GLOBAL CARBON COUNCIL

Driving Climate Actions

Project Verification Report

V3.1 - 2020

CONTENTS

COVER PAGE Project Verification Report Form (PVR)	
BASIC INFORMATION	
Name of approved GCC Project Verifier / Reference No. (also provide weblink of approved GCC Certificate)	Shenzhen CTI International Certification Co., Ltd (Ref. No. GCCV007/00) (https://www.globalcarboncouncil.com/wp-content/uploads/2022/03/GCCV007-00-CTI-GCC-Verifier-Certificate-27032022.pdf)
Type of Accreditation	☐ Individual Track[1] ☒ CDM Accreditation ☐ ISO 14065 Accreditation Name of the entity that provided the accreditation: UNFCCC Date of validity: till 30/05/2028 Ref NO. of DOE: E-0061 Weblink of the active accreditation certificate and approval: https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0061)
Approved GCC Scopes and GHG Sectoral scopes for Project Verification	**Approved GCC Scopes for Project Verification:** Green House Gas (GHG# - ACC) Environmental No-harm (E+) Social No-harm (S+) Sustainable Development Goals (SDG+) **Approved GHG Sectoral scopes for Project Verification:** 1. Energy (renewable/non-renewable sources) (CDM TA 1.1, 1.2) 2. Energy distribution (CDM TA 2.1) 3. Energy demand (CDM TA 3.1) 4. Manufacturing industries (CDM TA 4.1) 5. Chemical industry (CDM TA 5.1, 5.2) 6. Construction (CDM TA 6.1) 7. Transport (CDM TA 7.1) 8. Mining/mineral production (CDM TA 8.1) 9. Metal production (CDM TA 9.1, 9.2) 10. Fugitive emissions from fuels (solid, oil and gas) (CDM TA 10.1)

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

	11. Fugitive Emissions from production and consumption of halocarbons and sulphur hexafluoride (CDM TA 11.1, 11.2) 12. Solvents use (CDM TA 12.1) 13. Waste handling and disposal (CDM TA 13.1, 13.2) 14. Afforestation and Reforestation (CDM TA 14.1) 15. Agriculture (CDM TA 15.1)
Validity of GCC approval of Verifier	27/03/2022 to 26/03/2023
Title, completion date, and Version number of the PSF to which this report applies	Title: Jinchang Xipo 100MW solar power project Completion date: 01/04/2024 Version number: 3.0
Title of the project activity	Jinchang Xipo 100MW solar power project
Project submission reference no. (as provided by GCC Program during GSC)	S00367
Eligible GCC Project Type[2] as per the Project Standard (Tick applicable project type)	☒ **Type A:** ☐ Type A1 ☒ Type A2, Sub type 1 ☐ **Type B – De-registered CDM Projects:** ☐ Type B1 ☐ Type[3] B2
Date of completion of Local stakeholder consultation	15/04/2014
Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.	14/09/2022-28/09/2022 https://www.globalcarboncouncil.com/global-stakeholders-consultation-5/ No comments were received for this project.
Name of Entity requesting verification service (can be Project Owners themselves or any Entity having authorization of Project Owners)	Gansu ruicarbon Technology Consulting Co., Ltd
Contact details of the representative of the Entity, requesting verification service	Ms. Yating Jin rui_carbon@163.com Gansu ruicarbon Technology Consulting Co., Ltd

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

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

(Focal Point assigned for all communications)	Room 201, floor 2, building 3, No. 414, Pingliang Road, Chengguan District, Lanzhou City, Shaan Xi Province, People's Republic of China
Country where project is located	China
GPS coordinates of the Project site(s)	**Latitude-Decimal Degree**: 38°35'13"N~38°36'45"N (38.5869N~38.6125N); **Longitude-Decimal Degree**: 102°08'31"E~102°10'18"E (102.1419E~102.1717E)
Applied methodologies (approved methodologies of GCC or CDM can be used)	ACM0002: "Grid-connected electricity generation from renewable sources" (Version 21.0).
GHG Sectoral scopes linked to the applied methodologies	Scope 1 - Energy Industries (renewable / non-renewable sources)
Project Verification Criteria: Mandatory requirements to be assessed	☒ ISO 14064-2, ISO 14064-3 ☒ GCC Rules and Requirements ☒ Applicable Approved Methodology ☒ Applicable Legal requirements /rules of host country ☒ National Sustainable Development Criteria (if any) ☒ Eligibility of the Project Type ☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Baseline ☒ Additionality ☒ Emission Reduction calculations ☒ Monitoring Plan ☒ No GHG Double Counting ☒ Local Stakeholder Consultation Process ☒ Global Stakeholder Consultation Process ☒ United Nations Sustainable Development Goals (Goal No 13-Climate Change) ☐ Others (please mention below)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria ☒ United Nations Sustainable Development Goals (in additional to SDG 13) ☐ CORSIA requirements
Project Verifier's Confirmation:	The GCC Project Verifier [Shenzhen CTI International Certification Co., Ltd], certifies the following with respect to the GCC Project Activity [Jinchang Xipo 100MW solar power project].

The *GCC Project Verifier* has verified the GCC project activity and therefore confirms the following:	☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version 3.0, dated 01/04/2024) including the applicability of the approved methodology [ACM0002: "Grid-connected electricity generation from renewable sources" Version 21.0] and meets the methodology applicability conditions and is expected to achieve the forecasted real, measurable and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reductions estimates correctly and conservatively. ☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated [122,282] tCO_2e / year, as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2 and ISO 14064-3. ☒ The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and is likely to achieve the following labels: ☒ Environmental No-net-harm Label (**E⁺**) ☒ Social No-net-harm Label (**S⁺**) ☒ The Project Activity is likely to contribute to the achievement of United Nations sustainable Development Goals (SDGs), complies with the Project Sustainability Standard, and contributes to achieving a total of [3] SDGs (SDG 7, 8, 13), with the following[4] SDG certification label (**SDG⁺**): ☐ Bronze SDG Label ☒ Silver SDG Label ☐ Gold SDG Label ☐ Platinum SDG Label ☐ Diamond SDG Label ☒ The Project Activity complies with all the applicable GCC rules[5] and therefore recommends GCC Program to register the Project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	Reference number: GCC/S00367/V3.0 Date of approval: 03/04/2024
Name of the authorised personnel of GCC Project Verifier and his/her signature with date	

[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

	Zhou Lu, General Manager 03/04/2024

1. PROJECT VERIFICATION REPORT

Section A. Executive summary

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Brief Summary of the Project Activity

Jinchang xipo 100MW solar power project (hereinafter referred to as the project) aims to install a solar PV power station with total capacity of 100 MWp, which located in Xipo photoelectric Industrial Park, Jinchang City, Gansu Province, China.

The electricity generated from the project will be sold to the Northwest China Power Grid (NWCPG). The project delivers the renewable energy and achieve greenhouse gas (GHG) emission reductions through displacement of electricity delivered to NWCPG which is a fossil-fuel dominated power grid.

Latitude-Decimal Degree	Longitude-Decimal Degree
38°35'13"N~38°36'45"N (38.5869N~38.6125N)	102°08'31"E~102°10'18"E (102.1419E~102.1717E)

The project was installed with 314,655 of solar modules with a total capacity of 100 MW. The project is operational since 25/06/2016. The project is expected to supply an annual of 156,908 MWh electricity to NWCPG during the fixed 10 years' crediting period, which will achieve average annual emission reductions of 122,282 tCO_2e. The total GHG emissions reductions in the chosen fixed 10 years crediting period amount to 1,222,820 tCO_2e.

Scope of Verification

The Project Verification scope is defined as an independent and objective review of the Project Submission Form (PSF). The PSF is reviewed against the GCC criteria including but not limited to, GCC Project Standard (PS), GCC Verification Standard (VS), Environment and Social Safeguards Standard, Project Sustainability Standard, applied CDM methodology, tools and other relevant rules and requirements established under Program process. The verification team has, based on the recommendations in the Verification Standard employed (latest version) a risk-based approach, focusing on the identification of significant risks for project implementation, generation of ACCs and implemented safeguards aimed to achieve environmental, social and SDG impacts without causing any net harms.

The verification is not meant to provide any consulting towards the project owners. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

Verification Process

CTI assessed and determined whether the proposed implementation and operation of the project activity, and the steps taken to report emission reductions comply with the requirements specified in the GCC Project Standard V3.1, GCC Verification Standard V3.1, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques. The validation process consists of the following phases:

- the desk review of documents and evidence submitted by the project owner in context of the reference rules and guidelines issued by GCC,
- undertaking/conducting site visit, interview or interactions with the representative of the project owners/representatives,
- reporting audit findings with respect to clarifications and non-conformities and the closure of the findings, as appropriate and
- preparing a draft verification opinion based on the audit findings and conclusions
- technical review of the draft verification opinion along with other documents as appropriate by an independent competent technical review team
- finalization of the verification opinion (this report)

Appointment of the assessment team
Based on the requirements of competency, experience and qualified sectoral scopes, CTI appointed a verification team in accordance with CTI's internal procedures. The detailed information of each team member in the assessment team is listed in the table in Section B.1 below. The qualification of each team member is detailed in Appendix 2 to this report.

Conclusion
The review of the PSF, onsite verification, supporting documentation and subsequent follow-up actions (onsite audit and interviews) have provided CTI with sufficient evidence to determine the fulfilment of stated criteria, including additional labels (E+, S+ and SDG +). CTI is of the opinion that the project activity "Jinchang Xipo 100MW solar power project" as described in the final PSF (version:3.0, date:01/04/2024) 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 and associated tools. Therefore, the project is being recommended to GCC Steering Committee for request for registration.

Section B. Project Verification team, technical reviewer and approver

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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 & Validator	IR	Li	Ziqi	CTI	Y	Y	Y	Y
2.	Team member	IR	Yin	Meixiao	CTI	Y	Y	Y	Y
3.	Team member (for E+ S+ SDG assessment)	IR	Zhang	Wenting	CTI	Y	N	N	Y

4.	Financial Expert	IR	Chen	Yazi	CTI	Y	N	N	Y

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of GCC Project Verifier or outsourced entity)
1.	Technical reviewer	IR	Lin	Shunrong	CTI
2.	TR member	IR	Feng	Tian	CTI
3.	Approver	IR	Zhou	Lu	CTI

Section C. Means of Project Verification

C.1. Desk/document review

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The verification was performed primarily as a document review of the initial PSF/16/ and revised /final PSF/17/. The verification of information provided in the PSF was performed using the source of information provided by the project owner. Additionally, the cross checks were performed for information provided in the PSF using information from sources other than the verification sources, the verification team's sectoral or local expertise and, if necessary, independent background investigations.

