonstrate additionality, Tool 32 is not employed as the project is not under positive list and Tool 1 is followed to demonstrate additionality for the project activity. Selected methodology has been applied together with the “tool to calculate the emission factor for an electricity system, version 7” and “tool for assessment and demonstration of additionality, version 7”. These are the latest version of the methodology and related additionality & calculation tool. Project was envisaged for capacity of 30 MW in in the Indian state of Andhra Pradesh. Currently, the project activity is fully commissioned and continuously contributing towards emission reductions. GCC PSF for this project activity was web-hosted for global stakeholder’s consultation on 10/10/2022. Start date of the Project is 24/05/2017 which is the commissioning date of the project activity.</p> <p>In line with GCC Project Standard, version 03.1, the additionality of the Project activity is ascertained in line with the applicable guidance from the GCC. The demonstration of additionality for the Project activity is being carried out in accordance with the additionality tool provided by the UNFCCC i.e., “Tool for demonstration and assessment of Additionality” Version 07.0.0. The tool provides a step-wise approach to demonstrate additionality which is displayed below:</p> <p>Step 0: Demonstration whether the proposed project activity is the first-of-its-kind</p> <p>The proposed project activity is not the first-of-its-kind. Hence not applicable.</p> <p>Step 1: Identification of alternatives to the project activity consistent with current laws and regulations</p> <p>Alternative 1: The proposed project activity without GCC benefit;</p>
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	<p>Alternative 2: Continuation of the current situation, i.e., electricity will continue to be generated by the existing generation mix operating in the grid.</p> <p>Having regard to the fact that the project activity under consideration is solar power project, verification team is convinced that there are no other realistic and credible alternatives. Both the alternatives are in compliance with all applicable legal and regulatory requirements as; the implementation of project activity is a voluntary initiative and is not mandatory or a legal requirement; the applicable environmental regulations do not restrict the use of solar energy; and There is no legal requirement on the choice of a particular technology.</p> <p>Verification team noted that the project fulfils the norms put down by Central Pollution Control Board. As per Central Pollution Control Board (Ministry of Environment & Forests, Govt. of India), final document on revised classification of Industrial Sectors under Red, Orange, Green and White Categories (29/02/2016).</p> <p>As per the CPCB directions, letter no. 8-29012/ ESS (CPA)/2015-16 dated 07/03.2/016 CPCB letter no. 8-29012/ ESS (CPA)/ 2016-17 dated 18/01/2017⁷.“Accordingly, for all future references, the entry at S.No. 35 in White Category of industrial sectors namely "Solar Power generation through solar photovoltaic cell, Wind Power and Mini Hydel Power (less than 25 MW)" shall be read as "Solar Power generation through solar photovoltaic cell plants of all capacities, Wind Power Plants of all capacities and Hydel Power Plants up to and including capacity of 25 MW”</p> <p>As per the notification from the Ministry of the Environment, Forest and Climate change, Ministry of India⁸ The matter of applicability of item 8(a), 8(b) and 7(c) of the Schedule of EIA notification, 2006 on the projects of Solar Photo Voltaic (PV) Power Projects, Solar Thermal Power Plants and Development of Solar Parks has been further examined in the Ministry. It is clarified that the provisions of the Environment Impact Assessment Notification, 2006 is not applicable to the above projects</p> <p>There shall be no necessity of obtaining the “Consent to Establish/Operate” for White category of industries. Intimation to concerned SPCB / PCC is sufficient. Being a renewable power project, it falls under the category of White and thus these projects do not need clearance for Consent to operate and only needs to inform the relative State pollution control board. The same is done for the project and thus it can be confirmed that it follows the local laws of the host country.</p> <p>Due to above categorization of white category and being the renewable in nature, the project activity does not emit any emissions. Thus, there is no any other surplus regulatory requirement for the project activity. This is found to be accepted by Verification team.</p> <p>However, of the two alternatives identified, alternative (i) cannot be considered realistic as further analysis in the following paragraph reveals that it is not economically feasible option. Hence, alternative (ii) alone could be justified as realistic, credible and plausible alternative to the PP.</p>
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⁷<https://cpcb.nic.in/openpdf.php?id=TGF0ZXN0RmlsZS9fMTU2NzgZOTg1OF9tZWVpYXBob3RvMTk2MDYucGRm>

⁸http://environmentclearance.nic.in/writereaddata/public_display/circulars/2YME8DSI_OM%20Solar%20Parks%20dated%207th%20July%202017.pdf

	<p>Verification team is therefore, convinced that the project developer has taken into consideration all realistic and credible alternatives (having regard to the governing methodologies) including the project being undertaken as a non-GCC activity and continuation of current scenario. The identification of alternatives is in conformity with the guidance given by the tool.</p> <p>Outcome of Sub-step 1a: All the realistic alternatives for the project activity have been enlisted above.</p> <p>Sub-step 1b: Consistency with mandatory laws and regulations:</p> <p>The alternative(s) shall be in compliance with all applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g., to mitigate local air pollution. (This sub-step does not consider national and local policies that do not have legally-binding status.)</p> <p>Both the alternatives are in compliance with all applicable legal and regulatory requirements as;</p> <p>The implementation of project activity is a voluntary initiative and is not mandatory or a legal requirement;</p> <p><u>The relevant national laws and regulations pertaining to generation of electricity in India are (Scenario1 and 2):</u></p> <ul style="list-style-type: none"> • Electricity Act 2003⁹(Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity by taking the following measures) • National Electricity Policy 2005¹⁰("The Central Government shall, from time to time, prepare the National Electricity Policy and tariff policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy".) • Tariff Policy 2006¹¹(As per the national tariff policy, the central and the state electricity regulatory commissions must purchase a certain percentage of grid-based power from renewable sources.) • The factories act 1948¹²(All persons working under the Organizations) • Environmental (Protection) Act, 1986 and amendment(s) (The Environment (Protection) Act, 1986 ¹³authorizes the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds.) • Environmental Impact Assessment (EIA) Notification, 2006 ¹⁴ and amendment(s) (As per the notification from the Ministry of the Environment,
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⁹ [The Electricity Act, 2003|Legislative Department | Ministry of Law and Justice | GoI](#)

¹⁰ [National Electricity Policy, 2005 \(bareactslive.com\)](#)

¹¹ [Tariff Policy 2006 - India - Climate Change Laws of the World \(climate-laws.org\)](#)

¹² https://labour.gov.in/sites/default/files/Factories_Act_1948.pdf

¹³ [Short note on Environmental Protection Act of 1986: Overview \(testbook.com\)](#)

¹⁴ <http://www.environmentwb.gov.in/pdf/EIA%20Notification,%202006.pdf>

	<p>Forest and Climate change, Ministry of India¹⁵ The matter of applicability of item 8(a), 8(b) and 7(c) of the Schedule of EIA notification, 2006 on the projects of Solar Photo Voltaic (PV) Power Projects, Solar Thermal Power Plants and Development of Solar Parks has been further examined in the Ministry)</p> <ul style="list-style-type: none"> • The Air (Prevention and Control of Pollution) Act, 1981¹⁶ including Rules 1982 and 1983 and amendment(s) • The Water Prevention and Control of Pollution¹⁷. Solid Waste Management Rules¹⁸/ E-waste (Management) Rules¹⁹ and amendment(s) / Batteries (Management and Handling) Rules²⁰ • (Solid waste/E waste/Batteries management program should be prepared with thrust on reuse and recycling as per the CPCB guidelines) <p>The Project activity follows all the above applicable laws and regulations in India</p> <p>Moreover, Outcome of Sub-step 1b: Hence, both the alternatives enlisted above are found to comply with the mandatory laws and regulations taking into account the enforcement of the legislations in the region or country and EB decisions on national and/or sectoral policies and regulations. However, Alternative 2 has been selected as the appropriate baseline alternative for this project activity.</p> <p>Step 2: Investment analysis</p> <p>Determine whether the proposed project activity is economically or financially less attractive than at least one other alternative, identified in step 1, without the revenue from the sale of emission reductions credits. To conduct the investment analysis, use the following sub-steps:</p> <p>Sub-step 2a: Determine appropriate analysis method and Sub-step 2b (Option III): Apply benchmark analysis</p> <p>a) Suitability of investment analysis, financial indicator and benchmark:</p> <p>Project developer had demonstrated that the financial returns of the proposed GCC project activity would be insufficient to justify the required capital investment as per GCC Verification Standard. In the PSF, Project Owner has adopted a conservative approach to identify the benchmark for the project activity. The captive power project is generating revenue in terms of Energy savings that leads to cost savings. Thus, simple cost analysis (Option I) is not appropriate. Hence out of 2 options, investment comparison analysis (Option II) benchmark analysis (Option III), benchmark analysis is used for the project activity as per project type and decision-making context. Therefore, the Expected return on equity is considered appropriate benchmark. Accordingly, the post-tax Equity IRR has been considered as the relevant financial indicator for the project activity which is acceptable to the Verification team. Moreover, the financial indicator selected by the PO is correct based on the fact that</p>
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http://environmentclearance.nic.in/writereaddata/public_display/circulars/2YME8DSI_OM%20Solar%20Parks%20dated%207th%20July%202017.pdf

16 https://www.indiacode.nic.in/bitstream/123456789/9462/1/air_act-1981.pdf

17 <https://cpcb.nic.in/upload/home/water-pollution/A1977-36.pdf>

18 https://cpcb.nic.in/uploads/MSW/SWM_2016.pdf

19 https://cpcb.nic.in/uploads/Projects/E-Waste/e-waste_rules_2022.pdf

20 <https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf>

	<p>tool do not restrict the PO to either use project IRR or Equity IRR. This is under the prerogative of the PO to select appropriate indicator based on his preferences to know the IRR based on his equity investment or debt investment. The same is thus acceptable to the Verification team. Verification team however checked the Equity IRR calculation and found that input assumptions used for the calculation of Equity IRR are applicable at the time of investment decision of the project and thus is in accordance with the relevant guideline of the tool.</p> <p>“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”</p> <p>The investment analysis has been carried out in Nominal terms. Accordingly, default value has been adjusted by adding suitable forecasted inflation rate taken from Reserve Bank of India (Central Bank, India). Project Participant has calculated Benchmark based on WPI mean inflation rate. As per the Tool for the determination and assessment of additionality version 07, available to the PO at the time of Investment decision, the inflation forecast should be for the duration of the crediting period. However, since RBI provides forecast inflation only for 5 & 10 years, the project investor has calculated benchmark using 10 years durations and the same is considered as Benchmark for the project activity²¹.</p> <p>As per the Tool for the determination and assessment of additionality, version 07 the cost of equity is determined by selecting the values provided in the Appendix, i.e., Default values for cost of equity (expected return on equity) is presented below:</p> <p>Appendix A specifies default value of expected return on equity in real terms for Energy Industries (Group 1) in India = 9.77% (PO referred Methodological Tool Investment analysis version 12.0 for default value as a conservative approach)</p> <p>The Required return on equity (benchmark) was computed in the following manner: Nominal Benchmark²² = $\{(1+\text{Real Benchmark}) \times (1+\text{Inflation rate})\}-1$ Where:</p> <ul style="list-style-type: none"> - Default value for Real Benchmark = 9.77% (Tool27, Investment analysis version 12.0) <p>Benchmark estimation:</p> <p>The Cost of Equity has been considered using the “Methodological tool: Investment analysis” available at the time of decision making as well as the latest available value. As a conservative approach, the minimum value of benchmark has been considered as calculated using these 2 approaches.</p> <p>Table under Appendix in EB116, Annex 2 specifies default value of expected return</p>
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²¹ Since RBI provides inflation forecast only for 5 years and 10 years, hence inflation forecast for 10 years is being considered keeping in view length of crediting period to be 10 years.

²²As per Fisher Equation, https://en.wikipedia.org/wiki/Fisher_equation

on equity in real terms for Energy Industries (Group 1) in India = 9.77%²³
 Thus, minimum cost of equity considered for calculation of Benchmark = 9.77%
 As Central Bank of India (Reserve Bank of India) inflation forecast for 10 years during decision making time is taken as a minimal benchmark for the project activity

Project Proponent	Inflation Forecast for 10 years	Benchmark
30 MW Solar Power Plant by Aurobindo Pharma Limited	4.80%	15.04%

The conservative benchmark is compared with the IMF benchmark during project decision making time (31/12/2016). The inflation during the decision making time from IMF is 4.90%, and the benchmark is around 15.15 %. The present inflation rate is 6.10% and the benchmark arrived at 16.47%. Hence conservatively, 15.04% is considered for the project activity.

b) Parameters and assumptions used:

Project cost as per the DPR

Name of the Investor/Owner/SPVs	Project Capacity (MW)	Project Cost (In Million)	DPR Date
30 MW Solar Power Plant by Aurobindo Pharma Limited	30 MW	1,650	December, 2016

The Per MW cost of Project activity when compared with the CERC guidelines prevailing during 2015-16 is approximately Rs. 605.85 Lakhs/MW and the project cost is Rs 550 Lakh/MW lesser than the CERC regulations.

PLF as per DPR prepared by third party

Name of the Investor/Owner/SPVs	Project Capacity (MW)	PLF(%) = DPR (3 rd party Eng. Company)	DPR Date
30 MW Solar Power Plant by Aurobindo Pharma Limited	30	19.48	December 2016

Actual PLF:

Name of the Investor/Owner/SPVs	Project Capacity (MW)	Actual generation (May 2017 – May 2018)	Actual PLF % achieved (May 2017 – May 2018)

²³ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v12.pdf>

)
30 MW Solar Power Plant by Aurobindo Pharma Limited	30	38,031M Wh	14

Tariff rate as per the Andhra Pradesh Electricity Regulatory Commission (Captive Consumption)

Name of the Investor/Owner/SPVs	Tariff Rate INR (as per PPA)	PPA Date
30 MW Solar Power Plant by Aurobindo Pharma Limited	5.36	APERC, 2016-17

O&M cost as per DPR

Name of the Investor/Owner/SPVs	Project Capacity (MW)	O&M (In Million INR)	DPR Date
30 MW Solar Power Plant by Aurobindo Pharma Limited	30	18.81	December 2016

O&M cost as DPR

Name of the Investor/Owner/SPVs	Project Capacity (MW)	O&M cost as per DPR (In Million INR)
O and M	30 MW	18.81

The project activity is a renewable source of electricity generation and supplies the electricity to the INDIAN grid and used for captive consumption through open access in the Pharma unit. The key parameters which determine the Equity IRR of the project activity are project cost, PLF and profitability estimates.