C.2. On-site inspection

Duration of on-site inspection: 06/02/2023				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	The project verification team conducted interviews with the project owner, plant in-charge, other stakeholders to confirm the information and to resolve issues identified in the document review. An assessment was conducted as a part of project verification activity and involved: 1) an assessment of the implementation and operation of the project activity as per the PSF and GCC requirements 2) To verify that the project design, as documented is sound and reasonable, and meets the identified criteria GCC Standard Requirements and associated guidance 3) To assess conformance with the certification criteria as laid out in the GCC Standards; 4) To evaluate the conformance with the certification scope, including the GHG project and baseline scenarios, additionality; GHG sources, sinks, and reservoirs; and the physical infrastructure, activities, technologies and processes of the GHG project to the requirements of the GCC; 5) To evaluate the calculation of GHG emissions, including the	Xipo photoelectric Industrial Park, Jinchang City, Gansu Province, China	06/02/2023	Ziqi Li Meixiao Yin

	correctness and transparency of formulae and factors used; assumptions related to estimating GHG emission reductions; and uncertainties; and 6) To determine whether the project could reasonably be expected to achieve the estimated GHG reduction/removals. 7) a review of information flows for generating, aggregating and reporting of the ex-ante monitoring parameters 8) interviews with relevant personnel to confirm that the operational and data collection procedures can be implemented in accordance with the Monitoring Plan 9) a cross-check between information provided in the submitted documents and data from other sources 10) a review of calculations and assumptions made in determining the GHG data and estimated ERs, and 11) an identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters 12) Assessment of Stakeholder Consultation by interviewing the stakeholders. 13) Assessment of E+, S+ and SDG+ aspects as per the PSF and GCC requirements			

C.3. Interviews

No.	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Yating	Jin	Gansu Ruicarbon Technology Consulting Co., Ltd	06/02/ 2023	• Chronological description of the project activity with documents of key steps of the implementation. • Current status of plant design • Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project • Host Government Approval • Approval procedures and status • Monitoring and measurement equipment and system. • Financial aspects • Crediting period • Project activity starting date • ACCs allocation / ownership • Baseline study assumptions • Additionality • Sustainable development issues • Monitoring • Analysis of local stakeholder consultation	Ziqi Li Meixiao Yin
2.	Peiqiang	Yang	Project manager Jinchang Zhenxin Xipo Solar Power Co., Ltd			
3.	Guomin	Zhang	Project Chief Engineer Jinchang Zhenxin Xipo Solar Power Co., Ltd			

					• Roles & responsibilities of the project participant w.r.t. project management, monitoring and reporting • National Legislation • Details of emissions reduction • Local stakeholder consultation calculation	
4.	Sanguo	Qian	Local villager		• Stakeholder consultation • Job opportunities • Social, economic, environmental impacts	
5.	Youjun	Wu				
6.	Youcai	Wu				
7.	Xiucai	Li				
8.	Junping	Jiang				
9.	Xiliang	Xie	Local village committee		E+, S+, SDG+ Contribution of the project towards sustainable development	
10.	Wanguo	Wu				

C.4. Sampling approach

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Not applicable as no sampling has been used during the project

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

Areas of Project Verification findings	Applicable to Project Types	No. of CL	No. of CAR	No. of FAR
Green House Gas (GHG)				
Identification and Eligibility of project type	A_1, A_2, B_1, B_2			
General description of project activity	A_1, A_2, B_1, B_2	CL01		
Application and selection of methodologies and standardized baselines	A_1, A_2, B_1, B_2			
- Application of methodologies and standardized baselines	A_1, A_2, B_1, B_2			
- Deviation from methodology and/or methodological tool	A_1, A_2, B_1, B_2			
- Clarification on applicability of methodology, tool and/or standardized baseline	A_1, A_2, B_1, B_2			
- Project boundary, sources and GHGs	A_1, A_2, B_1, B_2			
- Baseline scenario	A_1, A_2, B_1, B_2			
- Demonstration of additionality including the Legal Requirements test	A_1, A_2, B_1, B_2	CL02 CL03		
- 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	CL04		
Start date, crediting period and duration	A_1, A_2, B_1, B_2			
Environmental impacts	A_1, A_2, B_1, B_2			
Local stakeholder consultation	A_1, A_2, B_1			
Approval & Authorization- Host Country Clearance	A_1, A_2, B_1, B_2			FAR01
Project Owner- Identification and communication	A_1, A_2, B_1, B_2			
Global stakeholder consultation	A_1, A_2, B_1			
Others (compliance with the latest PSF template)	A_1, A_2, B_1, B_2		CAR01	

VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E^+)	A_1, A_2, B_1	CL05 CL06		
Social Safeguards (S^+)	A_1, A_2, B_1	CL07		
Sustainable development Goals (SDG^+)	A_1, A_2, B_1			
Authorization on Double Counting from Host Country (only for CORSIA)	A_1, A_2, B_1			FAR01
CORSIA Eligibility (C^+)				
Total		7	1	1

Section D. Project Verification findings

D.1. Identification and eligibility of project type

Means of Project Verification	The project activity is correctly identified as A2 category in the PSF/17/. The project has not been registered under any GHG or non GHG program. By checking the Notice of Grid Connection for Quality Supervision and Inspection of Electric Power Engineering/26/ and interviewing with related staff, the project's operation started since 25/06/2016. The feasibility study report/23/ for the project was completed in November 2013, and the project had been approved by Gansu Provincial Development and Reform Commission on 06/12/2013/27/. The EIA report/29/ was prepared by the Lanzhou Coal Mine Design and Research Institute in July 2013 and was approved by Gansu Provincial Department of Environmental Protection on 22/08/2013/30/. Information regarding the consistency of the title of the projects, GPS coordinates, Legal owner, Project owner etc. has been checked from the any other registries/ websites of programs/ standards including both GHG (VERRA/37/, CDM /36/, GS/38/, CCER/85/, etc.) and non GHG (I-REC /40/ or any other local Renewable Energy Scheme), not same projects appearing in any other registries have been observed. The project activity is confirmed to be eligible as A2 category sub-type 1 as per the Project Standard/4/ and Clarification 01/14/ requirements: 1. The project is prompt-start and had already started their operations on 25/06/2016/26/ which is after 01/01/2016 but before 05/07/2022. 2. The project had made initial submission to GCC Program on 13/06/2022/50/, for uploading for global stakeholder consultation, which is prior to 05/07/2022. 3. The start date of the crediting period of the project is from 25/06/2016/26/, which is after 01/01/2016 but not more than one year after the start date of the operations of the GCC Project Activity. The project activity also complies with the relevant GCC eligibility requirements as per Para 16 of Project Standard (version 3.1)/4/ and confirmed that: 1. The project activity is not required by a legal mandate, and it does not implement a legally enforced mandate also the project activity complies with all the applicable host country legal requirements. This is confirmed through EIA Approval/30/ provided to the project activity as well the Project Registration and Filing Notice/27/ provided to the project activity. 2. The project activity delivers real, measurable and additional emission reduction of 122,282 tCO_2e annually (average value of the 10 years crediting period) as compared to the baseline scenario. 3. Project activity correctly applies to the Methodology ACM0002 for Grid-connected electricity generation from renewable sources (Version 21.0)/8/.
Findings	No finding was raised.
Conclusion	The verification team reviewed the approval documents for the EIA report and FSR, as well as the grid-connected scheduling protocol/28/ and other relevant documents.

	The project activity was found to meet the eligibility requirements under the GCC Project Standard.

D.2. General description of project activity

Means of Project Verification	**Project Description:** By checking the FSR/23/, the technical specification/47/ and interviewing with staff, it is confirmed that the project activity installed a solar PV power plant with total capacity of 99.8814 MWp. By checking the grid-connection scheduling protocol/28/ signed with Gansu Electric Power Company, CTI confirmed that the electricity generated from the project will be sold to Northwest China Power Grid (NWCPG). The project delivers the renewable energy and achieve greenhouse gas (GHG) emission reduction through displacement of electricity delivered by NWCPG which is a fossil-fuel dominated power grid, which is confirmed by checking the FSR/23/. The project has started operation on 25/06/2016, which is confirmed by checking the Notice of Grid Connection for Quality Supervision and Inspection of Electric Power Engineering/26/. It is confirmed that the validity period of electricity business license is 20/12/2017 to 19/12/2037/86/. By checking the FSR/23/ and the technical specification/47/, it is confirmed that the lifetime of equipment is 25 years. These details regarding nature, capacity and legal license of the PSF/17/ have been checked from FSR/23/ for the project activity. During assessment, the verification team observed that the project installation was complete and the project installation was carried out in accordance with the FSR/23/. Grid-connected scheduling protocol/28/ has been checked and it is confirmed that project plant is located in Xipo photoelectric Industrial Park, Jinchang City, Gansu Province, China and connected to NWCPG, which is one of the regional grids of Chinese grid network. The coordinates of the physical site of the project activity are as follows: Latitude-Decimal Degree: 38°35'13"N-38°36'45"N (38.5869N - 38.6125N) Longitude-Decimal Degree: 102°08'31"E-102°10'18"E (102.1419E - 102.1717E) Latitude and Longitude of the physical site of the project activity has been included appropriately in the PSF which was found consistent from the feasibility report. The location as well as the geodetic coordinates of the project site have been verified by checking GPS devices during site visit. The Project activity is a greenfield project which is confirmed through EIA Approvals /30/ for the project activity plant, EPC contract/20/ and preliminary review opinions on construction land/31/. Since, the project activity is grid connected generation, in the absence of activity same electricity would have been produced from the fossil intensive NWCPG. It was also verified by power wiring diagram/42/ and electricity meters /41/ during on-site audit. It was confirmed that electricity is boosted to 35kV after box transformers. 2 main transformers are adopted and electricity will then be boosted to 110kV before connected to 110kV Jinyao substation. Electricity will be finally fed into NWCPG through 330kV Shanghewan Substation, which belongs to NWCPG. The assessment team has also checked the site installations during onsite view and is found appropriate in line with details provided in the PSF/17/.

Legal Ownership:
The legal ownership of the Project activity facilities is with Jinchang Zhenxin Xipo Solar Power Co., Ltd. This has been checked with the project registration and filing notice/27/, LOA/24/, the business license/25/, the EPC contract/20/ and grid-connection scheduling protocol/28/ where legal ownership of the project plant and equipment is establishment and confirmed.

The legal owner has identified a single person for legal representation and in-turn have nominated Gansu ruicarbon Technology Consulting Co., Ltd to act Global Carbon Council Project Verification as the GCC project owner through letter of authorization/24/. The names of project owner and legal owners are also found to be consistent with the details provided as project owner in PSF/17/ and letter of authorization/24/ and is found appropriate.

Technical Details:
The project involves the installation of 314,655 solar modules with a total capacity of 100MWp. The technical specifications of the solar modules listed in the PSF is verified to be consistent with Technical Specification/47/ and FSR/23/.

By checking FSR/23/, the estimated annual average power output is 148,927 MWh during the 25 years' lifetime. The estimated electricity fed to NWCPG in the first year is 163,033 MWh. According to "Opinions on Promoting the Application of Advanced Photovoltaic Technology Products and Industrial Upgrading" issued by National Energy Administration on 01/06/2015/83/, the decay rate of polysilicon product shall not exceed 2.5% within 1st operation year and the annual decay rate shall not exceed 0.7% in the following operation years. The decay rate throughout the entire project lifecycle shall not exceed 20%. According to the FSR/23/ and the technical specification/47/, the decay rate of PV modules is no more than 2% in the first year, the decay rate within 5 years is no more than 5%, the decay rate within 12 years is no more than 10%, and the decay rate in 25 years is no more than 20%. Therefore, the decay rate of the project is reasonable.
Annual utilization hour is 1477h and the plant load factor (PLF) is calculated as 16.86%, which is verified to be consistent with FSR/23/.

Sampling Approach:
No sampling approach has been required or applied for the project verification.

Other Labels:
In addition to GHG emission reductions, the project activity has applied and qualifies below for other voluntary certification labels in accordance with the GCC requirements.

Voluntary Labels	Applied by the project
UN Sustainable development goals (SDG+)	Yes The project activity has applied and complies with 3 out of total 17 SDG; Silver
Environment No-net harm (E+)	Yes
Social No-net harm (S+)	Yes

CORSIA:
N/A as the Project Owner does not intend to use/sell/transfer/retire the carbon credits (ACCs) generated by the Project Activity for offsetting purposes to Airlines under ICAO's CORSIA requirements.

Findings

CL 01 was raised and resolved.

Conclusion	The project verification was based on review of the key documents such as EIA approval, FSR and Grid-connected scheduling protocol. The project description as contained in the final PSF was found accurate 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	**ACM0002: Grid-connected electricity generation from renewable sources (version 21.0)**	
	Applicability criterion	**Assessment**
	1. Para 4 of the applied methodology: This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).	Applicable. By checking the grid-connection scheduling protocol/28/, it is confirmed that the project is a grid connect solar power plant. By checking the EPC contract/20/, the Project Registration and Filing Notice/27/ and the Environmental Impact Assessment (EIA) approval/30/, issued in accordance with the host country's legal requirements, CTI confirmed the project is greenfield power plant.
	2. Para 5 of the applied methodology: 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 photovoltaic1 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).	Not applicable. By checking the FSR/23/ and via on-site inspection, the verification team confirmed that the project does not involve the integration of a BESS.
	3. Para 6 of the applied methodology: 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	Not applicable. After reviewing the project documents, including the FSR/23/and EIA/29/ and via on-site inspection, it was confirmed that: (a) The project activity is a grid connected solar PV power plant, thus the applicable condition is met; (b) The project activity does not involve BESS. The

	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 5 (a) above, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g. by referring to feasibility studies or investment decision documents); (d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies 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.	project only newly built a greenfield solar power station which does not involve capacity additions, retrofits, rehabilitations or replacements. Thus, this condition is not relevant to the project; (c) The project activity does not involve BESS. The project only newly built a greenfield solar power station without BESS. Thus, this condition is not relevant to the project; (d) The project activity does not involve BESS. The project only newly built a greenfield solar power station without BESS. Thus, this condition is not relevant to the project.
	4. Para 7 of the applied methodology: In case of hydro power plants, one of the following conditions shall apply: (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m^2; or I The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m^2; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m^2, all of the following conditions shall apply. (i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m^2; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity. (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m^2 shall be a. Lower than or equal to 15 MW; and	Not applicable. Through documents review, including the FSR/23/ and EIA/29/ and via on-site inspection, the verification team confirmed that the project is a solar power plant, do not involve the construction of hydro power plants.

	b. Less than 10 per cent of the total installed capacity of integrated hydro power project.	
	5. Para 8 of the applied methodology: In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity.	Not applicable. Through documents review, including the FSR/23/ and EIA/29/ and via on-site inspection, the verification team confirmed that the project is a solar power plant, do not involve the construction of hydro power plants.
	6. Para 9 of the applied methodology: The methodology is not applicable to the following: (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;	By checking the FSR/23/ and on-site visit, it is verified that this applicability criterion is met: (a) The project is greenfield solar power plant, which does not involve switching from fossil fuels to renewable energy sources at the site. (b) The project is not a biomass fired power plant.
	7. Para 10 of the applied methodology: 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”.	Not applicable. By checking the FSR/23/, it is verified that the project is a greenfield project, which does not involve retrofits, rehabilitations, replacements, or capacity additions. Thus, the applicability criterion is not applicable.
	Tool 01: Tool for the demonstration and assessment of additionality (Version 07.0.0)	
	Applicability criterion	**Assessment**
	1. The use of the “Tool for the demonstration and assessment of additionality” is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.	The project owner didn’t propose new methodology or submit revisions to the approved methodology. Thus, it is verified that this tool is applicable.

	2.Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.	The methodology applied in this project requires the use of this tool. Thus, it is verified that this tool is applicable.
	Tool 05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation (Version 3.0)	
	Applicability criterion	**Applicability criterion**
	1. Para 5 of the applied tool: If emissions are calculated for electricity consumption, the tool is only applicable if one out of the following three scenarios applies to the sources of electricity consumption: (a) Scenario A: Electricity consumption from the grid. The electricity is purchased from the grid only, and either no captive power plant(s) is/are installed at the site of electricity consumption or, if any captive power plant exists on site, it is either not operating or it is not physically able to provide electricity to the electricity consumer; (b) Scenario B: Electricity consumption from (an) off-grid fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants are installed at the site of the electricity consumer and supply the consumer with electricity. The captive power plant(s) is/are not connected to the electricity grid; or (c) Scenario C: Electricity consumption from the grid and (a) fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants operate at the site of the electricity consumer. The captive power plant(s) can provide electricity to the electricity consumer. The captive power plant(s) is/are also connected to the electricity grid. Hence, the electricity consumer can be provided with electricity from the captive power plant(s) and the grid.	By checking the FSR/23/ and via on-site inspection, it is verified that the electricity consumption is provided by the Northwest China Power Grid (NWCPG), which is Scenario A. Thus, this applicable condition is met.
	2. Para 6 of the applied tool: This tool can be referred to in methodologies to provide procedures to monitor amount of electricity generated in the project scenario, only if one out of the following three project scenarios applies to the recipient of the electricity generated: (a) Scenario I: Electricity is supplied to the grid; (b) Scenario II: Electricity is supplied to consumers/electricity consuming facilities; or (c) Scenario III: Electricity is supplied to the grid and consumers/electricity consuming facilities.	By checking the FSR/23/ and via on-site inspection, it is verified that the electricity generated in the project scenario is supplied to the Northwest China Power Grid (NWCPG), which is Scenario I. Thus, this applicable condition is met.
	3. Para 7 of the applied tool: This tool is not applicable in cases where captive renewable power generation technologies are installed to provide electricity in the project activity, in the baseline scenario or to sources of leakage. The tool only accounts for CO_2 emissions.	By checking the FSR/23/ and via on-site inspection, it is verified that this project is a solar power project. The tool is used to calculate the CO_2 emission from the electricity consumption from the grid and no captive renewable power

		generation facility at project site. Thus, this applicable condition is met.
	Tool 07: Tool to calculate the emission factor for an electricity system (Version 07.0)	
	Applicability criterion	**Applicability criterion**
	1. Para 3 of the applied tool: 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).	By checking the FSR/23/, it is verified that 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.
	2. Para 4 of the applied tool: Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e. option IIa and option IIb. If option IIa is chosen, the conditions specified in "Appendix 1: Procedures related to off-grid power generation" should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	It is verified that the emission factor for the Chinese grid is calculated considering only grid connected power plants as per information available on 2019 Baseline Emission Factors for Regional Power Grids in China/35/ Thus, the applicability criteria were found to be met.
	3. Para 5 of the applied tool: In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	The project is located in the Gansu province of People's Republic of China, which is not the in the Annex I country. Thus, this tool is applicable.
	4. Para 6 of the applied tool: Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	By checking the FSR/23/ and via on-site inspection, it is verified that the project is a solar power project which does not involve any biofuels. Thus, this tool is applicable.
	Tool 24: Common practice (Version 03.1)	
	Applicability criterion	**Applicability criterion**
	1. Para 3 of the applied tool: 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	The methodology ACM0002 (Version 21.0) applied in this project requires the use of this tool to demonstrate the common practice of this project. Thus, the

	common practice test for the demonstration of additionality.	application of this tool was found to be acceptable, and the applicability criterion is met.
	2. Para 4 of the applied tool: 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.	Via on-site inspection, it is verified that the methodology ACM0002 (Version 21.0) Applied in this project does not define any approaches for the conduction of the common practice test that are different from those described in this methodological tool. Thus, this applicability condition is not relevant to this project.
	Tool 27: Investment analysis (Version 12.0)	
	Applicability criterion	**Applicability criterion**
	1. Para 2 of the applied tool: This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", the guidelines "Non-binding best practice examples to demonstrate additionality for SSC project activities", or baseline and monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.	The methodology ACM0002 (Version 21.0) applied in this project requires the use of this tool to demonstrate the investment analysis of this project. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met.
	2. Para 3 of the applied tool: In case the applied approved baseline and monitoring methodology contains requirements for the investment analysis that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	Via on-site inspection, it is verified that the methodology ACM0002 (Version 21.0) applied in this project does not contains any requirements for the investment analysis that are different from those described in this methodological tool. Thus, this applicability condition is not relevant to the project.
Findings	No finding was raised.	
Conclusion	The verification team confirms that: It has critically assessed each applicability condition listed in the selected methodology and tools, and the relevant information contained in the PSF against these criteria. The selected CDM methodology (and tools) for the project activity is applicable.	