In the revised PSF, the project cost is based on the DPR (=Detailed project report) dated DECEMBER 2016. The DPR has been prepared by Sgurr Energy India which a third-party engineering company. DPR report has been submitted to validation team. The cost of solar plant as considered from the DPR is 55 Mn/MW which is the normal price in the region and is acceptable to the assessment team. The DPR was available during decision making and financial profitability of the project was decided based on this DPR. Validation team checked the DPR of the project activity and found that consideration of the project cost in revised PSF version 04 is correct. The actual installation cost is as per the CERC guidelines and the actual PO cost and estimated DPR figure.

The project activity is fully equity funded by the project owner. The profitability of the project, which forms the basis for IRR calculation is based on installed capacity, PLF, electricity tariff, O&M cost, depreciation and taxation. The installed capacity is based on the capacity of solar power plant, which is evidenced by the purchase order subsequently.

c) Assessment of Plant Load Factor (PLF):

	<p>PP considered the Plant load factor from a third-party engineering company Sgurr energy, for expected electricity generation estimation. They are contracted by the PPs for this project. PP has submitted the copies of the PLFs estimation report to the assessment team.</p> <p>Validation team assessed the PLF assessment report submitted as per DPR and the actual electricity generation and found correct. Same PLF report has been used in the financials and the emission reduction calculation. PLF estimation in DPR is in line with Para 3 (b) Annex 11, EB 48 and acceptable to the assessment team. Further, project activity achieved PLF of 14% during May 2017 to May 2018 after commissioning.</p> <p><u>D) Assessment of Electricity Tariff:</u></p> <p>The tariff is considered from DPR (INR 5.36/- per kWh) which is based on the Andhra Pradesh Tariff order for captive consumption unit, which was available to the PP at the time of decision making.</p> <p>Validation team assessed the tariff and found that same value was available during decision making and in conformity with additionality guidance. Furthermore, assessment team has also checked the actual tariff with the DPR for further substantiation as these values are available during the investment decision time. The vales as considered for the financial additionality determination are same as the values mentioned in power purchase agreement.</p> <p><u>e) Assessment of O& M cost:</u></p> <p>PP considered the O&M cost from the DPR estimated to be around INR 18.81 Million available at the time of investment decision and it is in house by the project owner and the OPEX cash flow is checked to find the O and M cost is appropriately considered in the Investment analysis. The DPR has been used in the financial calculation as same was available during decision making and hence applicable. According to additionality guideline the cost should be based on the input parameters available at the time of decision making and the PP has submitted DPR supporting this consideration. Therefore, considering the above assessment, validation team concluded that the O&M cost considered from respective DPR in the computation of financial indicator is in conformity with additionality guideline. Moreover, the actual O&M Cost is higher than the DPR considered in the DPR. Hence there won't be any impact on the additionality with actual O&M Cost.</p> <p><u>F) Assessment of Tax computation:</u></p> <p>The project developer has adopted book depreciation rates as per Schedule XIV of the Companies Act, 1956 for computing book profit and Income Tax Act 1961 stipulated for income tax calculation, which are in conformity with the accepted accounting principles adopted by the company and income tax laws in the host country. The block of assets has been computed for depreciation purpose as per the accepted accounting principles. Tax liability has been calculated as per the income tax rules and the rulings given. In computing the income tax liability, the project developers have considered Tax holiday (u/s 80IA of the Income Tax Act, 1961). Accelerated depreciation on plant and machinery is also sourced from IT act. The tax rates assumed corresponds to the tax rate prevailing at the time of taking decision (conformity to Appendix of EB92, Annex 5). Hence, these assumptions are appropriate during decision making context. The tax rate during 2015-16 is</p>
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	considered for the project activity.													
	g) <u>Cross checking parameters:</u>													
	Name of the parameter	DOE assessment												
	Project Cost	The details of the proposed project activity are given below.												
	<table border="1"> <thead> <tr> <th>Name of the Investor/Owner</th> <th>Project Capacity (MW)</th> <th>Project Cost (In Million)</th> <th>Project cost (in Million) per MW-AC</th> </tr> </thead> <tbody> <tr> <td>30 MW Solar Power Plant by Aurobindo Pharma Limited</td> <td>30 MW</td> <td>1,650</td> <td>55</td> </tr> </tbody> </table>	Name of the Investor/Owner	Project Capacity (MW)	Project Cost (In Million)	Project cost (in Million) per MW-AC	30 MW Solar Power Plant by Aurobindo Pharma Limited	30 MW	1,650	55					
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	<p>The project cost has been considered from DPR and was available at the time decision making for the project activity.</p> <p>The DOE has also checked the actual cost of the project from the CA certificate submitted to SECI and found that the actual project cost is higher than the estimated project provided in the PSF.</p> <p>Based on sectoral scope expert and local knowledge and the CERC guidelines during decision making time, the project cost considered as per DPR for the proposed project activity is found to be appropriate for solar projects. Also, since the actual cost is available to verifier from the CA certificate and the EPC contracts placed by the Project owner.</p> <p>The IRR as per the assumption from the DPR is as follows:</p>													
	<table border="1"> <thead> <tr> <th>Name of the Investor/Owner</th> <th>Project Capacity (MW)</th> <th>Project Cost (In Million)</th> <th>IRR</th> <th>Bench mark</th> </tr> </thead> <tbody> <tr> <td>30 MW Solar Power Plant by Aurobindo Pharma Limited</td> <td>30 MW</td> <td>1,650</td> <td>11.01</td> <td>15.04</td> </tr> </tbody> </table>	Name of the Investor/Owner	Project Capacity (MW)	Project Cost (In Million)	IRR	Bench mark	30 MW Solar Power Plant by Aurobindo Pharma Limited	30 MW	1,650	11.01	15.04			
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O&M cost and Escalation in the operational expense =5(%)-Standard practice in	The details of the proposed project activity are given below.													
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30 MW Solar Power Plant by Aurobindo Pharma Limited	30 MW	18.81	5,50,000											

	India	<p>The O&M cost has been considered from DPR and was available at the time of decision making for the project activity.</p> <p>The assessment team also checked the O&M cost as per O&M contract and found that the actual O&M cost as per O&M contract is higher than the cost considered in the DPR. Thus, the project activity is additional with the consideration of O&M cost as per the O&M contract.</p> <p>IRR value as per the O&M cost from the DPR is as below:</p> <table border="1"> <thead> <tr> <th>Name of the Investor/Owner</th> <th>Project Capacity (MW)</th> <th>O&M (In Million)</th> <th>IRR</th> <th>Bench mark</th> </tr> </thead> <tbody> <tr> <td>30 MW Solar Power Plant by Aurobindo Pharma Limited</td> <td>30 MW</td> <td>18.81</td> <td>11.01</td> <td>15.04</td> </tr> </tbody> </table> <p>Based on sectoral scope expert and local knowledge, the project O&M cost and its escalation considered as per DPR for the proposed project activity is found to be appropriate for solar projects. Also, actual O&M cost from the O&M contract is comparable, thus the same is acceptable.</p>	Name of the Investor/Owner	Project Capacity (MW)	O&M (In Million)	IRR	Bench mark	30 MW Solar Power Plant by Aurobindo Pharma Limited	30 MW	18.81	11.01	15.04					
	Name of the Investor/Owner	Project Capacity (MW)	O&M (In Million)	IRR	Bench mark												
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<p>Tariff</p> <p>The Tariff rate has been considered from the Andhra Pradesh State regulatory guidelines, for industries that get power from national grid. The IRR is computed in terms of energy savings and the same was available at the time decision made for the project activity.</p> <table border="1"> <thead> <tr> <th>Name of the Investor/Owner</th> <th>Project Capacity (MW)</th> <th>Tariff Rate (as per DPR)</th> <th>Tariff Rate (as per Andhra Pradesh State for decision making year)</th> </tr> </thead> <tbody> <tr> <td>30 MW Solar Power Plant by Aurobindo Pharma Limited</td> <td>30</td> <td>5.36</td> <td>5.36</td> </tr> </tbody> </table> <p>IRR value as per the State Electricity Board is mentioned as below:</p> <table border="1"> <thead> <tr> <th>Name of the Investor/Owner</th> <th>Tariff Rate (Andhra Pradesh state regulation)</th> <th>IRR</th> <th>Benchmark</th> </tr> </thead> <tbody> <tr> <td>30 MW Solar Power Plant by Aurobindo Pharma Limited</td> <td>5.36</td> <td>11.01%</td> <td>15.04%</td> </tr> </tbody> </table>	Name of the Investor/Owner	Project Capacity (MW)	Tariff Rate (as per DPR)	Tariff Rate (as per Andhra Pradesh State for decision making year)	30 MW Solar Power Plant by Aurobindo Pharma Limited	30	5.36	5.36	Name of the Investor/Owner	Tariff Rate (Andhra Pradesh state regulation)	IRR	Benchmark	30 MW Solar Power Plant by Aurobindo Pharma Limited	5.36	11.01%	15.04%
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	<p>Since the actual tariff itself was available at the time of investment decision and cross checked with the plant billing details before the project initiation, no further changes are expected.</p> <p>Based on sectoral scope expert and local knowledge, the project tariff rate considered as per state tariff order for the proposed project activity is found to be appropriate.</p>								
	<p>Tax Rates</p> <table border="1"> <tr> <td>Income tax rate (%)</td> <td>30.00%</td> </tr> <tr> <td>Corporate Tax/MAT(%)</td> <td>21.72%</td> </tr> <tr> <td>Surcharge</td> <td>12.00%</td> </tr> <tr> <td>Educational cess</td> <td>3.00%</td> </tr> </table> <p>The above table shows the tax rate considered for individual project Owner and the same is found suitable.</p> <p>Assessment team noted that the project developer has adopted book depreciation rates as per Schedule XIV of the Companies Act, 1956 for computing book profit and Income Tax Act 1961 stipulated for income tax calculation, which are in conformity with the accepted accounting principles adopted by the company and income tax laws in the host country i.e. INDIA. Tax liability has been calculated as per the income tax rules and the rulings given. In computing the income tax liability, the project developers have considered Tax holiday (u/s 80IA of the Income Tax Act, 1961). Accelerated depreciation on plant and machinery is also sourced from IT act. The tax rates assumed corresponds to the tax rate prevailing at the time of taking decision. Hence, these assumptions are appropriate during decision making context and thus acceptable to the assessment team.</p> <p>No further assessment is required as the Values are directly procured from Income Tax Act, 1961 which is standard guideline for Tax value in India.</p>		Income tax rate (%)	30.00%	Corporate Tax/MAT(%)	21.72%	Surcharge	12.00%	Educational cess
Income tax rate (%)	30.00%								
Corporate Tax/MAT(%)	21.72%								
Surcharge	12.00%								
Educational cess	3.00%								
<p><u>Sensitivity analysis:</u></p> <p>The Guidance on Additionality requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation. The project developer has identified Plant Load Factor (PLF), Project cost, Electricity tariff and O&M cost as critical assumptions. These critical parameters constitute more than 20% of either total project costs or total project revenues. The sensitivity analysis reveals that even under more favourable conditions, the IRR without GCC revenue would not cross the benchmark return as given in the following table:</p> <table border="1"> <tr> <td>Variation %</td> <td>-10%</td> <td>Normal</td> <td>10%</td> <td>Variation required to reach benchmark</td> <td>Value required to reach benchmark</td> </tr> </table>			Variation %	-10%	Normal	10%	Variation required to reach benchmark	Value required to reach benchmark	
Variation %	-10%	Normal	10%	Variation required to reach benchmark	Value required to reach benchmark				

PLF	9.47%	11.01 %	12.47 %	28.90%	25.11%
O&M	11.15 %	11.01 %	10.86 %	-307.00%	-38.94
Project Cost	12.46 %	11.01 %	9.75%	-24.20%	Rs. 1250
Tariff Rate	9.47%	11.01 %	12.47 %	28.80%	6.90

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

Probability to breach the benchmark:
Sensitivity Parameter 1: Project Cost
Project Cost for financial analysis is considered from DPR of the project activity, being available at the time of investment making decision to go ahead with the project activity. The actual project cost is lower than the DPR cost. But the CA certificate confirms that the breaching value does not happen for the project activity. Since the Loan sanction letter cost is similar,
Sensitivity Parameter 2: PLF
PLF considered in financials for is as per Third Party DPR in line with “Guidelines for the reporting and validation of Plant load factors” stated in EB48 Annex 11 option 3(b) . Hence, variation in PLF of more than 10% is unlikely to happen as the PLF has been reported as per the Third-Party Report based on long term data.
Sensitivity Parameter 3: Tariff Rate
The tariff is determined by Andhra Pradesh State electricity corporation Limited for the captive plants in the project activity. Hence, there is no probability to get variation for the same. However, Sensitivity is carried out for +/-10% even then the benchmark is not breached.
Sensitivity Parameter 4: O&M
The sensitivity analysis reveals that O&M will breach the benchmark at negative values and is hypothetical case. Since the O&M cost is subject to escalation (as evidence by the O&M agreement) and also subject to inflationary pressure, any reduction in the O&M costs is highly unlikely. Hence, the reduction in the O&M cost is highly unlikely.