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

Means of Project Verification	N/A
Findings	N/A
Conclusion	N/A

D.3.3 Project boundary, sources and GHGs

Means of Project Verification	As per the applied methodology ACM0002 Version 21.0, the project boundary is the spatial extent of the project, including the project power plant/unit and all facilities 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/8/. 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. The project boundary is clearly depicted with the help of a flow diagram in section B.3 of the PSF and duly verified by the verification team.
Findings	No finding was raised.
Conclusion	The verification team was able to assess that complete information regarding the project boundary has been provided in PSF/17/ and could be assured from the flow diagram. The verification team confirms that all identified boundary, selected emissions sources and justified for the project activity. Hence, in line with the paragraph 44 of Project standard version 3.1/4/, verification team confirms that identified boundary and selected emissions sources are justified for the project activity.

D.3.4 Baseline scenario

Means of Project Verification	The paragraph 24 of the applied methodology (ACM0002, Version 21.0)/8/ prescribes baseline scenario as, “The baseline scenario is that scenario in which the electricity is delivered to the grid by the renewable project activity, which would otherwise have been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.” The baseline scenario in the PSF/17/ is reported as the supply of electricity to grid and thereby displacement of electricity from the electricity distribution system connected to the NWCPG grid. The baseline scenario applied in the PSF/17/ was compared with the requirements of the baseline described in the applied methodology and found consistent. No project and leakage emissions were considered in the PSF/17/ which is in line with the applied methodology/8/. As per the latest version of China Electric Power Yearbook/48/, NWCPG is still dominated by fossil fuels fired power plants. The fossil-fuel fired power plants generated 72.46% of the total electricity provided by NWCPG. The relevant national and/or sectoral policies/35/ /87/ and circumstances/43//44/ are taken into account while determine the baseline scenario.
Findings	No finding was raised.
Conclusion	In line with paragraph 55 and 57 of the Project Standard (Version 3.1), verification team concluded that all assumptions and data used by the project owners are listed in the PSF/17/, including their references and sources.

	All documentation used by project owners as the basis for assumptions and source of data for establishing the baseline scenario is correctly quoted and interpreted in the PSF; All assumptions and data used in the PSF/17/ are justified appropriately and considered reasonable in the context of the project activity. All relevant policies and circumstances have been identified and correctly considered in the PSF/17/, in accordance with the guidance by the GCC Operations Team. The baseline methodology and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. The verification team also concluded that the identified baseline scenario reasonably represents what would occur in the absence of the project activity.

D.3.5 Demonstration of additionality

Means of Project Verification	For demonstrating additionality under GCC the project activity is required to undergo the following tests. **Legal Requirement Test:** Based on the available literature on Notice Regarding the Regulations for Electricity Generation from Renewable Energy/43/ and Law of the People's Republic of China on Renewable Energies/44/ in China it was confirmed that there are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions or other legally binding mandates requiring its implementation, or requiring the implementation of a similar technology/measure that would achieve equivalent levels of GHG emission reductions. The assessment team assessed the relevant regulations to confirm that the project meets the legal requirement test: • Project Registration and Filing Notice/27/ • EIA approval/30/ • Commencement Approval Form/32/ • Notice Regarding the Regulations for Electricity Generation from Renewable Energy /43/ • Law of the People's Republic of China on Renewable Energies/44/ • Environmental Protection Law of the People's Republic of China/45/ **Additionality Tests:** As per the applied methodology ACM0002 (Version 21.0), additionality of the following project activity is demonstrated and assessed by the latest version of Tool01: Tool for the demonstration and assessment of additionality (Version 07.0)/9/. **Step 0: Demonstration whether the proposed project activity is the first-of-its-kind.** This step is optional and not used for this project. **Step 1: Identification of alternatives to the project activity consistent with current laws and regulations** **Sub-step 1a: Define alternatives to the project activity** The Project Owner has identified following alternatives to the project activity. Alternative 1: The project activity not undertaken as a GCC project activity: Energy produced by the project plant would have been sold to the NWCPG grid as per the tariff rate considered. This will lead to financial infeasibility which has been discussed in step 2: investment analysis.

	Alternative 2: Continuation of the current situation (no project activity or other alternatives undertaken): This is the baseline scenario of the project activity. The grid will continue to supply electricity from power plants dominated with fossil fuel and result in GHG emissions. As per the verification team the identified alternatives chosen by the PO are the only real and credible alternatives to the project activity. **Sub-step 1b: Consistency with mandatory laws and regulations** This has been discussed in the legal requirement test above. The verification team has assessed mandatory laws and regulations and confirms that both the alternatives identified above are in compliance with mandatory laws and regulations in China is in compliance with mandatory laws and regulations in China. **Step 2: Investment analysis** Under step 2, it is demonstrated that project activity is not economically or financially feasible, without the revenue from the sale of ACCs. **Sub-step 2a: Determine appropriate analysis method:** The three analysis methods suggested by Tools for the demonstration and assessment of additionality (version 7.0) are simple cost analysis (Option I), investment comparison analysis (Option II) and benchmark analysis (Option III). Since the project will earn revenues from not only the carbon revenue but also from sale of electricity, the simple cost analysis method is not appropriate. Investment comparative analysis method is only applicable to the case in which alternative baseline scenario is similar to the proposed projects, so that comparative analysis can be conducted. The baseline scenario of the project is to supply equivalent annual power output from NWCPG rather than a new investment project activity by project owner. Therefore, Option II is not an appropriate method either. The project will use benchmark analysis method based on total investment IRR. This is in accordance with the Para 32 of Tool01 and thus accepted by the assessment team. **Sub-step 2b: Option III. Apply benchmark analysis:** Appropriateness of Benchmark: Post tax project IRR has been used as the financial indicator for the demonstration of financial unviability for the project activity. A suitable benchmark i.e., expected return on project has been selected as benchmark for comparison purposes. The source of benchmark was assessed by the verification team and the selected post tax project IRR and selected benchmark were found to be appropriate and in-line with the applied tools, guidelines and other supporting documents provided by the PO. Para 15 of Tool27/13/ states “Local commercial lending rates or WACC are appropriate benchmarks for a project IRR. Required/expected returns on project are appropriate benchmarks for a project IRR. Benchmarks supplied by relevant national authorities are also appropriate.” Since there’s no official regulation on the internal return rate of China's solar power industry, project owner has to refer to other regulation to assess the financial situation that similar with the proposed project before construction started. In line to the “the Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects” /46/ issued by the State Power Corporation of China in 2002, which is the latest available data and applicable at the time when the FSR was developed (11/2013), a threshold IRR (post-tax) on project (=required/expected return on project) nominal 8% (post-tax) for solar projects has been prescribed, which is consistent with the benchmark of the project/23/. It is confirmed that IRR (post-tax) is on nominal basis, which refers to any price or value expressed in money of the day, as opposed to real value. Real value adjusts for the effect of inflation. It is confirmed that same benchmark was used for CCER project

"Guohua Sunit Right Banner 50MWp Photovoltaic Power Generation Project" (Reg. No.696)/96/..

By checking relevant project information, it is confirmed that selected benchmark (8%, post-tax) has been applied by similar projects (renewable energy power generation)/88/. The same benchmark was used for approval of FSR by provincial DRC. Therefore, the selected benchmark value was found to be appropriate for this project and representative of the Host Country China.

Sub-step 2c. Calculation and comparison of financial indicators:
Chronology of events is as below:

Time	Key Event
07/2013	Final version of Environmental Impact (EIA) was completed by Lanzhou coal mine design & research institute./29/
22/08/2013	Approval of the EIA was issued by Gansu environmental protection bureau./30/
11/2013	Final version of FSR was completed by Gansu provincial institute of water resource hydropower survey design and research./23/
12/11/2013	Decision making meeting minutes, on which the board decided to invest the project with considering the income from carbon credits as soon as the project got approval./94/
06/12/2013	Project approved by Gansu Development and Reform Commission (Project Registration and Filing Notice)./27/
26/07/2014	EPC contract signed, which is the 1st investment contract regarding construction of the project./20/
10/08/2014	Commencement approval form issued and construction started/32/
29/06/2015	Supplementary EPC agreement signed. Commissioning date was postponed to 30/09/2016 if payment follows the supplementary EPC agreement./21/
25/06/2016	Project commissioned and started to export electricity to NWCPG./26/

(1) Basic parameters for calculation of financial indicators
For calculation of financial indicator, all relevant costs and revenues were found to be included in the IRR sheet/19/ provided by the PO. All assumptions and estimates used for input values were checked against the relevant sources.

In accordance with the ACM0002: "Grid-connected electricity generation from renewable sources"/8/ and Tool 27: Investment analysis/13/, the verification team evaluated the financial data in the project design documents and IRR calculation tables through third party or publicly available information based on the experience of the power industry, and cross-checked the key financial indicators with documents provided by the project owner. It is confirmed that the financial data in the feasibility report used in this project are valid and applicable.

(2) Financial Indicator: Post-tax Project IRR
By checking the project feasibility study report (FSR)/23/, the verification team confirmed that FSR compiled by Gansu Institute of Water Resources and Hydropower Design and Research in 11/2013, which is a qualified design institute. The project was approved by Development and Reform Commission of Gansu province on 06/12/2013/27/. Thus, CTI confirmed that the FSR was compiled by a qualified institution and the project was approved.

By checking the EPC contract/20/, which was the earliest investment made by the project on 26/07/2014. Thus, CTI confirmed this date is capable to be considered as investment decision point. The time interval between the FSR completion date and

the investment decision point was less than 1 year. Therefore, CTI confirmed that Input values used in all investment analysis shall be valid and applicable at the time of the investment decision taken by the project owner.

According to the FSR/23/, the technical specifications/47/, the operational lifetime of the project is 25 years. As per para 6 of the TOOL27: Investment analysis v12.0/13/, "The period of assessment should not be limited to the proposed crediting period of the CDM project activity, the investment analysis shall be conducted for at least 10 years". Although the project selects a 10-year fixed crediting period, since the lifetime of the project is 25 years, the investment analysis of the project is conducted for 25 years. Except that, CTI compared other input parameters for the financial analysis included in the PSF with the parameters stated in the FSR and was able to confirm that the values applied are consistent with the values stated in the FSR.

Based on the project feasibility study report/23/, the verification team reviewed the post- tax project IRR calculation table of the project, and the IRR/19/ of the project was 6.86%, lower than the industry benchmark value, without considering the carbon emission reduction benefits. Considering that when the ACC price is 120 CNY /tCO_2e, the IRR value is 8.21%, indicating that ACC income can improve the income of the project.