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

Name of the Investor/owner	Project Capacity (MW)	DPR Cost (Mn INR)	Actual Cost (Mn INR)	Variation in Project Cost	Breaching value for Project Cost (Mn INR)
Aurobind	30 MW	1650	1307	9.75%	1250

	o Pharma Limited																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Name of the Investor/owner</th> <th style="width: 15%;">Project Capacity (MW)</th> <th style="width: 15%;">PLF in 3rd party DPR</th> <th style="width: 15%;">Actual</th> <th style="width: 15%;">Variation in PLF</th> <th style="width: 15%;">Breaching Value for PLF</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Aurobindo Pharma Limited</td> <td style="text-align: center;">30 MW</td> <td style="text-align: center;">19.48%</td> <td style="text-align: center;">14%</td> <td style="text-align: center;">28.90%</td> <td style="text-align: center;">25.11%</td> </tr> </tbody> </table>							Name of the Investor/owner	Project Capacity (MW)	PLF in 3rd party DPR	Actual	Variation in PLF	Breaching Value for PLF	Aurobindo Pharma Limited	30 MW	19.48%	14%	28.90%	25.11%
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Name of the Investor/owner	Project Capacity (MW)	DPR Tariff (INR/kW)	Actual Tariff (INR/kW)	Variation in Tariff	Breaching value in Tariff Rate (INR/kW)													
Aurobindo Pharma Limited	30 MW	5.36	5.36	28.80%	6.90													
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<p>Verification team also confirmed the breaching values for individual parameters and thus confirms that the project is still additional</p> <p>Verification team also cross checked the references/ web links and supporting documents provided regarding input parameters and all the assumptions referred for investment analysis and confirms the parameters are correct and reasonable and acceptable.</p> <p>Common Practice analysis: -</p> <p>The common practice analysis is proved by following points as per the requirement</p>																		

	<p>of Methodological tool “Common Practice,” version 03.1 EB84, Annex 724:</p> <p>Applicable Geographical Area (Para 9): The project activity is a Grid connected solar PV system that is present in Andhra Pradesh State, India that supplies power to their own pharma unit through open access. Andhra Pradesh state is alone considered for Common practice analysis as tariff structure and CERC guidelines are state specific in India. The project is solar power plant with power as the output source of energy. All the solar power plant from Andhra Pradesh from the CDM ratification until the Purchase order placement in the identified capacity range is considered for analysis devoid of utilisation and mode of PPA agreement. With reference to the appointed date, by notification, constitute for the purposes of this Act, a Commission for the State to be known as the (name of the State) Electricity Regulatory Commission” Appropriateness of the same has been checked and confirmed from EA 2003 (http://www.cercind.gov.in/Act-with-amendment.pdf).</p> <p>Furthermore, following significant points on the State specific policy & regulatory framework on the renewable energy projects with special emphasis to solar power projects have been validated:</p> <p>Electricity Act 2003 (EA 2003) has changed the legal and regulatory framework for the renewable energy sector in India. The EA 2003 mandates policy formulation to promote renewable sources of energy by the federal government, the State governments and the State Electricity Regulatory Commissions (=SERCs) within their jurisdictions.</p> <p>The Electricity Act 2003 introduced some enabling provisions conducive to accelerated development of grid connected renewable energy sources. Under Section 61(h), promotion of cogeneration and generation of electricity from renewable sources of energy has been made the explicit responsibility of SERCs, which are bound by law to take these considerations into account while drafting their terms and conditions for tariff regulations. Nearly all SERCs have issued their tariff regulations incorporating suitable clauses, which will enable them to provide a preferential treatment to renewable energy (RE) during the tariff determination process. The SERCs determine the tariff for all renewable energy projects across the States, and the state-owned power Distribution Companies (DISCOMs) ensure grid connectivity to the renewable energy project sites.</p> <p>EA 2003 has initiated the adoption of the National Tariff Policy, 2006 as one of the key policies, National Tariff Policy (2006) framed under the Section 3 of the EA 2003. As per the excerpt from National Tariff Policy, 2006; pursuant to provisions of section 86(1)(e) of the EA 2003, the Appropriate Commission shall fix a minimum percentage for purchase of energy from such sources taking into account availability of such resources in the region and its impact on retail tariffs. Such percentage for purchase of energy should be made applicable for the tariffs to be determined by the SERCs latest by 01/04/2006.</p> <p>As mandated under section 86(1)(e) of the Electricity Act (2003), by 26/06/2012 SERCs had fixed quotas (in terms of % of electricity being handled by the power utility) to procure power from renewable energy sources. The mandate, which is called a Renewable Purchase Specification (RPS), varies from 0.5% to 14% in various states over varying time-scales. Few states have come out with technology specific RPSs. Besides, the state regulators determine the tariff for all RE projects in the states and ensure connectivity to the grid through extension of power evacuation from the RE project sites</p>
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²⁴<https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-24-v1.pdf>

	<p>Open access was introduced by the Electricity Act, 2003 to promote competition in the market by providing a choice of suppliers to the consumers and the act enabled large power consumers having connected load > 1 MW to buy cost effective power from power purchasers. According to the new rules, the consumers having a load >100 kW can directly purchase electricity through Renewable Power Producer (RPP) rather than only depending on DISCOMs.</p> <p>There are two options for generating solar energy: (1) Solar power plant on site (which might be on a rooftop, ground mount or carport solar installation), and, (2) Open Access solar power (wherein consumption of solar power is managed through the grid). The project activity falls under scenario 2, but with captive open access scheme under intra state open access model.</p> <p>Captive Open Access Scheme: In the captive capex model, the corporate buyer makes the 100% upfront capital investment. The buyer owns the power generating asset and the solar generated power is used for the buyer's consumption. Renewable developer constructs the plant, operates and maintains it over its lifetime. Key benefits are Hedge against electricity charges, tax benefits and No technical experience needed from a consumer's end. In this model, Open Access charges from the grid are applicable, but charges such as cross-subsidy surcharge and additional surcharge are waived off. Hence the regulations from SERC varies state wise and the investment climate for the renewable energy projects varies from State to State within India due to state specific local policy & regulatory framework as outlined by the State Electricity Regulatory Commissions of the respective state. This difference in investment condition leads to essential distinction among solar energy projects between different States of the host country India.</p> <p>Therefore, the investment climate for the renewable energy projects varies from State to State within India due to state specific local policy & regulatory framework as outlined by the State Electricity Regulatory Commissions of the respective state. This difference in investment condition leads to essential distinction among solar energy projects between different States of the host country India.</p> <p>Thus, the specific geographical area i.e., state of Andhra Pradesh for the common practice analysis of the proposed project activity is considered and thus the same is acceptable to the Verification team.</p> <p>Measure (Para 10): The project activity reduces greenhouse gas emissions by generating electricity using renewable energy source – solar power. Therefore, the project activity falls under the following measure:</p> <p>(b) Switch of technology with or without change of energy source including energy efficiency improvement as well as use of renewable energies.</p> <p>Output (Para 11): The project activity produces electricity. Therefore, electricity is considered as output of the project activity.</p> <p>Different Technologies (Para 12): The project activity uses solar energy for producing electricity and hence as per Para 12(a), the technologies which use energy source/fuel other than solar power will be considered as the different technologies for the project activity.</p> <p>Stepwise approach for common practice analysis has been carried out as per Methodological tool "Common Practice" version 03.1 EB84, Annex 7:</p> <p>Step (1): Calculate applicable capacity or output range as +/-50% of the total design capacity or output of the proposed project activity.</p>
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Range	Capacity	Unit
+50%	45	MW
Capacity of the proposed project activity	30	MW
-50%	15	MW

Step (2): Identify similar projects (both CDM and non-CDM) which fulfil all of the following conditions:

- (a) The projects are located in the applicable geographical area;
- (b) The projects apply the same measure as the proposed project activity;
- (c) The projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity;
- (d) The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g., clinker) as the proposed project plant;
- (e) The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1;
- (f) The projects started commercial operation before the GCC PSF is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity.

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

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

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

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

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

Since the project activity is 30 MW, the output range of +/- 50% has been considered as 45 MW (Higher range for comparison) to 15 MW (Lower range for Comparison) which is assessed to be correct.

As per the CDM guidelines), the start date of the project activity is before Purchase order date, 2016. Therefore, projects which have started commercial operation before 2016, have been considered for analysis.

	<p>Numbers of Similar projects identified, which fulfil above-mentioned conditioned are $N_{Solar} = 05$</p> <p>Verification team checked the sources which are considered to determine the similar projects and found correct.</p> <p>Step (3): Within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing verification. Note their number, N_{all}.</p> <p>The project activities, which have got registered or are under validation are 4 in number and have been excluded in this step. The list of the power plants identified is provided to the Verification team. After excluding the registered and under validation projects the total number of projects.</p> <p>$N_{all} = 01$</p> <p>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}.</p> <p>There is no different investment climate applied to the project activity and hence $N_{diff} = 0$</p> <p>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 like the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.</p> <p>Calculate $F = 1 - N_{diff}/N_{all}$ $F = 1 - (0/1) = 1$</p> <p>As per methodological tool “common practice” version 03.1, the proposed project activity is a “common practice” within a sector in the applicable geographical area if the factor F is greater than 0.2 and $N_{all} - N_{diff}$ is 2 not greater than 3.</p> <p>Thus, if both conditions are fulfilled, then project activity will be a common practice otherwise, the project activity is treated as not a common practice.</p> <p>Outcome of Common Practice analysis: As, i. $F = 1$; is greater than 0.2 ii. $N_{all} - N_{diff} = 0$; is not greater than 3</p> <p>The project activity does not satisfy second condition.</p> <p>Hence, project activity is not a common practice. The above discussions show that Solar power development is not a common practice and the project activity is not financially attractive; hence the project activity is additional and the verification team considers the approach and calculations acceptable as per the requirements in the methodological tool.</p>
Findings	CAR02, CAR 03 has been raised and successfully closed. Please refer to the appendix 4 for further details.
Conclusion	The information mentioned in the PSF is duly supported by evidence quoted herein. The verification team has described all steps taken, and sources of information used

	to cross-check the information contained in the PSF. The verification team determined that the evidence assessed is credible, where appropriate.
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D.3.6 Estimation of emission reductions or net anthropogenic removal

<p>Means of Verification</p>	<p>Project</p> <p>The verification team checked whether the equations and parameters used to calculate GHG emission reductions or net anthropogenic GHG removals for PSF is in accordance with applied methodology. Verification team checked section B.6 of the PSF to confirm whether all formulae to calculate baseline emissions, project emissions and leakage have been applied in line with the underlying methodology.</p> <p><u>Baseline Emissions:</u></p> <p>The baseline emissions as discussed in B.6.1 mentioned that the emissions would have occurred in the absence of the project activity. The emission reduction calculation has been done as per the approved ACM0002, version 21.0.</p> $BE_y = EG_{PJ, y} \times EF_{grid, CM, y}$ <p>Where,</p> <ul style="list-style-type: none"> BE_y = Baseline Emissions in year y (tCO₂/yr) EG_{PJ, y} = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr) EF_{grid, CM, y} = Combined margin CO₂ 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 CO₂/MWh) <p>As per PSF the estimated net electricity generation from the project activity is 49,833 MWh/year which is calculated based on the PLF which is taken from the project DPR which has been verified. Hence the value considered by the Project owner is acceptable. Further the project owner applied degradation factor 0.60% on every year on the net electricity generation by solar modules which is acceptable as most of the suppliers guaranteed. Based on the sectoral expertise and manufactures guaranteed of the panel suppliers of the project activity this is acceptable to verification team. The combined margin emission factor calculated based on the Tool is 0.9310 tCO₂e/MWh. Hence the baseline emission value will be 46,395tCO₂e/year.</p> <p><u>Project emission:-</u></p> <p>As per paragraph 35 of the applied methodology, ACM0002, version 21.0 “For most renewable energy project activities, PE_y = 0”. Since Solar power is a GHG emission free source of energy project emission considered as Zero for the project activity.</p> <p><u>Leakage Emissions:-</u></p> <p>As per the paragraph 61 of the applied methodology ACM0002, Version 21.0, “No other leakage emissions are considered. The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g., extraction, processing, transport etc.) are neglected.”</p>
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	<p>Emission reductions:-</p> <p>As per Paragraph 62 of the applied methodology, emission reductions are calculated as follows:-</p> $ER_y = BE_y - PE_y$ <p>Where:</p> <p>ER_y = Emission reductions in year y (tCO₂e/y) BE_y = Baseline Emissions in year y (t CO₂e/y) PE_y = Project emissions in year y (t CO₂e/y)</p> <p>Based on the above estimation ER_y = BE_y, Hence the estimated annual average emission reductions based on the ex-ante parameters is 46,395 tCO₂e.</p>
Findings	No Findings were Raised.
Conclusion	<p>Verification team confirm that the algorithms and formulae proposed to calculate project emissions, baseline emissions, and emission reductions in the PSF is in line with the requirements of the selected methodology ACM0002, version 21.0. For ex-ante calculation, the Verification team confirms that</p> <ul style="list-style-type: none"> • All assumptions and data used by the project participants are listed in the PSF including their references and sources. • All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PSF • All values used in the PSF are considered reasonable in the context of the proposed project activity • The baseline methodology and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions; • All estimates of the emissions can be replicated using the data and parameter values provided in the PSF. • All calculations are complete and without any omissions.

D.3.7 Monitoring plan

Means of Project Verification	<p>The monitoring plan is included in Section B.7 of the PSF based on the approved monitoring methodology ACM0002, version 21.0 and is correctly applied to the project activity. The monitoring plan has been found to be in compliance with the requirements of the applied methodology for calculation of GHG emission reductions, GCC Environment and Social Safeguards Standard v.3.0, and Project Sustainability Standard v.3.0. The monitoring plan includes following parameters:</p> <p>Ex-ante Parameters:</p>		
	S No	Ex-ante Parameter	Assessment
	1.	EF _{grid,OM,y}	<p>Operating margin CO₂ emission factor in the year y</p> <p>This parameter has been calculated as per the last three-year data found from the Baseline CO₂ emission database version 18.0, September 2022 published by the Central electricity authority, Government of India. This parameter will be used for the calculation of baseline emission and will be fixed for the entire crating period. The value of the parameter is 0.9518.</p>

	2.	$EF_{grid,BM,y}$	<p>Build margin CO₂ emission factor in the year y</p> <p>This parameter has been calculated as per the last three-year data found from the Baseline CO₂ emission database version 18.0, September 2022 published by the Central electricity authority, Government of India. This parameter will be used for the calculation of baseline emission and will be fixed for the entire crating period. The value of the parameter is 0.8687.</p>																													
	3.	$EF_{grid,CM,y}$	<p>Combined margin CO₂ emission factor in the year y</p> <p>This parameter has been calculated as per the last three-year data found from the Baseline CO₂ emission database version 18.0, September 2022 published by the Central electricity authority, Government of India. This parameter will be used for the calculation of baseline emission and will be fixed for the entire crating period. The value of the parameter is 0.9310.</p>																													
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	2.	Long-term jobs (> 10 year) created	<p>This parameter shall demonstrate positive impacts of aspects with respect to baseline scenario / BAU / pre-existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators. This Parameter is also applicable for SDG 8. Since this project activity is a Solar based power plant which have life around 25 years, due to this project activity long terms job is being produced. The records for the number of employees shall be provided during each monitoring period as per the QA/QC measures.</p> <p>This was confirmed by interviewing the local people working in the plant, various monitoring personnel of the project activity during remote inspection and the monitoring practices followed by the project owner and pay roll which was found to be is appropriate in relation to the project activity and is acceptable to the assessment team.</p>
	3.	New short-term jobs (< 1 year) created	<p>This parameter shall demonstrate positive impacts of aspects with respect to baseline scenario / BAU / pre-existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators. This Parameter is also applicable for SDG 8. Since this project activity is a Solar based power plant which have life around 25 years, due to this project activity long terms job is being produced. The records for the number of employees shall be provided during each monitoring period as per the QA/QC measures.</p> <p>This was confirmed by interviewing the local people working in the plant, various monitoring personnel of the project activity during remote inspection and the monitoring practices followed by the project owner and pay roll which was found to be is appropriate in relation to the project activity and is acceptable to the assessment team.</p>
	4.	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities	<p>This parameter shall demonstrate positive impacts of aspects with respect to the baseline scenario / BAU / pre-existing scenario and to demonstrate that they do not cause any net harm to society. It contributes to the quality of the employment by ensuring that the staff is trained and certified for the required positions. Minimum 1 no of woman employment will be employed if required and monitored through pay slips. The training records given to the employees in a year for the number of employees shall be provided during each monitoring period.</p>
	5.	Climate Change	<p>This parameter shall demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre-existing scenario and to demonstrate that they have an impact on SDG as per selected indicators. This shall justify SDG Goal 13 i.e. Take urgent action to combat climate change and its impacts. The monitoring parameter will be continuously monitored by means of energy meters as mentioned above monitoring parameter $EG_{PJ, facility, y}$.</p>
	6.	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	<p>This parameter is continuously monitored based on the number of jobs created by the project owner in both direct, indirect employment, permanent and temporary (Skilled/Unskilled) during project construction and project operation phase. This will be verified using the HR and payroll records of the employees who worked on the project activity. This was confirmed by interviewing the monitoring personnel of the project activity during remote site inspection and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.</p>