Project type (Ref. No.)/88/	Capacity (MWp)	Unit static investment cost (million CNY/MW)	PLF	Tariff (CNY/kWh including VAT)	Annual O&M cost/installed capacity (million CNY /MW)
CCER (067)	50	12.2074	16.17%	1	0.2759
CCER (534)	100	10.4148	16.70%	0.9	0.2319
CCER (538)	50	10.6032	16.67%	1	0.3236
CCER (646)	100.8	11.9922	16.20%	1	0.2594
CCER (724)	50	10.551	15.88%	1	0.2699
CCER (740)	50	9.8001	/	1	0.3740
CCER (792)	50	10.2642	16.34%	1	0.3687
CCER (795)	50	10.9514	17.24%	1	0.3748
CCER (299)	50	/	19.83%	/	/
VCS (1453)	50	12.4134	16.23%	1	0.1832
VCS (1362)	50	11.4940	16.18%	1	0.1964
VCS (1444)	100	9.4037	16.25%	0.9	0.1702
VCS (1406)	100	11.3196	16.14%	0.95	0.1958
CDM (7530)	50	18.8768	17.90%	1	0.1386
CDM (9667)	50	12.4134	16.23%	1	0.1832
The project	100	10.2786	16.86%	0.9	0.2519

Validation of Input Parameters:

Parameter	Data	Means of Verification
Installed capacity	100 MWp	Data source: FSR and Technical Specification The verification team confirmed the total installed capacity of the project is 100 MWp by checking the FSR/23/ and Technical Specification/47/.
Annual power generation	148,927MWh /yr	Data source: FSR The FSR of the project activity provides a detailed study and analysis of the project activity site location for solar radiation and weather / site conditions and estimates the generation of the project activity considering selected equipment and technology. According to the FSR/23/, the estimated electricity fed to NWCPG in the first year is 163,033 MWh. According to "Opinions on Promoting the Application of Advanced Photovoltaic Technology Products and Industrial Upgrading" issued by National Energy Administration on 01/06/2015/83/, the decay rate of polysilicon product shall not exceed 2.5% within 1st operation year and the annual decay rate shall not exceed 0.7% in the following operation years. The decay rate throughout the entire project lifecycle shall not exceed 20%. According to the FSR/23/, the decay rate of PV modules is no more than 2% in the first year, the decay rate within 5 years is no more than 5%, the decay rate within 12 years is no more than 10%, and the decay rate in 25 years is no more than 20%. By checking the Technical Specification /47/, CTI confirmed the decay rate is consistent with FSR/23/. Therefore, the decay rate of the project is reasonable. It is expected that the project will supply electricity the average net electricity 148,927 MWh annually during the technical lifetime of 25 years. By checking the electricity transaction notes (ETNs), it is confirmed that the average net electricity supplied to the grid from 06/2016 to 07/2023 is 105,047MWh, which is lower than the estimated value in FSR/23/. The annual equivalent utilization hours considered in the analysis are 1,477 hours and the plant load factor (PLF) is 16.86%. It is confirmed in the FSR that estimation and calculation procedures are in accordance with Preparation Measures for Feasibility Study Reports of Photovoltaic Power Generation Projects/89/ and Technical Regulations for the Connection of Photovoltaic Power Stations to the Power Grid of State Grid Corporation of China/90/.
Project lifetime	25 years	Data source: FSR The FSR mentioned the lifetime of solar cells/modules as 25 years and accordingly 25 years as lifetime of project plant and assessment period for investment analysis has been considered by the project investors. The assessment team has reviewed other registered

			CDM projects, and it is verified that it is a prevailing and standard industrial practice in China for solar projects to consider the lifetime of 25 years. By checking FSR/23/ and the Technical Specification/47/, the verification team confirmed that the lifetime of the equipment is 25 years. Thus, the expected operational lifetime in the PSF is correct and reasonable. Further, as per the Para 6 of Tool 27: Investment analysis/13/, "IRR calculations should reflect the period of expected operation of the underlying project activity (technical lifetime) and if a shorter period than the technical lifetime is chosen, the investment analysis shall be conducted for at least 10 years and include the fair value of the project activity assets at the end of the assessment period." The project investors have selected and conducted 25 years analysis as life period for the project activity plants, which is longer than the 10 years as mandated in the tool, and further as reasonable fair value of the assets is also included in the cash flow at the end of the assessment period.
	Total static investment	1,027.86 million CNY	Data source: FSR The total static investment applied in the analysis is 1,027.86 million CNY is sourced from the approved FSR, which was composed of bank loan and entity equity. By checking the EPC contract signed in 26/07/2014/20/, total amount is 1,050 million CNY. The difference between the estimated contracted cost for equipment, construction etc., in the FSR and the corresponding actual contracted costs is reasonable, which indicates that the total static investment estimated in the FSR was realistic at the time. The unit static investment cost is 10.2786 million CNY/MW. The value of the similar project list above is between 9.4037 million CNY/MW (Ref No.1444) to 18.8768 million CNY/MW (Ref No.7530). The total static investment per unit installed capacity of the proposed GCC project activity is an intermediate value of the registered projects. Therefore, the total static investment of the project is deemed to be reasonable and appropriate.
	Annual O&M costs	25.19 million CNY	Data source: FSR The O&M cost is consistent of Annual staff salary and welfare, Annual Material fee, Annual Miscellaneous fee, Annual insurance fee, and Annual Repair and maintenance cost. Each component has been verified by the assessment team. A detailed calculation is broken down in the IRR spreadsheet. The annual operating cost in the IRR spreadsheet is verified by assessment team and confirmed to be traceable from the FSR with each

			value. The breakdown of the annual operating cost is as followed: 1. Salary and welfare: 3.6 million CNY/year considering 30 persons with 75,000CNY/year and 60% welfare benefits as per the regulation. 2. Material cost: 35 CNY/KWh* 100MW = 3.5 million CNY/Year 3. Miscellaneous fee: 30 CNY/KWh* 100MW = 3.0 million CNY/Year 4. Insurance fee: 0.5% of regulatory applicable fixed assets =0.5% * 943.42 million CNY = 4.72 million CNY/year 5. Repair and maintenance cost: 1.1% of regulatory applicable fixed assets =1.1% * 943.42 million CNY = 10.38 million CNY/year The O&M cost per unit installed capacity for the project is 0.2519 million CNY/MWp (25.19 million CNY/100 MWp). In order to verify O&M cost of the project, the verification team has checked the percentage of annual O&M cost per unit installed capacity of the registered solar power projects in Gansu province under CCER, VCS and CDM programs. It is found that the value of the similar project list in the Table 4 of the PSF is between 0.1386 million CNY/MWp (Ref No.7530) to 0.3748 million CNY/MWp (Ref No.795). The FSR of the registered projects were completed between 2012 to 2013. The annual O&M cost per unit installed capacity of the proposed GCC project activity is an intermediate value of the registered projects. By checking the cash flow/65/ supplied by the project owner, O&M cost of the project is 17.37, 17.75, 19.00, 20.54, 23.00 and 23.05 million CNY respectively from 2017 to 2022. Average O&M cost is 20.12 million CNY/year which consist 80% of O&M cost estimated in FSR/23/. Therefore, the verification team confirms that the annual O&M costs of the project are reasonable and appropriate.
	Tariff	0.9 CNY/kWh (year 2-21) 0.3343 CNY/kWh (year 22-26)	Data source: FSR In the FSR/23/, the electricity tariff was assumed as 0.9 CNY/kWh (including VAT) during year 2 to year 21 of the project and 0.3343 during the last 5 years. CTI has studied the “Notice of the National Development and Reform Commission on Leveraging Price to Promote the Healthy Development of the Photovoltaic Industry (FGJG [2013] No. 1638)”/53/, in which it stipulated that if a project was approved after 01/09/2013 and commissioned after 01/01/2014, the tariff would be 0.9CNY/kWh for Gansu province, which is the highest tariff available. The project was approved by Gansu Provincial Development and Reform Commission on 06/12/2013/27/,which is later than

			01/09/2013. The project was commissioned on 25/06/2016/26/, which is later than 01/01/2014. Besides, according the "Notice of the National Development and Reform Commission on Leveraging Price to Promote the Healthy Development of the Photovoltaic Industry (FGJG [2013] No. 1638)"/53/, the maximum subsidy years of tariff are 20 years. During the last 5 years of the project, tariff will be equal with tariff of local coal-fired projects/54/. By checking the PPA signed in 11/2019/84/, CTI confirmed the tariff with subsidy (VAT incl., Y2-Y21) is 0.9 CNY/kWh and consistent with FSR/23/. The tariff without subsidy (VAT incl., Y22-Y26) is 0.3078 CNY/kWh, which is lower than that in the FSR and make the estimation in PSF conservative. By checking the electricity transaction notes (ETNs), it is confirmed that the tariff (2016 to 2023) is 0.9 CNY/kWh (including VAT), which is consistent with the FSR/22/. The tariff of the Project (0.9 CNY/kWh) is in the scope of the tariff of the similar project list above (0.9 CNY/kWh to 1.0 CNY/kWh). Therefore, CTI confirmed the tariff was applicable to the project.
	VAT for equipment	17%	In the FSR, 17% VAT is paid for purchase equipment, which is as usual for purchased goods. According to the "Interim regulations of the People's Republic of China on value added tax"/55/, the equipment VAT can be credited over the operation period against the tariff VAT until the VAT from the equipment VAT is fully recovered. For this project, it happened on the 6th year of operation period.
	Income tax	Y2-Y4: 0 Y5-Y7: 12.5% Y8-Y26: 25%	The income tax used in the financial analysis for this project activity is 25%, which is in line with the "Enterprise income tax law of the People's Republic of China"/56/. In addition, as per Notice of the State Administration of Taxation on the Implementation of Enterprise Income Tax Preferential Policies for Public Infrastructure Projects Supported by the State (Guo Shui Fa [2009] No. 80)/57/, the income tax for first 3 operation years (year 2- 4) of the project will be exempted and the income tax for the following three years (year 5-7) will be taxed at a half rate, i.e., 12.5%. Therefore, in the IRR calculation, the income tax rate for the first three operation years (year2-4) is 0 and for the 5th to 7th operation years is 12.25%. CTI confirmed that the tax benefits from interest payments were considered in the calculation of income tax by including the interest of loan in total cost, which is in line with the TOOL27: Investment analysis v12.0/13/.
	The urban maintenanc	7%	According to the Provisional Regulations of the People's Republic of China on Urban Maintenance