	7.	Ensure healthy lives and promote well-being for all at all ages	The parameter will Ensure healthy lives and promote well-being for all at all ages. The data will be annually recorded and can be checked through plant records. This was confirmed by interviewing the monitoring personnel of the project activity during remote site inspection and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	8.	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	The parameter will on long-term behaviour change processes through special programmes as per the CSR activity throughout the project lifetime. Annual monitoring and reports from the project owner can be used to monitor this parameter. The project owner provides nutritious food to students at the project site. This was confirmed by interviewing the monitoring personnel of the project activity during remote site inspection and the monitoring practices followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	9.	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	This parameter shall demonstrate positive impacts of aspects with respect to the baseline scenario / BAU / pre-existing scenario and to demonstrate that they do not cause any net harm to society. It contributes to the quality of the employment by ensuring that the staff is trained and certified for the required positions. The training records given to the employees in a year for the number of employees shall be provided during each monitoring period.
	10.	Ensure availability and sustainable management of water and sanitation for all	The parameter will Ensure availability and sustainable management of water and sanitation for all. The data will be annually recorded and can be checked through plant records. This was confirmed by interviewing the monitoring personnel of the project activity during remote site inspection 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.	Solid waste Pollution from Hazardous wastes (EL-02)	The PO has claimed that the hazardous waste produced during the operations and end of life by the Project activity will be regulated and disposed to the waste handlers. The waste management plan and waste management policy of the company have been verified by the assessment team and found to be in compliance with the local laws. The monitoring parameter will be continuously monitored by means of plant records. Actual plant records of project waste (if any) to be shared by the PO at the time of Emission reduction verification of the project activity.
	12.	E- Batteries (EL-05)	The PO has claimed that the hazardous waste produced during the operations and end of life by the Project activity will be regulated and disposed to the waste handlers. The waste management plan and waste management policy of the company have been verified by the assessment team and found to be in compliance with the local laws. The monitoring parameter will be continuously monitored by means of plant records. Actual plant records of project waste (if any) to be shared by the PO at the time of Emission reduction verification of the project activity.
	13.	Solid waste Pollution from E-wastes (EL-04)	As per monitoring plan E-waste generated from the project activity shall be stored and disposed-off as per the guidance of E-waste management and Handling Rules in the host country. As per the guidance the E-waste generated from the project activity will be collected by the dealer of authorized producer or dismantler or recycler or through the designated take back service provider of the producer to dismantler or recycler. This will be monitored by means of the records by the project owner in the all the installation sites when E waste will be disposed of or sent for refurbishment. This was confirmed by interviewing the monitoring personnel of the project activity during on site visit and the monitoring practices

		followed by the project owner is appropriate in relation to the project activity and its acceptable to the assessment team.
	14. Solid waste Pollution from end-of-life products/equipment (EL06)	The PO has claimed that the hazardous waste produced during the operations and end of life by the Project activity will be regulated and disposed to the waste handlers. The waste management plan and waste management policy of the company have been verified by the assessment team and found to be in compliance with the local laws. The monitoring parameter will be continuously monitored by means of plant records. Actual plant records of project waste (if any) to be shared by the PO at the time of Emission reduction verification of the project activity.
	The verification team confirmed that the parameters are sufficient to calculate the emission reductions including the environmental and social safeguards in accordance with the methodology and are correctly reported in the PSF.	
Findings	CL05 has been raised and successfully closed. Please refer to the appendix 4 for further details.	
Conclusion	<p>The verification team confirms that,</p> <ul style="list-style-type: none"> • The verification team confirms that the monitoring plan based on the approved monitoring methodology is correctly applied to the PSF. • The monitoring plan will give opportunity for real measurements of achieved emission reductions. The verification team considers that monitoring arrangements described in the monitoring plan is feasible within the project design. • The means of implementation of the monitoring plan are sufficient to ensure that the emission reduction and other voluntary labels achieved from the project activity is verifiable and thereby satisfying the requirement of Verification Standard. • The monitoring plan will give opportunity for real measurements of achieved emission reductions. There are no host country requirements pertaining to monitoring of any sustainable development indicators. Therefore, there are no such parameters identified in the PSF. 	

D.4. Start date, crediting period and duration

Means of Project Verification	<p>The Start date of the project activity is 24/05/2017 which is commissioning date of the project activity. The Commissioning certificate of the installation of the project activity has been verified and confirmed start date as per PSF is found correct and acceptable to verification team.</p> <p>A crediting period of a maximum length of 10 years has been selected by project owner. The start date of the crediting period is stated as 24/05/2017, which is appropriate as per paragraph 40(b) of the Project Standard version 03.1. The crediting period is therefore from 24/05/2017 to 23/05/2027.</p> <p>The expected lifetime of the project activity is 25 years which is verified by the technical details of the PV panels and confirmed based on the sectoral expertise.</p>
Findings	No Findings were raised
Conclusion	The start dates and the crediting period type & length have been verified and found to be in accordance with GCC project standard version 03.1.

D.5. Environmental impacts

Means of Project Verification	As The guidelines on Environmental Impact Assessment have been published by Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006. Further amendments to the notification have been done on 14/07/2018, the Solar Power projects are not listed in any of the categories of the schedule, hence, No EIA required as per host country legislation
Findings	No findings were raised
Conclusion	In the opinion of the Verification team, in the project activity environmental impacts is not significant as per host country legislation. Further analysis not required in this context.

D.6. Local stakeholder consultation

Means of Project Verification	<p>A LSC was conducted for the project activity on below mentioned dates: -</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Invitation date</th> <th>Meeting date</th> </tr> </thead> <tbody> <tr> <td>Jamsar, Lalsar Village, Bikaner District, Rajasthan</td> <td>-</td> <td>10/06/2022</td> </tr> </tbody> </table> <p>The stakeholders were invited through invitations. The consultation was performed to meet the requirement of the GCC since there are no Host country requirement to conduct consultation for such projects.</p> <p>The verification team confirms that the local stakeholder consultation process was performed by the project owner before the submission of the project activity for global stakeholder consultation.</p> <p>The objective of the local stakeholder consultation carried out to comply with GCC requirements and identify the comments/concerns that might be required to be addressed by PO. The stakeholder consultation responses were received by the Verification team. The verification team confirmed by review of the stakeholder responses that the summary of stakeholders' comments reported in PSF was accurate. There was no negative feedback received. The list of the relevant stakeholders who were requested for feedback is also provided in the PSF.</p>	Location	Invitation date	Meeting date	Jamsar, Lalsar Village, Bikaner District, Rajasthan	-	10/06/2022
Location	Invitation date	Meeting date					
Jamsar, Lalsar Village, Bikaner District, Rajasthan	-	10/06/2022					
Findings	CAR 05 was raised and closed successfully. Please refer to the appendix 4 for further details.						
Conclusion	<p>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 participant considering the ongoing pandemic to receive unbiased comments from the all the stakeholders.</p> <p>The verification team confirms that the local stakeholder consultation process performed for the project activity fulfils the requirements.</p>						

D.7. Approval and Authorization- Host Country Clearance

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

	subsequent verification, when the issuance of carbon credit is considered beyond 1 st Jan 2021.
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D.8. Project Owner- Identification and communication

Means of Project Verification	The information and contact details of the project owner and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF which was checked. The Authorization letters signed by the project owners has been verified and also the company registration documents and project owner valid KYC document have been checked. The legal owner of the project is M/s Aurobindo Pharma Limited and same to be demonstrated by the project owner through the commissioning certificate, power purchase agreement of M/s Aurobindo Pharma Limited. All information were consistent in these documents and acceptable to the verification team
Findings	No Findings were raised
Conclusion	The verification team confirms that the information of the project owners have been appended as per the template and the information regarding the project owners stated in the PSF and authorization letter was found to be consistent.

D.9. Global stakeholder consultation

Means of Project Verification	The PSF was made available through the dedicated interface on the GCC website. The duration of the period for submission of comments for the global stakeholder consultation was from 10/10/2022 to 24/10/2022. There were minor comments received during this period
Findings	The 1 minor comments minor comments were received during Global stakeholder consultation are as follows: Minor Issue 1: LOA mentions Aurbindo Pharma Limited as PO however on GCC portal Infinite Environmental Solutions LLP is mentioned as Focal Point.
Conclusion	The PSF had been made public for receiving stakeholder feedback and some minor comments were raised during the GSC process. The verification team confirms that all the comments raised during the Global stakeholder consultation has been addressed and same has been updated in the PSF.

D.10. Environmental Safeguards (E+)

Means of Project Verification	<p>The Project owner has chosen to apply for the Environmental No-net-harm Label (E+). The assessment of the impact of the project activity on the environmental safeguards has been carried out in section E.1 of the PSF. Out of all the safeguards no risks were identified to the environment due to the project implementation and operation. And the following have been indicated as positive impacts: -</p> <p>Environment – Air- CO₂ emissions. Environment – Land- Solid waste Pollution from Hazardous wastes Environment – Land- Solid waste Pollution from E-wastes. Environment – Land- Solid waste Pollution from Batteries Environment – Land- Solid waste Pollution from end-of-life products/ equipment Environment – Land- land use change (change from cropland /forest land to project land) Environment – Natural Resources – Replacing fossil fuels with renewable sources of energy.</p> <p>The appropriate monitoring plan has been put in place to monitor the elements marked positive and risks identified due to implementation of the project activity. Also, the parameter compliance with local regulations/laws i.e., E-Waste generated from</p>
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	the project activity will be also monitored to ensure the compliance of the laws during the crediting period. The detailed matrix has been included in appendix 5 of the report.
Findings	CL03, CAR 06 has been raised and successfully closed. Please refer to the appendix 4 for further details.
Conclusion	Based on the documentation review the verification team can confirm that Project Activity is not likely to cause any negative harm to the environment but would have a positive impact, hence, is eligible to achieve additional E+ certifications

D.11. Social Safeguards (S+)

Means of Project Verification	<p>The Project owner has chosen to apply for the Social No-net-harm Label (S+). The assessment of the impact of the project activity on the social safeguards has been carried out in section E.2 of the PSF. Out of all the safeguards no risks to the society due to the project implementation were identified and the following have been indicated as positive impacts: -</p> <ul style="list-style-type: none"> a) Social – Jobs: Long-term jobs (> 1 year) created/ lost b) Social – Jobs: New short-term jobs (< 1 year) created/ lost c) Social – Jobs: Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities <p>An appropriate monitoring plan has been put in place to monitor the elements. The detailed matrix has been included in appendix 6 of the report</p>
Findings	CAR 07 has been raised and successfully closed. Please refer to the appendix 4 for further details.
Conclusion	Based on the documentation review the verification team can confirm that Project Activity is not likely to cause any negative harm to the society but would have a positive impact, hence, is eligible to achieve additional S+ certifications

D.12. Sustainable development Goals (SDG+)

Means of Project Verification	<p>The assessment of the contribution of the project activity on United Nations Sustainable Development Goals has been carried out in section F of the PSF. Out of the 17 Goals project activity has no adverse effect on any of the goal and contribute to 6 SDGs:</p> <ul style="list-style-type: none"> • Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture • Goal 3. Ensure healthy lives and promote well-being for all at all ages • Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all • Goal 6. Ensure availability and sustainable management of water and sanitation for all • Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all • Goal 13. Take urgent action to combat climate change and its impact <p>An appropriate monitoring plan has been put in place to monitor the elements. The detailed matrix has been included in appendix 7 of the report</p>
Findings	CAR 08 has been raised and successfully closed. Please refer to the appendix 4 for further details.

Conclusion	Based on the documentation review the verification team can confirm that Project activity is not likely to contribute to the United Nations Sustainable Development Goals and would have a positive impact, hence, is eligible to achieve additional SDG+ certifications.
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D.13. Authorization on Double Counting from Host Country (for CORSIA)

Means of Project Verification	A declaration under section A.5 of the PSF has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 24/05/2017 to 23/05/2027.
Findings	CAR 09 has been raised and successfully closed. Please refer to the appendix 4 for further details.
Conclusion	The project owner has clarified the intent of use of carbon credits for CORSIA. hence no double counting will take place.

D.14. CORSIA Eligibility (C+)

Means of Project Verification	The project activity meets the CORSIA Eligibility since the crediting period is after 01/01/2016 and the project is applying for registration under GCC which is one of the approved programmes for eligibility. It was also confirmed that the project activity does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes
Findings	FAR 01 is raised. Please refer to the appendix 4 for further details.
Conclusion	The project activity meets the CORSIA Label (C+) eligibility: <ul style="list-style-type: none"> • The Project Activity complies with all the requirements for the Emission Unit Criteria of CORSIA • A written attestation from the host country's national focal point on double counting is not required for Emission units till 31 December 2020; • The project meets all the requirement of the Emission Unit Criteria of CORSIA required for projects under GCC and therefore can be issued a CORSIA Label (C+) certification.

Section E. Internal quality control

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

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

Section F. Project Verification opinion

LGAI Technological Center S.A. (Applus+ Certification) has performed a verification of the “30 MW Solar Power Plant by Aurobindo Pharma Limited”. The verification is performed on the basis of GCC criteria project verification standard, Version 3.1 for the project activity, GCC guideline and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

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

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented as designed, the project is likely to achieve the estimated average annual emission reductions of **46,395 tCO₂e** per year.

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

In detail the conclusions can be summarized as follows:

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

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

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
AMS	Approved Methodology for SSC Projects
BE	Baseline Emission
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CM	Combined Margin
CPCB	Central Pollution Control Board
CO ₂	Carbon dioxide
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CP	Crediting period
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Green House Gas
GW	Giga Watt
GWh	Giga Watt hour
IPCC	Intergovernmental Panel on Climate Change
kW	Kilo Watt
kWh	Kilo Watt hour
LSC	Local Stakeholder Consultation
MoV	Means of Verification
MP	Monitoring Plan
MW	Mega Watt
MWh	Mega Watt hour
OM	Operating Margin
PA	Project Activity
PSF	Project Submission Form
PE	Project Emission
PLF	Plant Load Factor
PO	Project Owner
PS	Project Standard
SDG	Sustainable Development Goal
tCO ₂ e	Tonnes of Carbon dioxide equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VS	Verification Standard

Appendix 2. Competence of team members and technical reviewers

- **Mr. Pankaj Kumar** has done M. Sc in Environment Management from Forest Research Institute, Dehradun and B. Sc. (Hons.) in Environment & Water Management from Magadh University, Bihar, India. He has also done Post Graduate Diploma in Environmental Law from NLSIU, Bangalore. He has more than 12 years of working experience in GHG Assessments and has participated during his career in Agencies and DOEs like MITCON, Agrinergy, Carbon Check and is empanelled with Applus+ Certification since 2015 for the performance of CDM/VCS/GS project assessments. He has extensive experience in the Renewable, Waste Management and Energy Demand Scopes of UNFCCC CDM and has done more than 100 Validations and Verifications of PAs and PoAs as Lead Auditor, Technical Expert and Technical Reviewer, mainly in Asia, Africa, USA, Asia Pacific and Americas under CDM, Verified Carbon Standard, Gold Standard & Social Carbon Standard, Brazil. He is an experienced, qualified and result oriented Environment and climate change professional having 16 yrs. of relevant experience in Climate Change (Mitigation & Adaptation), Environmental Due Diligence, Disaster Risk Reduction, Climate finance, adaptation planning, capacity building, validation and verification of GHG project. He can also provide technical support for environmental investigative, remedial projects involving air, water and soil, Waste management, EIA, Environmental Compliance, ISO 14001, OHSAS 18001, GHG accounting (ISO 14064) and Carbon foot printing. Mr. Pankaj Kumar is based in Patna, India. Mr. Pankaj Kumar may participate as part of the Audit Team as Lead Auditor and Technical Expert for the assessment.
- **Mr. Deepak Pundlik** has 15 years of experience in climate change, waste management and environmental management. After completing Masters in Environment Sciences from Pune university, He has worked in waste management field. As a GHG consultant, he handled more than 50 projects under renewable energy, waste management sectors during his stint with companies - MITCON and Thermax Limited. As a GHG auditor, he has validated/verified projects under CDM/VCS/GS and GCC mechanisms from renewable energy, energy demand, waste management sectors.
- **Mr. Denny Xue** has a Bachelor's Degree on Thermal Energy Engineering and Master's Degree on Environmental Engineering. He has more than 10 years of experience on CDM project development. Before he joined Applus+ LGAI, he has been worked for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development. He is working with Applus+ since 2011 carrying out Validation and verification for CDM/GS/VCS project under scope 1 and 13 as auditor, lead auditor, technical expert and technical reviewer.

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
1	GCC	GCC Program Manual	Version 03.1	Project Owner
2	GCC	Project Standard	Version 03.1	Project Owner
3	GCC	Verification Standard	Version 03.1	Project Owner
4	GCC	Environment-and-Social - Safeguards-Standard	Version 03.0	Project Owner
5	GCC	Project-Sustainability-Standard	Version 03.1	Project Owner
6	GCC	Project Submission Form	Version 04.0	Project Owner
7	GCC	Clarification 01	Version 01.3	Project Owner
8	GCC	Clarification 02	Version 01.0	Project Owner
9	GCC	Standard on avoidance of double counting	Version 01.0	Project Owner
10	Project Owner	Webhosted PSF Final PSF	Version 01, Dated 06/03/2023 Version 04, Dated 01/04/2023	Project Owner
11	Project Owner	Webhosted ER sheet Final ER sheet	Version 01, Dated 06/03/2023 Version 04, Dated 01/04/2023	Project Owner
12	UNFCCC	CDM approved Methodology: ACM0002	version 21.0	Project Owner
13	UNFCCC	Tool to calculate the emission factor	Version 07.0	Project Owner
14	Project Owner	Commissioning Certificate of Solar PV Project		Project Owner
15	Project Owner	Technical Details of Solar PV Modules installed in the PA.	-	Project Owner
16	Project Owner	30 MW LTOA Open Access Agreement and Approval Letter	-	Project Owner
17	Project Owner	Local Stakeholder Consultation documents like invitation, Notes on LSC, Meeting Photos	-	Project Owner
18	Project Owner	Employee Records / HR Records	-	Project Owner
19	Project Owner	CSR Policy of the Project Owner Recruitment & Selection Policy	-	Project Owner
20	Project Owner	Detailed Project Report	-	Project Owner
21	State Utility	Calibration Certificate	-	Project Owner
22	State Utility	Joint Metering Report and Sales Invoices.	-	Project Owner
23	Government of	Electricity Act 2003 National	Dated 26/05/2003	Publicly

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	India	Electricity Policy 2005	Dated 12/02/2005	available
24	CDM	CDM Website https://cdm.unfccc.int/Projects/projectsearch.html	-	Publicly available
25	VERRA	Verra Registry https://registry.verra.org/app/search/VCS/All%20Projects	-	Publicly available
26	Gold Standard	GS Website: https://registry.goldstandard.org/projects?q=&page=1	-	Publicly available
27	I-REC Standard	International REC Standard (I-REC) https://www.irecstandard.org/registries/	-	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: 11/01/2023
Description of CL				
VVB has found certain fields are left blank in the submitted PSF. Clarification from PO is requested.				
Project Owner's response				Date:06/03/2023
The revisions are made in the revised PSF				
Documentation provided by Project Owner				
Revised PSF ,Version 2.0				
GCC Project Verifier assessment				Date: 16/03/2023
PO has updated the left blank space in revised PSF, Version 2.0. Thus, CL is Closed.				
CL ID	02	Section no.	D.2	Date: 11/01/2023
Description of CL				
VVB has found the version number of methodology applied, Rules and requirements, CEA database etc. are not updated. Clarification sought from PP.				
Project Owner's response				Date: 06/03/2023
The data are updated and submitted in the revised PDD, section D.2, Version 2				
Documentation provided by Project Owner				
NA				
GCC Project Verifier assessment				Date: 16/03/2023
PO has updated the version number of methodology applied, Rules and requirements, CEA database etc in the revised PSF, Version 2.0. Thus, CL is Closed.				
CL ID	03	Section no.	D.2	Date: 11/01/2023
Description of CL				
PO has considered the the Ex-Ante scoring of environmental impact of Solid waste Pollution from Hazardous wastes (EL02) as +1 under section E.1. However as per the GCC "Environment and Social Safeguards Standard" version 3.0 para 22(b) which mentions "If the environmental impact is positive and assessed as "Harmless" with respect to the pre-project scenario or baseline scenario and the impact can be measured or has been measured and monitored to demonstrate that it is 'harmless', a score of "+1" shall be assigned to the aspect", PO should compare the impact from project activity from the pre project scenario, in which there were no panels. Then how can PO consider the score as +1. Clarification from PO is requested.				
Project Owner's response				Date: 06/03/2023
The E+,S+ are changed as per the guidelines and as per the GCC requirements. As per step 7 of the GCC standard (ii) If the Net Score is: a. Zero or positive, the overall anticipated impact of the project during construction and operations phase is considered as negligible and the Project Activity is likely to cause no-net-harm;				
As per point no 2 of step 4: If impacts exist for certain aspects, but the Project Activity by design are expected to comply with the applicable national legal/regulatory/stricter voluntary corporate requirements and will be within legal/voluntary corporate limits, then the severity of impacts shall be indicated as "Harmless". Such aspects would have to define the performance indicators, which would be tracked ex-post to demonstrate compliance with the legal/stricter voluntary corporate mandate and to prove that the project remains "harmless" with respect to environmental or social impacts. Benchmarks to define a project "harmless" can be as per legal requirement or as per company's stricter voluntary internal corporate target and is the choice to be made by the Project Owner in the PSF. So the indicator is marked +1 and mentioned harmless in the respective sections of the indicators.				
Documentation provided by Project Owner				
NA				
GCC Project Verifier assessment				Date: 16/03/2023

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The above response indicate that the project activity is harmless if proper monitoring is done which is accepted. Still PP is requested to explain how the scoring is done as +1 which mandates the project activity to be harmless when compared to pre project scenario. Thus, CL is Open.	
Project Owner's response	Date: 20/03/2023
As per the requirement of GCC guidelines on version 3.0 of environmental and social safeguard standard the revision are made in the section E.1	
GCC Project Verifier assessment	Date: 30/03/2023
PO has revised the section E.1 inline with the requirement of GCC guidelines on version 3.0 of environmental and social safeguard standard and it is found correct. Thus, CL is Closed.	

CL ID	04	Section no.	D.2	Date: 11/01/2023
Description of CL				
PO is requested to submit the following documents for verification.				
<ol style="list-style-type: none"> 1. PPA/ Wheeling Agreements 2. O&M contracts 3. Additionality supportings 4. DPR 5. Project Cost Supportings 6. Technical Specification 7. CA certificate for actual cost. 8. Sample JMRs. 9. SDG parameter supportings 10. S+ and R+ supportings 11. Any other documents required by project. 				
Project Owner's response				Date: 06/03/2023
The supporting documents are provided with this submissions				
Documentation provided by Project Owner				
<ul style="list-style-type: none"> • PPA/ Wheeling Agreements • O&M contracts • Additionality supportings • DPR • Project Cost Supportings • Technical Specification • CA certificate for actual cost. • Sample JMRs. • SDG parameter supportings • S+ and R+ supportings • Any other documents required by project. 				
GCC Project Verifier assessment				Date: 16/03/2023
PO has submitted the above requested documents and same is found correct. Thus, accepted. CL is Closed.				

CL ID	05	Section no.	D.1	Date: 16/01/2023
Description of CL				
<ol style="list-style-type: none"> 1. PO is requested to clarify how the panels are cleaned and are there any sources of emissions due to cleaning activity in the section B.1 of PSF 2. Also, pls provide line diagram of the unit in the section B.1 of PSF 				
Project Owner's response				Date: 06/03/2023
<ol style="list-style-type: none"> 1. The panel cleaning procedure is mentioned in section and 2. single line diagram is provided 				
Documentation provided by Project Owner				
GCC Project Verifier assessment				Date: 16/03/2023

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1. PO has not provided the clarification on how the panels are cleaned and are there any sources of emissions due to cleaning activity in the section B.1 of PSF. Thus, CL is Open.
2. Single line diagram of the units are now provided in Section B.1 of the PSF. Thus, CL is Closed.
Project Owner's response Date: 27/03/2023
1. Solar power projects use a modest amount of water for cleaning solar panels for the purpose of collection and reflective surfaces like mirrors, heliostats, and photovoltaic (PV) panels. However, the quantity of water used is very insignificant, particularly when compared with the baseline power plants. So there are no sources of emissions occur due to the cleaning activity of solar panel. The method of cleaning is included in section b.3 and Section B.1 is especially only for the "Reference to methodology(ies) and tools applied in the project" for more clarification kindly refer the PSF filing GCC guidelines "Para 17 and 18".
GCC Project Verifier assessment Date: 30/03/2023
PO has provided the clarification on how the panels are cleaned in Environment safeguards section and the sources of emissions due to cleaning activity and it is found that there are no sources of emissions occur due to the cleaning activity of solar panel. Thus, CL is Closed.

Table 2. CARs from this Project Verification

CAR ID	01	Section no.	D.2	Date: 11/01/2023
Description of CAR				
1. As per the guidelines provided for PSF, PO shall revise and complete the sections A.1, A.3, C.1, C.2, C.3, G.1 of the submitted PSF.				
2. PO requested to submit detailed technical specifications and evidences for the lifetime of the plant/modules etc. Kindly submit.				
Project Owner's response				Date: 06/03/2023
The entire section of the PSF, Section A1, A3, C.1, C2, C3 and G1 are revised				
Documentation provided by Project Owner				
PSF				
GCC Project Verifier assessment				Date: 16/03/2023
1. PO has revised the entire section of the PSF, Section A1, A3, C.1, C2, C3 and G1 as per the guidelines provided for PSF. Thus, CAR is Closed.				
2. PO has not submitted the detailed technical specifications and evidences for the lifetime of the plant/module etc. Kindly submit. CAR is Open.				
Project Owner's response				Date: 27/03/2023
2. The details of technical specification are given in the submitted DPR, Table 6.2, 6.4 and in page 12 and the life time that is power warranty is 25 years as per the same technical specification table. The missed details are incorporated in the section A3 of the PSF.				
GCC Project Verifier assessment				Date: 30/03/2023
PO has updated the details of technical specifications and evidences for the lifetime of the plant/module in section A.3 of the PSF and same is found correct. Thus, CAR is Closed.				
CAR ID	02	Section no.	D.2	Date: 11/01/2023
Description of CAR				
As per the requirement of para 14 and 15 of the GCC Project Standard Project activity is required to demonstrate compliance to criteria for CORSIA. Corrective action sought.				
Project Owner's response				Date: 06/03/2023

<p>1. The Project Owner ensure that the Project Activity complies with all the requirements for the CORSIA Emissions Unit Eligibility Criteria as stipulated by Project Standard.</p> <p>The start of Project Activity operation and the start of crediting period shall be on or after 1 January 2016 and complies with all the applicable GCC rules and requirements; b. The Project Activity is likely to result in GHG emission reductions as a result of implementation of the registered GCC project activity; c. The Project Activity has not caused any net harm to the environment and/or society and therefore achieves Environmental No-net-harm Label (E +) and Social No-net harm Label (S +); d. The Project Activity has made contributions for achieving United Nations Sustainability Development Goals (SDGs)</p> <p>The comissioning certificate is provided for the project conformity to CORSIA, and the declaration and documents supports the E+ S+ and SDGs are submitted and the Host country HCA will be provided during issuance.</p>	
Documentation provided by Project Owner	
Self -declaration document	
GCC Project Verifier assessment	Date: 16/03/2023
As per the requirement of para 14 and 15 of the GCC Project Standard Project activity is required to demonstrate compliance to criteria for CORSIA and same is not provided in the revised PSF Version 02, Thus, CAR is Open.	
Project Owner's response	Date: 27/03/2023
The details of the CORSIA requirements are included in the revised PSF version03 under section A.5 of the PSF.	
GCC Project Verifier assessment	Date: 30/03/2023
The details of the CORSIA requirements are included in the revised PSF version03 under section A.5 of the PSF. However, under section A.6 the referred section B.5 for the additional requirements for CORSIA is incorrect. Thus, CAR is Open.	
Project Owner's response	Date: 01/04/2023
The section A-6 is filled as per PSF filling guidelines and resubmitted.	
GCC Project Verifier assessment	Date: 03/04/2023
PO has filled section A.6 the additional requirements for CORSIA as per PSF filling guidelines. Thus, CAR is Closed.	