	e and construction tax		and Construction Tax/58/, if the taxpayer is located in the urban area, the tax rate is 7%. The urban maintenance and construction tax rate (7% of VAT) in the FSR/23/ is verified to be derived from the regulation/58/. Therefore, it is reasonable to adopt a 7% tax rate for this project.
	The education surtax rate	5%	The education additional tax of 5% applied in the financial analysis was derived from the FSR/23/, which is composed of education additional tax of 3% imposed by central government in line with "Provisional regulations of the People's Republic of China on education tax"/59/, and local education additional tax of 2% imposed by the Gansu province in line with the Administrative Measures for the Collection and Use of Local Education Surcharges in Gansu Province (Gan Zheng Ban Fa [2010] No. 107)/60/.
	Depreciation period and Residual rate	23 years 4.13%	The depreciation period of 23 year is derived from the FSR/23/. According to the "Enterprise income tax law of the People's Republic of China"/61/, an enterprise shall begin computing depreciation for a fixed asset in the month following the month in which the asset is into service, and shall cease computing depreciation for a fixed asset in the month following in which the asset's use is ceased. The minimum number of years for computing depreciation of fixed assets is 10 years for the manufacturing and business operations. Therefore, the depreciation period of 23 years for the project is in line with the regulation and has been taken into account in the income tax calculation. The residual rate (5%) is derived from the FSR/23/ and is in line with the Notice of the State Administration of Taxation on Doing a Good Job in the Subsequent Management of Cancelled Enterprise Income Tax Approval Projects (Guo Shui Fa [2003] No. 70)/62/.CTI confirmed that the residual value has been recovered at the end of operational period in the IRR calculation, and deemed to be reasonable. It is of CTI's opinion that the depreciation period of 23 years and residual value rate of 5% are reasonable and appropriate.
	Loan interest rates Loan repayment period	Long term interest rate: 6.55% Short term interest rate: 6.00% Loan repayment period: 15 years	CTI verified that the long-term loan interest rate 6.55% and short-term loan interest rate 6.00% used in the financial analysis were derived from the FSR/23/ and are consistent with the value stipulated by People's Bank of China (authority organization in economic field in China) in July 2012/63/, which was the latest loan rates available when the FSR was completed in 11/2013. By checking the historical loan rates stipulated by People's Bank of China/63/, CTI confirms the long-term loan rate of 6.55% and short-term loan rate of 6.00% were in accordance with the historical

		records of People's Bank of China. By checking IRR sheet/19/, By checking the FSR/23/, CTI confirmed the loan repayment period is 15 years. Hence CTI was able to confirm that the loan interest rate and loan repayment period applied in the financial analysis is reasonable and acceptable.
Equity rate for the project	70% loan 30% equity	By checking the FSR/23/, CTI confirmed the equity rate for the project is 70% loan and 30% equity.

By checking the FSR/23/ and IRR sheet /19/, CTI confirmed working capital has been added back in final year cash inflow. Recovery of working capital in the end of project life time is reasonable and in line with requirements in "Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects" /47/. Depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, has been added back to net profits for the purpose of calculating project IRR, NPV). All government subsidies/exemptions/rebates are considered for IRR calculation.
The input values of the parameters involved in the investment analysis was cross-checked against each of the evidence provided by the PO and all the values were found to be applicable at the time of the investment decision.
In conclusion, based on CTI's local and sectorial knowledge as well as review of previously registered CDM/VCS/CCER projects, the verification team is able to confirm that the input parameters used in the financial analysis are reasonable and adequately represent the economic situation of the project.

Sub-step 2d: Sensitivity Analysis
In the PSF, four parameters contributing more than 20% to revenues or costs of the project are identified: fixed assets investment, annual electricity delivered to grid, annual O&M cost and electricity tariff, and their sensitivity analysis is carried out. The data and assumptions used in the sensitivity analysis in the PSF were considered reasonable by the audit team.

Total static investment:
If there is a decrease in fixed assets investment by 7.60%, the IRR reach the benchmark. CTI checked EPC contract/20/ available at the verification, and found that the actual value of the investment (including the cost of generation equipment and its installation, cost of civil work construction and land use) is 1,050 million CNY, which is higher than the total static investment estimated in the FSR (1,027.86 million CNY). Thus, it is impossible to lower the total static investment of the project by 7.60%.

Annual electricity delivered to grid:
If the Annual power supply increases more than 7.7%, the project IRR could reach the benchmark. As per the FSR/23/, based on reliable light intensity data issued by local authority, the annual sunlight situation remains stable. The annual electricity delivered to grid was estimated based on sunlight situation. Therefore, the average annual electricity supply will not change substantially in subsequent years.
According to electricity transaction notes (ETNs)/64/ issued by the grid company, average net electricity supplied to the grid from 06/2016 to 07/2023 is 103,665.61 MWh. The value estimated in the FSR is 148,927 MWh. The actual value is 69.6% of that estimated in FSR. Therefore it's impossible to increase 7.7% of net electricity supply to reach the benchmark.
Therefore, it is not credible to improve the economic attraction due to the increase in annual power supply.

Annual O&M cost:
If the Annual O&M cost decreases more than 36.5%, the project IRR could reach the benchmark. The annual O&M cost mainly includes maintenance cost, salary and the welfare, insurance cost, material cost and other miscellaneous costs. But according to the Chinese statistic yearbook/49/, there is an increasing trend for the employee salary and the material price in the recent years. By checking the cash flow/65/ supplied by the project owner, OM cost of this project is about 17.37, 17.75, 19.00, 20.54, 23.00, and 23.05 million CNY respectively from 2017 to 2022. Average OM cost among these years is 20.12 million Yuan/year which consist 80% of OM cost valued expected in FSR. Thus, it is impossible for the operating costs decreasing by 36.5%.

Electricity tariff:
When the tariff increases more than 7.7%, the project IRR could reach the benchmark. As mentioned in the content above, in the "Notice of the National Development and Reform Commission on Leveraging Price to Promote the Healthy Development of the Photovoltaic Industry (FGJG [2013] No. 1638)"/53/, that if a project was approved after 01/09/2013, the tariff would be fixed as 0.9CNY/kWh for Gansu province. Besides, according the "Notice of the National Development and Reform Commission on Leveraging Price to Promote the Healthy Development of the Photovoltaic Industry (FGJG [2013] No. 1638)"/53/, the maximum subsidy years of tariff are 20 years. During the last 5 years of the project, tariff will be equal with tariff of local coal-fired projects/54/. What is more that the tariff of solar power projects will be strictly controlled by the government and normally the tariff is kept at a stable level. By checking the PPA signed in 11/2019/84/, CTI confirmed the tariff with subsidy (VAT incl., Y2-Y21) is 0.9 CNY/kWh and the tariff without subsidy (VAT incl., Y22-26) is 0.3078 CNY/kWh, which is lower than that in the FSR. Thus, CTI confirms it not likely that the power tariff increases by 7.7%.

Step 3: Barrier analysis
The PO has not chosen to apply barrier analysis.

Step 4: Common practice analysis
Common practice analysis has been carried out by using the methodology Tool 24: Common Practice (Version 03.1)/12/ and its stepwise approach.

Step 4a-1: Calculate applicable capacity or output range
The install capacity of the project is 100MW, so the applicable capacity range is assessed as 50 to 150 MW.

Step 4a-2: Identify similar projects (both CDM and non-CDM) which fulfil all of the following conditions

Conditions	Verification opinions
The project is located in the applicable geographic area.	Gansu province was selected as the applicable geographical area. In China's vast territory, there are great differences in economic development level, investment environment, solar energy resources, electricity price policy, development conditions, labor and labor costs among different provinces/51//52/. Therefore, the approval team believes that Gansu province is a reasonable geographical scope.

	The project uses the same technology as this project.	This project is a renewable energy power generation project of solar power generation, so similar projects are also solar energy power generation projects.
	If the project activity involves energy conversion, the project will use the same energy/fuel and feedstock as the project activity.	This project is a renewable energy power generation project of solar power generation, so similar projects are also solar energy power generation projects.
	The Project power plant and the project active power plant provide comparable and identical products/services.	This project is a renewable energy power generation project of solar power generation, so similar projects are also solar energy power generation projects.
	The project capacity scope is the same as that in Step 1.	The designed installed capacity of this project is 100MW, so the applicable installed capacity range is 50 MW~150MW.
	The commencement of commercial operation of the Project is prior to the publication of the proposed Project documents or the proposed project commencement date, whichever is earlier.	The project is a solar power generation project. The similar projects that were put into operation before the start date, which should follow the definition of CDM glossary due to the tool adopted for common practice is a CDM tool. Therefore, "starting date" here means the project participants commit to making expenditures for the construction or modification of the main equipment or facility. As for this project, starting date here is 1st contract signed is EPC project which was signed on 26/07/2014. By checking the EPC supplementary agreement/21/, it is confirmed that due to the payment delay, project didn't start the construction until 10/08/2014 when project owner issued the commencement approval form/32/ along with the supervision company. On 29/06/2015, EPC supplementary agreement/21/ was signed, in which new delivery time was delayed to 30/09/2016 in case payment of the project follow the new schedule.
	Thus, by checking the China electric power yearbook/48/ and relevant project information on CDM/36/, VCS/37/, CCER/85/ and GS/38/ website, it has been concluded that the project owner has appropriately considered all the available projects as per the applicable selection criteria defined for the common practice analysis of current project. It is confirmed that the list is completed, and 15 solar power projects within the applicable range are identified. Step 4a-3: Within the projects identified in Step 4a-2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number, N_{all}. All the projects identified in Step 4a-2 are seeking for financial support from different	

	voluntary emission reduction mechanism. Hence, N_{all} =0. Step 4a-4: Within similar projects identified in Step 4a-3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number, N_{diff}. In Step 4a-3, N_{all} is 0. Thus, $N_{diff} = N_{all} = 0$. Step 4a-5: Calculate factor $F=1-N_{diff}/N_{all}$ representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity. As stated before, $N_{all} = N_{diff}$, $F = 1 - N_{diff}/N_{all} = 1 – 1 = 0<0.2$ Hence, it is concluded that the project is not common practice within the region. Thus, the project is validated as not a common practice in applied geographical region and hence additional.
Findings	CL02, CL03 was raised and resolved.
Conclusion	The information mentioned in the PSF is duly supported by evidence quoted therein. The verification team has described all steps taken, and sources of information used to crosscheck the information contained in the PSF. The verification team determined that the evidence assessed is credible, where appropriate.