CAR ID	03	Section no.	D.3.5	Date: 20/01/2023
Description of CAR				
<ol style="list-style-type: none"> 1. PP is requested to revised the section B.2 regarding applicability of the methodology and show applicability/non-applicability to each and every condition required as per methodology. 2. PO is requested to revised all the values of parameters as per the latest version of the respective sources. Values are commented in the PSF for reference. 3. In the IRR sheet inflation forecast of 2016 is considered whereas latest report of inflation forecast for crediting period was 2017. Justification from PO is requested. 4. PO is requested to submit the JMRs from start date of the Project activity till one year of Project activity to cross check the generation of electricity from start date of Project activity and actual PLF achieved. 				
Project Owner's response				Date: 06/03/2023
<ol style="list-style-type: none"> 1. The applicability condition is revised 2. All the parameters as per the comments are revised 3. The inflation forecast from Oct 2016 is considered and revised IRR is submitted 4. JMRs are submitted from the start date till one year of operation 				
Documentation provided by Project Owner				

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GCC Project Verifier assessment	Date: 16/03/2023
<ol style="list-style-type: none"> 1. In Section B.2 demonstrate applicability criteria of each tool separately and correctly. PO is requested to revise and resubmit the PSF. CAR is Open. 2. PO has revised all the values of parameters as per the latest version of the respective sources and it is found correct. Thus, CAR is Closed. 3. In the IRR sheet inflation forecast of 2016 is considered whereas latest report of inflation forecast for crediting period was 2017. Justification from PO is requested. CAR is Open 4. PO has submitted the JMRs from start date of the Project activity till one year of Project activity to cross check the generation of electricity from start date of Project activity and actual PLF achieved and it is found correct. Thus, CAR is Closed. 	
Project Owner's response	Date: 27/03/2023
<ol style="list-style-type: none"> 1. The applicability of each tool is given as per the methodology requirement and reference tools and the non-applicable conditions are mentioned as not applicable separately across each conditions in the revised PSF 3. As per the Investment analysis tool, only the central bank of India (i.e.) RBI for April 2016 and its inflation forecast for 10 years down the line is considered for establishing benchmark and the revised IRR is submitted. 	
GCC Project Verifier assessment	Date: 30/03/2023
<ol style="list-style-type: none"> 1. PO has provided the applicability of each tool as per the methodology requirement and reference tools and the non-applicable conditions are mentioned as not applicable separately across each conditions in the revised PSF. Thus, CAR is Closed. 2. PO is requested to mention the investment decision date in PSF and provide the latest report of inflation forecast inline with applicable Investment tool. CAR is Open. 	
Project Owner's response	Date: 01/04/2023
<ol style="list-style-type: none"> 2. The investment decision date is given in the revised PSF and the link on inflation present year is submitted along with this submission from imf. 	
GCC Project Verifier assessment	Date: 03/04/2023
<p>PO has provided the investment decision date and link on inflation in revised PSF. Thus, CAR is Closed.</p>	

CAR ID	04	Section no.	D.3.7	Date: 06/03/2023
Description of CAR				
<ol style="list-style-type: none"> 1. As the project is already commissioned, PO is requested to submit the evidence for the commissioning date of the project. 				
Project Owner's response				Date: 06/03/2023
<ol style="list-style-type: none"> 1. Commissioning date of the project activity is submitted 				
Documentation provided by Project Owner				
Commissioning certificate				
GCC Project Verifier assessment				Date: 16/03/2023
<p>PO has submitted the commissioning certificate of the project activity and it is found correct and consistent. Thus, CAR is Closed.</p>				

CAR ID	05	Section no.	D.6	Date: 11/01/2023
Description of CAR				
<p>PO requested to submit all supporting documents for the Local Stakeholders Consultation conducted including invitations and MoMs of the meetings & outcomes of the meetings. Kindly submit.</p>				
Project Owner's response				Date: 06/03/2023
<p>LSC documents are submitted.</p>				
Documentation provided by Project Owner				
NA				
GCC Project Verifier assessment				Date: 16/03/2023
<p>PO has submitted the supporting documents for the Local Stakeholders Consultation conducted including invitations and MoMs of the meetings & outcomes of the meetings. Thus, CAR is Closed.</p>				

Project Verification Report

CAR ID	06	Section no.	D.10	Date: 11/01/2023
Description of CAR				
PO requested to review & revised the Environmental safeguards for the positive and negative impacts. Corrective action sought.				
Project Owner's response				Date: 06/03/2023
ESG is revised in the revised PSF				
Documentation provided by Project Owner				
PSF version 2				
GCC Project Verifier assessment				Date: 16/03/2023
Environmental safeguards for the positive and negative impacts are found inconsistent. Thus, CAR is Open.				
Project Owner's response				Date: 27/03/2023
The environmental safeguards for positive and negative impacts are revised in the PSF				
Project Owner's response				Date: 30/03/2023
PO has revised the environmental safeguards for positive and negative impacts and same is found consistent. Thus, CAR is Closed.				

CAR ID	07	Section no.	D.11	Date: 11/01/2023
Description of CAR				
PO requested to review & revised the social safeguards for the positive and negative impacts. Corrective action sought.				
Project Owner's response				Date: 06/03/2023
The Social safeguard standards are revised				
Documentation provided by Project Owner				
PSF version2				
GCC Project Verifier assessment				Date: 16/03/2023
PO has review & revised the social safeguards for the positive and negative impacts. Thus, CAR is Closed.				

CAR ID	08	Section no.	D.3.6	Date: 16/01/2023
Description of CAR				
<ul style="list-style-type: none"> PO shall mention the technical specifications of Panels, Inverters, Lines, etc in Section A.3. as per the template of PSF. Central Electricity Authority of India has recently updated CEA CO₂ database to version 18.0. PO is requested to considered the updated version18.for emission reduction calculation 				
Project Owner's response				Date: 06/03/2023
<ul style="list-style-type: none"> The solar PV technical details are mentioned in section A.3 of the psf CEA updated versión 18 is used for Emission factor calculation and revised document is submitted 				
Documentation provided by Project Owner				
NA				
GCC Project Verifier assessment				Date: 16/03/2023
<ul style="list-style-type: none"> PO has mentioned the solar PV technical details in section A.3 of the revised PSF Version 02. Thus, CAR is Closed. PO has updated the CEA CO₂ database to version 18.0. and considered the updated version18 for emission reduction calculation. Thus, CAR is Closed. 				

CAR ID	09	Section no.	D.13	Date: 16/01/2023
Description of CAR				
The project owner shall submit a No double counting declaration and Host Country Attestation on Double Counting related to CORSIA requirements. Kindly submit.				
Project Owner's response				Date: 06/03/2023
The no doublé counting declaration is provided with this submission				
Documentation provided by Project Owner				
GCC Project Verifier assessment				Date: 16/03/2023
PO has submitted the declaration for no double counting. Thus, CAR is Closed.				

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CAR ID	10	Section no.	D.13	Date: 16/01/2023
Description of CAR				
In section B.2, para 1 and Tool 1, project bundling is talked about, then why Appendix 8 section is not addressed as per meth? Like Avoidance of Double Accounting. Please correct .				
Project Owner's response				Date: 06/03/2023
The project is not a bundle Activity and hence the corrections are made in revised PSF				
Documentation provided by Project Owner				
GCC Project Verifier assessment				Date: 16/03/2023
PO has corrected the mentioned details in revised PSF. Thus, CAR is Closed.				

CAR ID	11	Section no.	D.13	Date: 16/01/2023
Description of CAR				
In the PSF, section E.1. 'Environmental Safeguard' of PSF column Environment – Natural Resources- (ENR07)- please confirm how the project is expected to supply an average of 110,202 MWh per year renewable electricity to grid, is this linked to total annual generation of 51,193,440 (KWh) mentioned in section B.5 Sub-step 2c of PSF.				
Project Owner's response				Date: 06/03/2023
<i>The secitons are revised in the PSF</i>				
Documentation provided by Project Owner				
GCC Project Verifier assessment				Date: 16/03/2023
PO has revised Section E.1. 'Environmental Safeguard' of PSF column Environment – Natural Resources- (ENR07) in the revised PSF Version 02. Thus, CAR is Closed.				

Table 3. FARs from this Project Verification

FAR ID	01	Section no.		Date: 16/03/2023
Description of FAR				
Verifying Verifier to check Host Country Attestation on Double Counting related to CORSIA requirements during verification stage				
Project Owner's response				Date:
Documentation provided by Project Owner				
GCC Project Verifier assessment				Date:

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

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards								Project Owner’s Conclusion		GCC Project Verifier’s Conclusion (To be included in Project Verification Report only)	
		Description of Impact <i>(positive or negative)</i>	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	3 rd Party Audit
				Not Applicable	Harmless	Harmful	Operational Controls	Program of Risk Management Actions	Monitoring parameter frequency and of	Ex- Ante scoring of the environmental impact (as per scoring matrix Appendix-02)			
Environmental Aspects on the identified categories²⁵ indicated below.	<i>Indicators for environmental impacts</i>	<i>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.</i>	<i>Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified risks of environmental impacts.</i>	<i>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</i>	<i>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,</i>	<i>If negative environmental impacts exist that will not be in compliance with the applicable national legal/regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-safe)</i>	<i>Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as ‘Harmful’ at least to a level that is in compliance with applicable legal/regulatory requirements or industry best practice or stricter voluntary corporate requirements</i>	<i>Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been identified as Harmful.</i>	<i>Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless or harmful. The frequency of monitoring to be specified as well including the data source.</i>	-1 0 +1	<i>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.</i>	<i>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.</i>	

²⁵ sourced from the CDM SD Tool and the sample reports are available (<https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx>)

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					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.	and shall be indicated as Harmful							
Environment - Air	SO _x emissions (EA01)	The solar power project does not cause any Sox emissions in the project scenario. However, 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) when compared with the baseline	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	With reference to the CPCB modified direction No. B29012/ES S (CP NA 18 sourced from the CDM SD Tool and the sample reports are available (https://www4.unfcc.int/sites/sdc/microsite/Pages/SD-Reports.aspx) Project Submission Form 60 of 105 INTERNAL some of the fossil fuel power plants may have emitted SOx emissions, on which data is not available and can't be quantified. threshold s for both ambient air quality as well as stack emissions. therefore, is not expected to or does not cause any harm.	No risks identified.

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												A)/2015-16; dated March 07, 2016 (Appendix A) solar power project falls in White category and it is mentioned in the notification that there shall be no necessity of obtaining the Consent to Operate" for White category of industries. However, 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.	
<i>NO_x emissions (EA02)</i>	The solar power project does not cause any NOx emissions in the project scenario. However, 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.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	With reference to the CPCB modified B29012/ES S (CP A)/2015-16; dated March NA Project Submission Form 61 of 105 INTERNAL some of the fossil fuel power plants may have emitted NOx emissions, on which data is not available and can't be quantified. 07, 2016 (Appendix	No risks identified

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												A) solar power project falls in White category and it is mentioned in the notification that there shall be no necessity of obtaining the Consent to Operate” for White category of industries. However, 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.	
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. The caused CO ₂ emissions by the grid - connected power plants is expressed as grid emission factor, i.e. t CO ₂ /MWh 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	The baseline activity generates CO ₂ emisison and the anticipate emissions will be accordance with the The Air (Prevention & Control of Pollution) Act 1981 stipulates thresholds for both ambient air quality as well as	Not Applicable	Harmless	Not Applicable	Not Applicable	There is not legal/regulatory limit for this aspect. The GHG emission reductions due to the installment of the project activity will be measured monthly. The parameter has been monitored in section B.7.1	Monthly measuring for electricity generation will be done by using electricity meters. Thus, emission reduction will be done using the actual generation values.	+1	With reference to the CPCB modified direction No. B29012/ESS(CPA)/2015-16; dated March 07, 2016 (Appendix A) solar power project falls in White category and it is mentioned in the notification that there shall be no necessity of obtaining the Consent to Operate” for White category of industries. However, in the baseline scenario (grid)	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.		

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		activity x grid emission factor	stack emissions.								some of the fossil fuel power plants may have emitted CO2 emissions, which has been calculated by the combined margin emission factor as mentioned in the PSF. Therefore, emission reductions are expected to be reduced which will be regularly monitored and verified ex-post and therefore is eligible to be scored.	
<i>CO emissions (EA04)</i>	The solar power project does not cause any CO emissions in the project scenario	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	With reference to the CPCB modified direction No. B29012/ESS(CPA)/2015-16; dated March 07, 2016 (Appendix A) solar power project falls in White category and it is mentioned in the notification that there shall be no necessity of obtaining the Consent to Operate" for White category of industries.	No risks identified
<i>Suspended particulate matter (SPM) emissions (EA05)</i>	The solar power project does not cause any SPM emissions in the project scenario. However, during site preparation and excavation for foundation and piling work and access it. may cause SPM emission.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	With reference to the CPCB modified direction No. B29012/ESS (CPA)/2015-16; dated March 07, 2016 (Appendix A) solar power project falls in White category and it is	No risks identified

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											<p>mentioned in the notification that there shall be no necessity of obtaining the Consent to Operate” for White category of industries. However, during construction phase, mitigation measures as per ESIA will be followed to prevent the SPM emissions from other sources due to project. In the baseline scenario (grid) some of the fossil fuel power plants may have emitted SPM emissions</p> <p>The air pollution caused by the project activity was monitored only during the construction phase and it was found with-in the permissible limit. The parameter is required to be monitored only during the construction phase therefore, it will not be monitored throughout the crediting period. The PM2.5 and PM 10 was found within the permissible limit i.e 60 um/m3 and 100 um/m3 respectively</p>
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<i>Fly ash generation (EA06)</i>	The solar power project does not cause any Fly ash emissions in the project scenario	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	With reference to the CPCB modified direction No. B29012/ES S (CP A)/2015-16; dated March 07, 2016 (Appendix A) solar power project falls in White category and it is mentioned in the notification that there shall be no necessity of obtaining the Consent to Operate” for White category of industries	No risks identified
<i>Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)</i>	The solar power project does not cause any Fly ash emissions in the project scenario	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	With reference to the CPCB modified direction No. B29012/ES S (CP A)/2015-16; dated March 07, 2016 (Appendix A) solar power project falls in White category and it is mentioned in the notification that there shall be no necessity of obtaining the Consent to Operate” for White category of industries	No risks identified
<i>Odor (EA08)</i>	The solar power project does not cause any odour in the project scenario	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
<i>Noise Pollution (EA09)</i>	The solar power project does not cause any noise pollution in the project scenario	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no	No risks identified

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											impact on the project activity.	
Environment - Land	Solid waste Pollution from Plastics (EL-01)	This is a solar power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
	Solid waste Pollution from Hazardous wastes (EL02)	Project anticipates generating hazardous waste (solar PV module) and it is monitored following hazardous waste management rule, 2016.	Hazardous waste management rules 2016 ²⁶ . The hazardous and other wastes shall be transported from an occupier's establishment to an authorized actual user or to an authorized disposal facility in accordance with the provisions of these rules. As per the section D of hazardous waste act, the metal waste under category B can be imported subjected to	Not Applicable	Harmless as the Project owner will dispose the hazardous waste (solar PV module) for recycling through the licensed hazardous waste vendor bound by the law on Hazardous waste management rule ²⁷	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 (solar PV module) quantity generated and disposed will be continuously and monitored and recorded in the hazardous waste register	+1	The project owner undertakes to manage solar PV modules 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, 2019 to be sent back to the manufacture or an authorized recycler Hence, this parameter will not be scored.	The project will have a positive impact by managing solar PV modules waste in an appropriate manner and in compliance to the prevailing laws and regulations. This amount of managing waste 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.