D.3.6 Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	In accordance with the applied methodology ACM0002 (Version 21.0)/8/, the PSF has calculated Emission Reductions in the following manner: $ER_y = BE_y – PE_y – L_y$ Where, ER_y - Emission reductions in year y (t CO_2e) BE_y - Baseline Emissions in year y (t CO_2e) PE_y - Project Emissions in year y (t CO_2e) L_y - Leakage emissions in year y (t CO_2e) **Baseline Emissions (BE_y):** As the applied methodology, baseline emissions include only CO_2 emissions from electricity generation in power plants that are displaced due to the project activity. $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ Where, BE_y - Baseline Emissions in year y (t CO_2) $EG_{PJ,y}$ -Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the GCC project activity in project year y $EF_{grid,CM,y}$ -CO_2 emission factor for grid connected power generation in year y The project activity is the installation of a new grid-connected renewable power plant at a site where no renewable power plant was operated prior to the implementation of the project activity. According to the methodology ACM0002 (Version 21.0): $EG_{PJ,y} = EG_{facility,y}$ Where: $EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr). $EG_{PJ,y} = EG_{facility,y} = EG_{export,y} – EG_{import,y}$ **Determination of Combined margin Grid emission factor ($EF_{grid,CM,y}$)** The Combined margin CO_2 emission factor for grid connected power generation in year y ($EF_{grid,CM,y}$) is calculated in a transparent and conservative manner as a combined margin (CM), consisting of the combination of operating margin (OM) and

build margin (BM) according to the steps prescribed in the "Tool to calculate the emission factor for an electricity system", version 07.0.

The PSF applies the calculation of the grid emission factor as per the latest available official guidance "2019 Baseline Emission Factors for Regional Power Grids in China"/35/ published by the DNA of China based on the data from China Electric Power Yearbook (2016~2018) /48/ and China Energy Statistical Yearbook (2016~2018)/49/. "2019 Baseline Emission Factors for Regional Power Grids in China" is the only most recent available official statistics published by China's DNA on 29/12/2020 as confirmed by checking China DNA's official website/35/.

Meanwhile the PSF of the project was submitted for GSC on 13/06/2022 as confirmed vis checking the registration interface of the project on GCC portal/50/. Therefore, it is confirmed that the latest data published by China's DNA is not older than 3 years which is in compliance with the requirement of para 8&9 stipulated in Clarification No.3, v1.0/15/ issued by GCC. Thus, $EF_{grid,OMsimple,y}$ is calculated to be 0.8922 tCO_2e/MWh and $EF_{grid,BM,y}$ is calculated to be 0.4407 tCO_2e/MWh. The verification team has checked the website of China's DNA /35/ and can confirm that the most recent data available at the time of submission of registration request is applied in the PSF. It is confirmed that the calculation is in accordance with the calculation process of the corresponding methodology and tools.

As per the Tool to calculate the emission factor for an electricity system (version 07.0) /11/ and based on the weight ω_{OM} and ω_{BM} of 0.75:0.25 by default for the fixed-ten year crediting period, the combined margin emission factor ($EF_{grid,CM,y}$) is calculated to be $0.75 \times 0.8922 + 0.25 \times 0.4407 = 0.7793$ tCO_2e/MWh and the $EF_{grid,CM,y}$ is fixed for the whole crediting period of the project activity.
The annual average net electricity supplied to the grid is 156,908 MWh during the 10-year fixed crediting period (25/06/2016-24/06/2026) which is in line with the FSR/23/ of the project. It's confirmed that the estimation of the figure is reasonable. Thereby, the baseline emissions per calendar year could be calculated to be 156,908MWh $\times$ 0.7793 tCO_2e/MWh = 122,278 tCO_2e. CTI confirmed that the emission reductions calculation is correct in the PSF/17/.

Therefore, the baseline emission is calculated below:

Year	**$EG_{PJ,y}$ (MWh)**	**$EG_{grid,CM,y}$ (t CO_2e/MWh)**	**Baseline Emission (t CO_2e)**
25/06/2016-24/06/2017	163,033	0.7793	127,055
25/06/2017-24/06/2018	160,666	0.7793	125,211
25/06/2018-24/06/2019	159,538	0.7793	124,331
25/06/2019-24/06/2020	158,418	0.7793	123,459
25/06/2020-24/06/2021	157,306	0.7793	122,592
25/06/2021-24/06/2022	156,202	0.7793	121,732
25/06/2022-24/06/2023	155,105	0.7793	120,877
25/06/2023-24/06/2024	154,016	0.7793	120,028

25/06/2024-24/06/2025	152,935	0.7793	119,186
25/06/2025-24/06/2026	151,861	0.7793	118,349
Total	**1,569,080**	**/**	**1,222,820**
Average	156,908	/	122,282

Project Emission (PE_y):
According to ACM0002 (version 21.0), for most renewable power generation project activities, $PE_y = 0$.

Leakage Emission (L_y):
According to ACM0002 (version 21.0), no leakage is considered. The main emissions potentially giving rise to leakage are neglected.

Emission Reductions (ER_y):
According to formula $ER_y = BE_y - PE_y – L_y$, the annual emission reduction (ER_y) of the project in typical year is calculated as follows:

Year	**Baseline emissions (t CO_2e)**	**Project emissions (t CO_2e)**	**Leakage (t CO_2e)**	**Emission reductions (t CO_2e)**
25/06/2016-24/06/2017	127,055	0	0	127,055
25/06/2017-24/06/2018	125,211	0	0	125,211
25/06/2018-24/06/2019	124,331	0	0	124,331
25/06/2019-24/06/2020	123,459	0	0	123,459
25/06/2020-24/06/2021	122,592	0	0	122,592
25/06/2021-24/06/2022	121,732	0	0	121,732
25/06/2022-24/06/2023	120,877	0	0	120,877
25/06/2023-24/06/2024	120,028	0	0	120,028
25/06/2024-24/06/2025	119,186	0	0	119,186
25/06/2025-24/06/2026	118,349	0	0	118,349
Total	**1,222,820**		**/**	**1,222,820**
Average	122,282		/	122,282

	The annual emission reductions are estimated to be: 122,282 tCO_2e. The project activity is expected to achieve 1,222,820 tCO_2e of net emission reductions during the 10-year crediting period.
Findings	No finding was raised.
Conclusion	The verification team confirms the followings: ● 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 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. ● No sampling has been applied in the project activity.

D.3.7 Monitoring plan

<table>
<tr><td rowspan="3">Means of Project Verification</td><td colspan="3">The monitoring plan is included in Section B.7 of the PSF/17/ based on the approved monitoring methodology ACM0002 (version 21.0)/8/ is correctly applied to the project activity. The monitoring plan includes following parameters:</td></tr>
<tr><td>No.</td><td>Parameters</td><td>Description</td></tr>
<tr><td>1.</td><td>$EG_{facility,y}$ or $EG_{PJ,y}$ (ENR07 and SDG7)</td><td>$EG_{facility,y}$ was assessed to compare PSF against the TOOL 05: baseline, project and/or leakage emissions from electricity consumption and monitoring of the electricity generation, and this was confirmed to be aligned.

Net electricity supplied to the grid by the Project activity. The monitoring parameter will be calculated based on the electricity delivered to the grid by the project ($EG_{export,y}$) and the electricity consumed by the project which is imported from the grid ($EG_{import,y}$).
$EG_{facility,y} = EG_{export,y} – EG_{import,y}$
$EG_{export,y}$ and $EG_{import,y}$ will be continuously monitored by means of 4 bi-directional meters are installed at the outlet of main transformer, with 0.2s accuracy class. For the purpose of measurement, the readings of main meters (M1 and M3) will be accounted in normal scenario but in case of failure of main meters, back up meters reading will be accounted. The meters will be calibrated at least 6 years according to “Verification Regulation of Electrical Meters for Measuring Alternating-current Electrical Energy” (JJG596-2012)/97/. The monitoring parameter will be measured in records and recorded on monthly basis. This parameter is monitored as performance indicator for “Replacing fossil fuels with renewable sources of energy (ENR07)” and SDG 7.</td></tr>
<tr><td>2.</td><td>$EG_{import,y}$</td><td>Quantity of the electricity consumed by the project which is imported from the grid in year y
All modules are connected to main transformer via 2 transformers. Each line is installed with 1 main meter and 1 backup meter. The monitoring parameter will</td></tr>
</table>

			be continuously monitored by means of 4 bi-directional meters are installed at the outlet of main transformer, with 0.2s accuracy class. Cross check measurement results with receipts or invoices. The calibration of meters, including the frequency of calibration, should be done in accordance with national standards or requirements set by the meters. The calibration will be carried out according to relevant national standards and regulations by qualified organization. The accuracy class of the meters should be in accordance with the stipulation of the meter supplier and/or as per the requirements set by the grid operators or national requirements.
	3.	$EG_{export,y}$	Quantity of the electricity delivered to the grid by the project in year y All modules are connected to main transformer via 2 transformers. Each line is installed with 1 main meter and 1 backup meter. The monitoring parameter will be continuously monitored by means of 4 bi-directional meters are installed at the outlet of main transformer, with 0.2s accuracy class. Cross check measurement results with receipts or invoices. The calibration of meters, including the frequency of calibration, should be done in accordance with national standards or requirements set by the meters. The calibration will be carried out according to relevant national standards and regulations by qualified organization. The accuracy class of the meters should be in accordance with the stipulation of the meter supplier and/or as per the requirements set by the grid operators or national requirements.
	4.	CO_2 emission reduction (tCO_2/year) (EA03 and SDG13)	The electricity delivered to the grid by the project is estimated to 156,908 MWh renewable energy-based electricity per year and mitigates the 122,282 tCO_2 annually during 10-year fixed crediting period emissions which would have been generated from the fossil fuel-based power plants, achieving the emission reduction. The electricity generated by the project and electricity delivered to the grid will be monitored continuously and recorded monthly. CO_2 emission reductions will be calculated accordingly. This parameter is monitored as performance indicator for Environment safeguard parameter "CO_2 emissions" (EA03) and SDG 13.
	5.	The number of people employed as long-term worker (SJ01, SJ04 and SDG8)	By checking the FSR/23/, 30 long-term jobs will be supplied to local people who qualified for the position, which will in line with Labor Law of the People's Republic of China/74/. This parameter is monitored by roster or payroll annually. Parameter "Long-term jobs (> 10 year) created/ lost (SJ01)" and "Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04)