²⁶ <https://cpcb.nic.in/rules/>

²⁷ [MINISTRY OF ENVIRONMENT AND FORESTS \(iwma.in\)](http://www.mwpl.in/)

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			conditions specified to vendors and the battery waste can be recycled without permission from CPCB/SPCB									
<i>Solid waste Pollution from Bio-medical wastes (EL03)</i>	The project activity does not create any bio-medical waste and hence it is not possible	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
<i>Solid waste Pollution from E-wastes (EL04)</i>	E- waste generation from the Solar Power Project in terms of damaged equipment, electronic equipment wires and computer auxiliary etc can be recycled or imported by vendors based on the E waste management amendment rule 2018 and Hazardous waste management rule 2016	E-Waste Management Amendment rules, 2018 ²⁸ . As per the section D of hazardous waste rule, the metal waste under category B can be imported subjected to conditions specified	Not Applicable	Harmless . The metal waste can be recycled subject to CPCB conditions based on battery management rule,2022 ²⁹	Since management action is inducted therefore no environmental impact are anticipated	The Project owner will follow and implement the national rules formulated by CPCB to ascertain best practice prevailing in the industrial practices	Project owner has introduced procedure to maintain records of e-waste generated and its disposal as per applicable law and procedure for same is being articulated under Section B.7.2	Quantity of E-waste discarded at the end-of-life time will be monitored and recorded.	+1	The Project Owner will collect, store all E- waste generation from the Solar Power Project in terms of damaged equipment, electronic equipment wires and computer auxiliary etc. and dispose compliance E-Waste Management Amendment rules, 2018.	The project will have a positive impact by managing E-waste in an appropriate manner and in compliance to the prevailing laws and regulations. This amount of managing E-waste 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.	
<i>Solid waste Pollution from Batteries (EL05)</i>	The project uses batteries for storage purposes and it follows Hazardous waste management rule, 2016 and battery waste management rule 2022	E-Waste Management Amendment rules, 2018	Not Applicable	Harmless The batteries are recycled via vendors and	Not Applicable	The Project owner will follow and implement the national rules formulated by CPCB to	Not Applicable	The hazardous waste part will be recycled through authorized vendor at the end-of-life time	+1	The project batteries will be sold to vendors at the end of life time and it is monitored	No risks identified	

²⁸ https://cpcb.nic.in/uploads/Projects/E-Waste/e-waste_amendment_notification_06.04.2018.pdf

²⁹ <https://cpcb.nic.in/uploads/hwmd/Battery-WasteManagementRules-2022.pdf>

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			<p>the battery waste can be recycled without permission from CPCB/SPCB as it is harmless</p> <p>The rules cover all types of batteries, viz. Electric Vehicle batteries, portable batteries, automotive batteries and industrial batteries.</p> <p>The rules function based on the concept of Extended Producer Responsibility (EPR) where the producers (including importers) of batteries are responsible for collection and recycling/refurbishment of waste batteries and use of</p>	<p>hence governed by law and not applicable</p>	<p>ascertain best practice prevailing in the industrial practices</p>						
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Project Verification Report

			recovered materials from wastes into new batteries.									
<i>Solid waste Pollution from end-of-life products/equipment (EL06)</i>	The project activity may create solid waste from end of-life products/equipment will be generated. Project activity may result in the E-waste from the panels and other electronic products at the end of its lifetime.	Hazardous waste management rule 2016 ³⁰ Battery waste management rule 2022	Not Applicable	Harmless The project owner follows Hazardous waste management rule 2016 Battery waste management rule 2022	Not applicable	The Project owner will follow and implement the national rules formulated by CPCB to ascertain best practice prevailing in the industrial practices	Project owner has introduced procedure to maintain records of end-of-life products/equipment and its disposal as per applicable law and procedure for same is being articulated under Section B.7.2	Quantity of waste discarded at the end-of-life time will be monitored and recorded	+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 and the authorised vendors will recycle the equipments at the end of the lifetime	Project owner provided mitigation plan to reduce the risk is not likely to cause any harm to the environment. This amount of managing waste 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.	
<i>Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)</i>	This is a solar power project and hence this aspect has no impact on the project activity.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
<i>land use change (change from cropland /forest land to project land) (EL08)</i>	Land used for SPV installations. The project activity uses only barren land and hence it is not applicable	No land change happened	Not Applicable	Harmless	Not Applicable	Not Applicable	Not Applicable	Not Applicable	+1	Monitored as per appendix 1 of Environmental and social safeguard standards	The project will have a positive impact by Land used for SPV installations. The project activity uses only barren land and the same is monitored as per appendix 1 of Environmental and social safeguard standards.	

³⁰ <http://www.iwma.in/HWM%20Rules.pdf>

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<p>Environment - Water</p>	<p><i>Reliability/ accessibility of water supply (EW01)</i></p>	<p>Depletion of resources and Water Water contamination</p>	<p>The Water (Prevention & Control of Pollution) Act 1974</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>During construction phase, mitigation measures as per ESIA is followed to prevent the Depletion of NA 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/unintended spillage, the contaminated soil will be immediately collected and stored as hazardous waste Prepare and implement water conservation scheme e.g., rainwater harvesting at the project site of the modules. 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</p>	<p>No risks identified</p>
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											of water consumption in the project activity.	
<i>Water Consumption from ground and other sources (EW02)</i>	The project activity uses sprays to clean the SPV cells and hence ground water is not used for maintenance purpose	The Water (Prevention & Control of Pollution) Act 1974	Not Applicable	Harmless	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	The parameter is monitored as per Appendix 01 of the Environment and social safeguard Standard	No risks identified
<i>Generation of wastewater (EW03)</i>	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	Not Applicable	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 and hence it is not applicable	No risks identified
<i>Wastewater discharge without/with insufficient treatment (EW04)</i>	The project activity uses sprays to clean the SPV cells and hence no waste water is generated from plant operation	Not Applicable	Not Applicable	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 and hence it is not applicable	No risks identified
<i>Pollution of Surface, Ground and/or Bodies of</i>	The project activity uses sprays to clean the SPV cells and hence no surface water pollution is	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no	No risks identified

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	<i>water (EW05)</i>	generated from plant operation									impact on the project activity.		
	<i>Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)</i>	The project activity uses sprays to clean the SPV cells and hence does not discharge any harmful toxic wastes	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified	
Environment – Natural Resources	<i>Conserving mineral resources (ENR01)</i>	The solar power plant does not conserve any mineral resource and hence not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified	
	<i>Protecting/enhancing plant life (ENR02)</i>	The solar power plant does not conserve any mineral resource and hence not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified	
	<i>Protecting/enhancing species diversity (ENR03)</i>	The solar power plant does not conserve any mineral resource and hence not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified	
	<i>Protecting/enhancing forests (ENR04)</i>	The solar power plant does not conserve any mineral resource and hence not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified	
	<i>Protecting/enhancing other depletable natural resources (ENR05)</i>	This is a renewable energy power project generating power through the solar energy which is renewable source of energy and hence there is no impact.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified
	<i>Conserving energy (ENR06)</i>	There is no scope for energy conservation since it is a solar power plant generating and supplying electricity through the grid.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified

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<i>Replacing fossil fuels with renewable sources of energy (ENR07)</i>	The solar power project replaces fossil fuel with the renewable solar energy for the power generation by installing the solar power plant which would have been otherwise generated from the fossil fuel dominant.	The overall impact is positive compared to the baseline alternative and hence .Not Applicable	Not Applicable	Harmless The overall impact is positive with respect to the baseline alternative.	Since management action is inducted therefore no environmental impact are anticipated	Total quantum of fossil fuel replaced due to the project activity will be monitored against the indicator of quantum of fossil fuel-based electricity replaced due to the project activity.	The parameter has been monitored in section B.7.1.	Considering the occurrence of emission reductions through the electricity generation from the solar power project. This parameter will be monitored through the monthly Power generation from the proposed solar Project. Monthly electricity generation will be monitored through the energy meters installed at the substation. Energy Generation reports will be provided for the verification of generation.	+1	Project proponent Monitors the value of net electricity generation supplied to the grid through energy meter. Exante it is estimated that project activity generates electricity MWh per annum. Hence this parameter will be scored.	The project will have a positive impact by replacing 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.	
<i>Replacing ODS with non-ODS refrigerants (ENR08)</i>	The solar power plant does not conserve any mineral resource and hence not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This is a solar power project and hence this aspect has no impact on the project activity.	No risks identified	
Net Score: +7												
Project Owner’s Conclusion in PSF:												
The Project Owner confirms that the Project Activity will not cause any net harm to Environment.												
GCC Project Verifier’s Opinion:												
The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to the environment.												

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

Impact of 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 <i>(positive or negative)</i>	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	3 rd Party Audit
				Not Applicable	Harmless	Harmful					
Social Aspects on the identified categories³¹ indicated below.	<i>Indicators for social impacts</i>	<i>Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all sources during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control</i>	<i>Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts</i>	<i>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</i>	<i>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</i>	<i>If negative social impacts exist that will not be in compliance with the applicable national legal/regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm and shall be indicated as Harmful</i>	<i>Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as Harmful.</i>	<i>Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless or harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source</i>	-1 0 +1	<i>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</i>	<i>Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful" aspects how has the project owner adopted Risk Mitigation Action / management actions plans and policies to mitigate the risks of negative social impacts to levels that are unlikely to cause any harm.</i>

³¹ sourced from the CDM SD Tool and the sample reports are available (<https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx>)

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					<i>on society. To the BAU / baseline scenario must also mark their aspect as "harmless"</i>						<i>Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.</i>
Social - Jobs	<i>Long-term jobs (> 10 year) created/lost (SJ01)</i>	The project activity generates long term job opportunities during the operation the project activity in both the project sites	Host country minimal wage requirements. Regulations on Minimum Wage for Employees working by Labor Contract ³² .	Employment generation gives positive impact that is monitored and hence not applicable.	Harmless As the impact is positive in nature	Not Applicable	Not Applicable	Annual pay slips/declaration from the client can be used to monitor this parameter. Till date 6 nos are permanently employed.	+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 assessment of the same is provided section D.3.7 of the Project Verification Report.
	<i>New short-term jobs (< 1</i>	The project activity generates short term job opportunities during the	Host country minimal wage requirements.	Employment generation gives positive impact that is	Harmless	Not Applicable	There are no harmful impacts of the project activity as it	No of labor force was employed during construction period. Number of	+1	No of labor force has been employed	The project operation has created new job opportunities in the area during

³² <https://thukyluat.vn/vb/decreed-90-2019-nd-cp-2019-based-minimum-wages-applied-to-employees-under-labour-contracts-68a65.html#VanBanTA>

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	<i>year) created/lost (SJ02)</i>	operation the project activity.	Regulations on Minimum Wage for Employees working by Labor Contract.	monitored and hence Not Applicable			leads to the employment generation.	employees will be checked form the log book.		during the construction phase and can be confirmed from contractual agency declaration. Since the project activity is already operational the project activity has already resulted in employability at its early stage.	operational phase of the project activity. The number of persons employed would be monitored through HR records and payroll records. This will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.
	<i>Sources of income generation increased/reduced (SJ03)</i>	There is a positive impact of the project activity on the creation of employment resulting in increase in source of income generation.	There is no legal requirement from local authority to create permanent employment from the project activity	Not Applicable	No Action Required	Not Applicable	Not Applicable	There is not any monitoring system applicable for this safeguard, therefore it is not taken into account	Not Applicable	Source of income generation have increased due to the project activity. There is not any monitoring system applicable for this safeguard, therefore it is not taken into account.	No risks identified
	<i>Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginali</i>	The project activity will generate employment to both genders	Not Applicable	The project creates positive impact from the project activity and monitored	Not Applicable	Not Applicable	Not Applicable	Minimum 1 no of woman employment will be employed if requested and monitored through pay slips	+1	There is no negative impact from the project activity	The project operation has created new job opportunities to both genders in the area during operational phase of the project activity. The number of persons employed would be monitored through HR

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	<i>zed groups, people with disabilities (SJ04)</i> <i>(Human rights)</i>										records and payroll records. This will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.	
Social - Health & Safety	<i>Disease prevention (SHS01)</i>	This is a renewable energy-based power generation plant through solar energy which is clean energy and does not emit any gasses or chemicals impacting the livelihood. There is no impact. But for the overall well being the project owner planned health cards and medical camps	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Occupational health hazards (SHS02)</i>	There is a possibility of physical hazards in project sites due to human intervention or technical failure or emergency	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Reducing / increasing accidents /incidents/fatality (SHS03)</i>	There is a possibility of accidents/incidents/near miss in project sites due to human intervention or technical failure or emergency.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Reducing / increasing crime (SHS04)</i>	The project does not cause any crime and hence in it's not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Reducing / increasing food</i>	The project activity does not cause any wastage of food and hence not applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this	No risks identified

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	wastage (SHS05)									project activity		
	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	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	Efficiency of health services (SHS07)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	Sanitation and waste management (SHS08)	Project will generate domestic waste during construction and operation of the project.	As per Factories Act, Solid waste management rules	The project will have proper sanitation facilities (during construction portable toilets, during operation permanent toilets) for both men and women as per factories act and domestic waste generated will be disposed as per local regulations.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	Other health and safety issues (SHS09)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
Social - Education	specialized training / education to local	The project does not involve educational training and it is not mandatory	Not Applicable	Not Applicable	Harmless	Not Applicable	Not Applicable	The project owner gives 89 training to 21 students annually.	Not applicable	There is no mandatory law to generate permanent	The project management has regularly organized numbers of skill	

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	<p><i>personnel (SE01)</i></p>									<p>employment from the project activity, however, project owner has been decided to provide training to the local people & generate employment for local people. 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.</p>	<p>trainings at the project activity site. The number of trainings would be monitored through training attendance records and photos. This will be monitored as per monitoring plan in the PSF section B.7.1 and assessment of the same is provided section D.3.7 of the Project Verification Report.</p>
	<p><i>Educational services improved or not (SE02)</i></p>	<p>The project does not involve educational training and it is not mandatory</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Harmless</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>Not Applicable</p>	<p>The project owner provided the training and education related to the technology, through the training the employ will get knowledge and</p>	<p>No risks identified</p>

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										enhance skills, monitoring by the no of training records		
	<i>Project-related knowledge dissemination effective or not (SE03)</i>	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Other educational issues (SE03)</i>	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
Social - Welfare	<i>Improving/deteriorating working conditions (SW01)</i>	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Community and rural welfare (indigenous people and communities) (SW02)</i>	The project creates certain no of employment the impact is not considerable in scale.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Poverty alleviation (more people above poverty level) (SW03)</i>	The project creates certain no of employment the impact is not considerable in scale.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified

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	<i>Improving / deteriorating wealth distribution / generation of income and assets (SW04)</i>	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Increased or / deteriorating municipal revenues (SW05)</i>	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Women's empowerment (SW06)</i> <i>(Human rights)</i>	Equal working opportunity for both men and women	Project owner implement and maintain the HR policy to ensure that no gender discrimination should be entertained while employing the workforce and paying the wages for the project activity 100% probability and equal pay packages will be provided to the both men and women employees.	Positive impact as 10 women's are employed in plant office	Not Applicable	Not Applicable	Not Applicable	Project owner monitors the parameter if woman shows interest in employment	Not Applicable	Not Applicable	No risks identified	
	<i>Reduced / increased traffic congestion (SW07)</i>	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Exploitation of Child labour</i>	Child Labour and forced labour are strictly prohibited by law.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this	No risks identified

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	(Human rights) (SW08)									project activity		
	Minimum wage protection (Human rights) (SW09)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	Abuse at workplace. (With specific reference to women and people with special disabilities / challenges) (Human rights) (SW10)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	Other social welfare issues (SW11)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	Avoidance of human trafficking and forced labour (Human rights) (SW12)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified

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	<i>Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs</i> <i>(Human rights)</i> <i>(CW13)</i>	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity	No risks identified
	<i>Provisions of resettlement and human settlement displacement</i> <i>(Human rights)</i> <i>(CW14)</i>	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
Net Score:		+3										
Project Owner’s Conclusion in PSF:		The Project Owner confirms that the Project Activity will not cause any net harm to society.										
GCC Project Verifier’s Opinion:		The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society.										

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

UN-level SDGs	UN-level Target	Declared Country-level SDG	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?
<p>Describe UN SDG targets and indicators</p> <p>See: https://unstats.un.org/sdgs/indicators/indicators-list/</p>	Describe the UN-level target(s) and corresponding indicator no(s)	Has the host country declared the SDG to be a national priority? Indicate Yes or No	Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column for guidance.	Define project-level targets/actions in line with need project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).	Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets	Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG indicator and its corresponding target, frequency of monitoring and data source	Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s).	Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or no)
Goal 1: End poverty in all its forms everywhere	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Goal 2 seeks sustainable solutions to end hunger in all its forms by 2030 and to	YES	CSR sustainability and community outreach arm of The Project Owner, helps the under privileged people with good health cause	The Foundation emphasises on long-term behaviour change processes through special projects./programmes implemented by the client in the project site through construction of kitchen and supply of nutritional food to the local people by M/s Aurobindo Pharma Limited	The Foundation emphasises on long-term behaviour change processes through special programmes as per the	The project owner provides nutritious food to 1000 students at the project site	Annual monitoring and reports from the project owner can be used to monitor this parameter.	Yes

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	achieve food security. The aim is to ensure that everyone everywhere has enough good-quality food to lead a healthy life				CSR activity throughout the project lifetime			
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	YES	CSR sustainability and community outreach arm of The Project Owner, helps the under privileged people with good health cause through establishment of the primary health centre in the project location in identified mandals near project location	The Foundation emphasises on long-term behaviour change processes through special projects,	The Foundation emphasises on long-term behaviour change processes through special projects, and CSR activities throughout the project lifetime	Project owner implement and maintain the policy to ensure that to promote proper Healthy lives through implementation of primary health center in 8 mandals in the project location	Annual monitoring and reports from the project owner can be used to monitor this parameter.	Yes
Goal 4. Ensure inclusive and	Goal 4 aims to	YES	CSR sustainability and community outreach arm of The	CSR sustainability and community outreach arm of The	The Foundation	Development of Skill	Annual monitoring	Yes

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<p>equitable quality education and promote lifelong learning opportunities for all</p>	<p>ensure that all people have access to quality education and lifelong learning opportunities. The Goal focuses on the acquisition of foundational and higher-order skills at all stages of education and development; greater and more equitable access to quality education at all levels as well as technical and vocational education and training (TVET); and the knowledge, skills and values</p>	<p>Project Owner by implementing skill development programmes to the students</p>	<p>Project Owner by implementing skill development programmes to the students</p>	<p>emphasises on long-term behaviour change processes through special projects, and CSR activities throughout the project by improving the quality of education and life development skills.</p>	<p>development center, and conducted more than 89 trainings in the project location.</p>	<p>and reports from the project owner can be used to monitor this parameter</p>	
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	needed to function well and contribute to society.							
Goal 5. Achieve gender equality and empower all women and girls	NA	NA	NA	NA	NA	NA	NA	NA
Goal 6. Ensure availability and sustainable management of water and sanitation for all	Goal 6 aims to ensure availability and sustainable management of water and sanitation for all. Water and sanitation are critical to the health of people and the planet. Goal 6 not only addresses the issues relating to drinking water, sanitation and hygiene (WASH), but also the	YES	CSR sustainability and community outreach arm of The Project Owner by implementing RO water treatment plant in the project location	The project owner implements proper water treatment plant to improve quality of drinking water to the inhabitants of the area	As one of the CSR initiative, the project owner implemented water development scheme on long term basics to necessitate the living people.	Installation of RO water system for 703 village beneficiaries for sustainable drinking water facility and sanitation.	Annual monitoring and reporting of the beneficiaries by the project owner.	Yes

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	quality and sustainability of water resources worldwide. Improvements in drinking water, sanitation and hygiene are essential for progress in other areas of development too, such as nutrition, education, health and gender equality.							
Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all	NA	NA	NA	NA	NA	NA	NA	NA
Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all	8.5 By 2030, achieve full and productive employment and decent work for all women	Yes	Project activity supports creation of short term and long term job opportunities during the construction and operation of the project activity. Supports economic productivity through technology up gradation and innovation through training of labour in high intensive sector.	Project creates new employment and generates income for the following people <ul style="list-style-type: none"> UnSkilled Man Power for Module Cleaning Works Technicians Security Aurobindo Staff 	Project creates new employment and generates of average 1 crores/Annum	8.5.2 Employment per the national labour and company law. 8.8.2 Maintains company HR policy to create	Quantity of employment will be monitored through project owners self-declaration based on employment records	Yes

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	<p>and men, including for young people and persons with disabilities, and equal pay for work of equal value</p> <p>8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment</p>		<p>Project protects labour rights and promotes safe and secure working environments.</p> <p>Supports a transition to a low-carbon society through employment training for former fossil fuel industry employees</p>	<p>Through Project activity economic development has been achieved in the project location by creating opportunities to the other allied services and indirect employment.</p>		<p>standard operating procedures (SOPs) to follow and maintain safe and secure work environment and by paying the wages as per the minimum wages act of the country.</p>		
<p>Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>	<p>Goal 9 addresses three important aspects of sustaina</p>	No	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA

Project Verification Report

	<p>ble development: infrastructure, industrialization and innovation. Infrastructure provides the basic physical facilities essential to business and society; industrialization drives economic growth and job creation, thereby reducing income inequality ; and innovation expands the technological capabilities of industrial sectors and leads to the development of new skills.</p>												
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	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities							
Goal 10. Reduce inequality within and among countries	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 11. Make cities and human settlements inclusive, safe,	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA

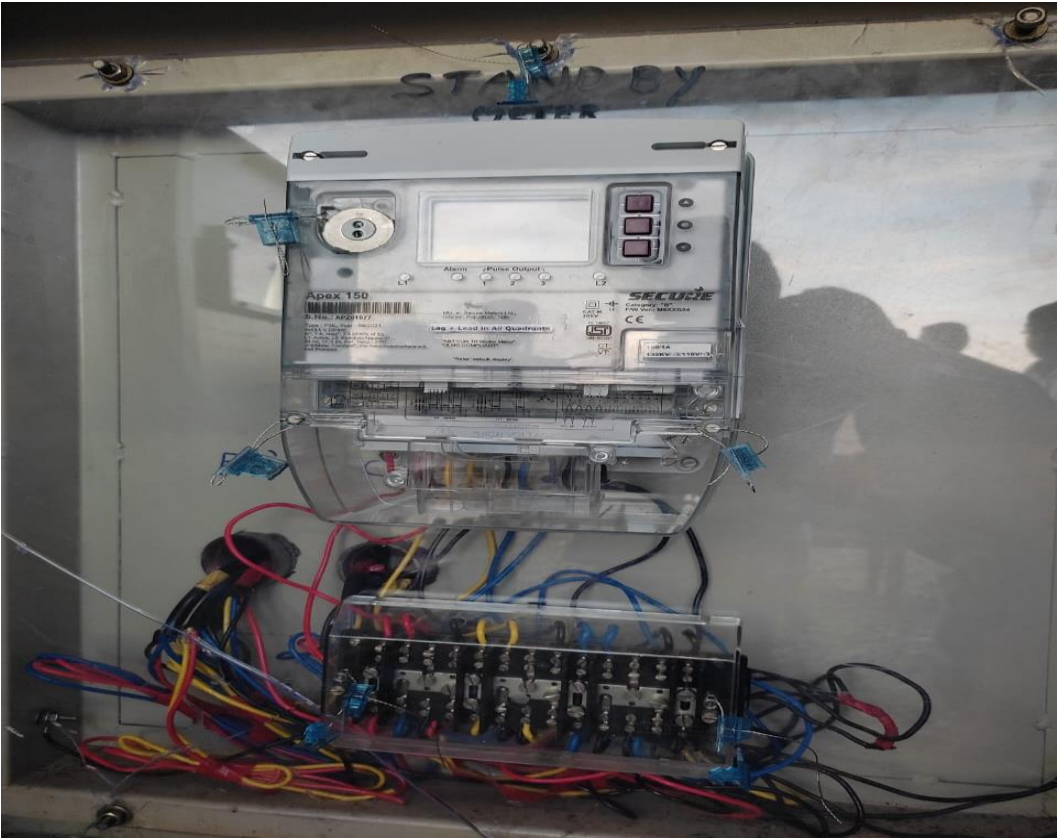
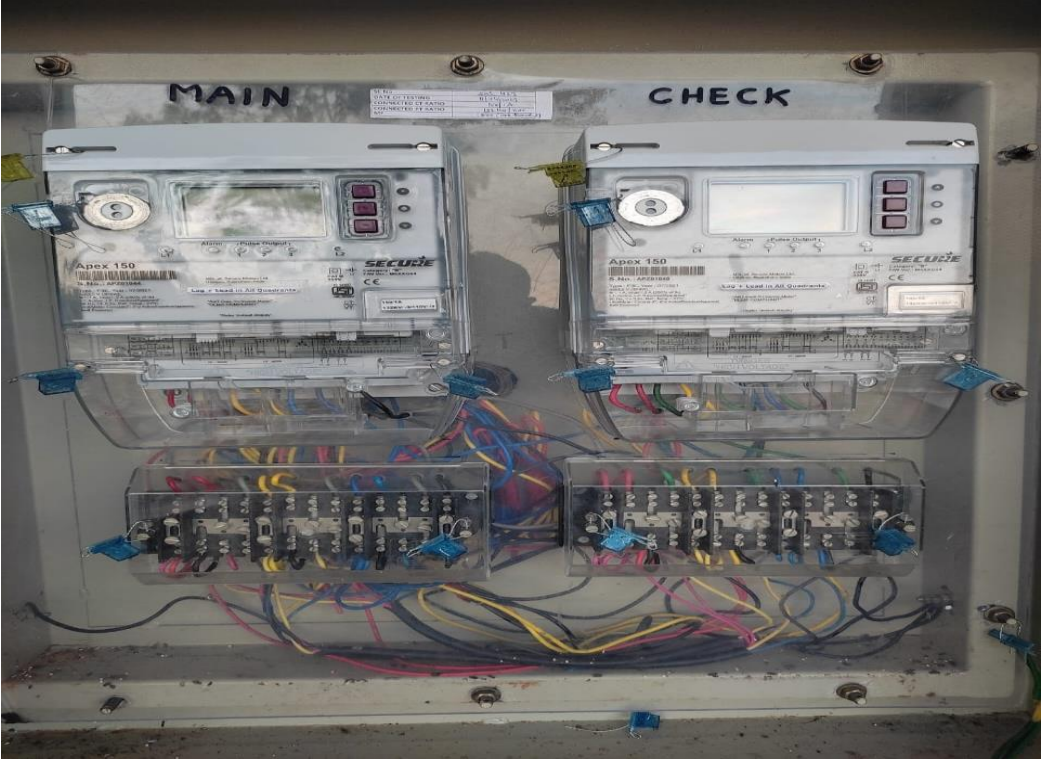
Project Verification Report

resilient, and sustainable								
Goal 12. Ensure sustainable consumption and production patterns	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 13. Take urgent action to combat climate change and its impacts	Improve education, awareness raising and human and institutional capacity on climate change mitigation adaptation, impact reduction and early warning	Yes	The project activity generates electricity through Renewable energy (solar) which result in reduction of power generation from fossil fuel based generation unit supplying electricity to the grid and hence reduction in Greenhouse gases emission that contribute to reduction in global warming and climate related hazards	The project activity through implementation of 30 MW of solar power generation unit will result in reduction of 46,395 tCO ₂ /year	The reduced greenhouse gas emissions per year for the crediting period will be used as proper project-level indicator and the information regarding the project activity will be disseminated to enhance stakeholders awareness	Emission reductions achieved per year	Electricity produced by the renewable generating unit multiplied by an emission factor	Yes
Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 15. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA

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Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	NA
SUMMARY								
					Targeted		Likely to be Achieved	
Total Number of SDGs					6		6	
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF					Diamond		Diamond	

Appendix 8. Project Monitoring Meters Photographs



DOCUMENT HISTORY

Version	Date	Comment
V 3.1	31/12/2020	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ Revised version released on approval by the Steering Committee as per the GCC Program Process; ▪ Revised version contains the following changes: <ul style="list-style-type: none"> ○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC); ○ Considered and addressed comments raised by the Steering Committee: <ul style="list-style-type: none"> ➢ 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 CORSIA³³;
V 2.0	25/06/2019	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ Initial version released for approval by the GCC Steering Committee under GCC Program Version 1

³³See 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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