			(Human rights)" should include monitoring of the number of people employed as long-term worker.
	6.	Training records supplied for local personnel (SE01)	The project owner has employed local personnel and will provide training to them. This parameter is monitored by training records. Project owner provides relevant training courses for the staff during construction and operation period. Training records will be saved by the project owner annually.
	7.	Noise level (Decibel) (EA09)	The noise of the project boundary will be monitored annually. The noise from the project should meet the class II standard in <Emission standard for environmental noise at boundary of industrial enterprises >(GB12348-2008)/69/. This parameter is monitored as performance indicator for "Noise Pollution (EA09)".
	8.	Waste oil treatment records or contracts (EL02)	The hazardous waste oil will be temporarily stored in storage pools under the main transformer and box transformers, which is in accordance with "Hazardous Waste Storage Pollution Control Standard" (GB 18597-2023)/93/. The waste oil will be sent to an organization with hazardous waste treatment qualifications for processing. Waste oil treatment records or contracts will be maintained. This parameter is monitored as performance indicator for "Solid waste Pollution from Hazardous wastes (EL02)".
	9.	Quantity of E-waste produced and quantity of e-waste disposed / treated (EL04)	Waste PV modules may be generated during the operation of PV power plants. PV modules are collected and stored at specific locations and collected by special facilities and treated by qualified company. The solid waste from e-waste is properly disposed according to Measures for the Administration of the Prevention and Control of Environmental Pollution by Electronic Waste/71/. The contract and replacing records for quantity of e-waste generation, disposed or recycled will be maintained. This parameter is monitored as performance indicator for "Solid waste Pollution from E-wastes (EL04)".
	10.	Solid waste Pollution from end-of-life products/ equipment (EL06)	Solid waste will be caused if no proper treatment of end-of-life products/ equipment. End-of-life products/ equipment are collected and stored at specific locations and collected by special facilities and treated by qualified company. Solid waste from end-of-life products/equipment is properly disposed as per Measures for the Administration of the Prevention and Control of Environmental Pollution by Electronic Waste/71/.The contract and replacing records for quantity of end-of-life products/ equipment will be maintained. This parameter is monitored as performance indicator for "Solid waste Pollution from end-of-life products/ equipment (EL06)".
	11.	Septic tank cleaning records and domestic management log (EW03 and SHS08)	The domestic sewage will be treated in the septic tank and integrated treatment facilities. It could be check from septic tank cleaning record. Domestic solid waste will be collected and stored at designated place

			before transferred to waste management site, which is in line with Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases/91/. This parameter is monitored as performance indicator for "Generation of wastewater (EW03)" and "Reducing / increasing accidents/Incidents/fatality (SHS08)".
	12.	Waste water indicator monitoring records (EW03)	The treated domestic sewage will be monitored by qualified company. The monitoring records will be maintained every batch. By checking the Environmental Impact Assessment Acceptance Report, the value of PH, COD, BOD, suspended solids and ammonia meet the criteria of standard for dry farming of "Standards for irrigation water quality" (GB5084-2021)/72/. This parameter is monitored as performance indicator for "Generation of wastewater (EW03)".
	13.	Accident recording logs and emergency plan (SHS03)	Accident that happened at the project site will be monitored and recorded. Emergency plan is in place which could help staff to manage the accident. Accident recording logs and emergency plan (latest version) will be maintained by the project owner. This parameter is monitored as performance indicator for "Reducing / increasing accidents/Incidents/fatality (SHS03)".
	14.	Roster and training records (SW06 and SW08)	The project owner has established recruitment policy to make sure there is no discrimination when hiring people from different race, gender, religion, etc. Women could be equally hired, empowered, get rewards and get promotion, which is in line with Labor Law of the People's Republic of China/74/ and Employment Promotion Law of the People's Republic of China/92/. It is illegal to hire child labor, the project owner will follow the Labor Law of the People's Republic of China/74/ to make sure all staff are adult. Roster and training records will be maintained by the project owner annually. This parameter is monitored as performance indicator for "Women's empowerment (SW06) (Human rights)".
	The verification team confirmed that the parameters are sufficient to calculate the emission reductions including the environmental and social safeguards/SDG achievement in accordance with the methodology and are correctly reported in the PSF/17/.		
Findings	CL04 were raised and resolved.		
Conclusion	The verification team confirms that: The monitoring plan described in the PSF /17/ is complying with the requirements of the selected methodology. Assessment of compliance of Environmental/Social and SDG impacts monitoring considered in the PSF is in compliance with relevant GCC standards. Based on detailed review, the monitoring arrangement described in the monitoring plan is feasible within the project design. The verification team confirms that the project owner will be able to implement the described monitoring plan. The means of implementation of the monitoring plan are sufficient to ensure that the emission reduction and other voluntary labels achieved from the project activity is verifiable and thereby satisfying the requirement of Verification Standard. The		

	monitoring plan will give opportunity for real measurements of achieved emission reductions.

D.4. Start date, crediting period and duration

Means of Project Verification	As per para 38 of GCC Program standard v3.1/4/: "*The project start date is the date of start of operations of the project*". By checking the Notice of Grid Connection for Quality Supervision and Inspection of Electric Power Engineering/26/ and through on-site interview with key staff, it is confirmed that the project started operation on 25/06/2016 and thus, the project start date is determined as 25/06/2016 in the PSF which is in line with the requirement of GCC Program standard. By checking the approved FSR/23/ and technical specification of equipment, CTI confirms that the expected operational lifetime of the project activity is 25 years. Thus, the expected operational lifetime in the PSF is correct and reasonable. As per para 39 and 40 (b) of GCC Project standard v3.1/4/: "*Crediting periods for all GCC project types are determined in the relevant Baseline and Monitoring Methodologies and refer the minimum of either a 10-year period or a conservative estimate of the technical lifetime of the installed technologies or implemented measures, whichever is shorter*" and "*The start date of the crediting period shall be: For Type A2 Project Activities: after 1 Jan 2016 but not more than one year after the start date of the operations of the GCC Project Activity*". As verified above, the project started operation on 25/06/2016 with an expected operational lifetime of 25 years, thus CTI confirms that it is acceptable for PO to select a fixed 10-year crediting period starting from 25/06/2016 and ends on 24/06/2026.
Findings	No finding was raised.
Conclusion	CTI concludes that the start date of the Project, expected operational lifetime, crediting period and duration demonstrated in the PSF was in accordance with the applicable Project Verification requirements in the Verification Standard and Project Standard.

D.5. Environmental impacts

Means of Project Verification	The project owners have conducted Environment Impact Assessment in 07/2013/29/. The EIA is approved by Gansu Provincial Department of Environmental Protection on 22/08/2013. By reviewing the environmental impact assessment report of this project, the verification team confirmed that the environmental impacts caused by the project have been listed in the project submission form, and specific counter measures have also been proposed for the environmental impacts that may be caused by each aspect. After interview with project owners, the validation team confirmed that the project will not have a significant impact on the local environment by taking the relevant measures described in the environmental impact assessment report.
Findings	No finding was raised.
Conclusion	The project has little impact on the environment, and the owner has taken proper measures to ensure that the project does not have significant negative impacts on the environment

D.6. Local stakeholder consultation

Means of Project Verification	According to the FSR/23/, the project is located in Gobi area and it's difficult to find a large number of residents around project site. A poster was posted to inform local people about this consultation after the project was approved by local authority.

	Anyone around the project site is welcomed to give their comments. On 15/04/2014, the project owner carried out a survey /22/ of the nearest residents around project site, local administrative, and staff or the project, 18 representatives were collected. No negative opinion on construction of the project is heard and environmental and social considerations expressed by stakeholders are discussed on the meeting. The project verification team determined the local stakeholder consultation process was in accordance with the applicable Project Verification requirements related to the local stakeholder consultation in the Verification Standard and Project Standard using the onsite observation, interview with local stakeholders and review of LSC documents.
Findings	No finding was raised.
Conclusion	The verification team confirms that the summary of stakeholders' comments reported in PSF/17/ is complete. In the opinion of the team, the local stakeholder consultation process was adequately conducted by the project owner to receive unbiased comments from the all the stakeholders. The verification team confirms that the local stakeholder consultation process performed for the project activity fulfils the requirements.

D.7. Approval and Authorization- Host Country Clearance

Means of Project Verification	The Project Owner does not intend to use/sell/transfer/retire the carbon credits (ACCs) generated by the Project Activity for offsetting purposes to Airlines under ICAO's CORSIA requirements. For carbon credits issued during 01/01/2016 to 31/12/2020 the HC attestation is not required. For this project activity Host country clearance is not required at the time of project verification.
Findings	FAR 01 was raised.
Conclusion	N/A

D.8. Project Owner- Identification and communication

Means of Project Verification	The information and contact details of the representation of the project owner and project owners themselves have been appropriately incorporated in Appendix 1 of the PSF/17/ which was checked and verified by the verification team from Authorization letter/24/ signed by the project owners. All information was consistent between these documents. Business license/25/, Project Registration and Filing Notice/27/, EIA approval/30/, Commencement Approval Form/32/, Electricity Business License/86/, Notice of Grid Connection for Quality Supervision and Inspection of Electric Power Engineering/26/ and EPC contract/20/ were used to verify the corporate identity of the legal owners, Project Owner and the authorized focal point as defined in the Letter of Authorization/24/.
Findings	No finding was raised.
Conclusion	The verification team confirms that the information of the project owners has been appended as per the template and the information regarding the project owners stated in the PSF/17/ and authorization letter/24/ were found to be consistent. The project is legally owned by the project owner.

D.9. Global stakeholder consultation

Means of Project Verification	The PSF/16/ (version1.0 29/05/2022, https://www.globalcarboncouncil.com/global-stakeholders-consultation-5/) 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 14/09/2022 to 28/09/2022. There were no comments received during this period.

Findings	No finding was raised.
Conclusion	The PSF had been made public for receiving stakeholder feedback and no comments were raised during the GSC process.

D.10. Environmental Safeguards (E+)

Means of Project Verification	The Project Owner has chosen to apply for this certification label. The assessment of the impact of the project activity on the environmental safeguards has been carried out in section E.1 of the PSF/17/. Out of all the safeguards no risks to the environment due to the project implementation were identified and the following have been indicated as positive impacts. a) Environment-Air-CO_2 emissions (EA03): The project reduces CO_2 emissions since it reduces the amount of fossil fuel used. In case of "no project", stated amount of electricity would likely be generated from fossil and cause air pollution. The project will not cause any harm in this regard. The PO will measure the emission reduction according to the net electricity delivered to the grid. b) Environment-Natural Resources-Replacing fossil fuels with renewable sources of energy (ENR07): The project activity causes positive impact on the environment by replacing the fossil fuels with the renewable energy sources of energy. This aspect will be monitored by $EG_{facility,y}$. The following have been indicated as harmless impacts: c) Environment-Air-Noise pollution (EA09): Noise level (Decibel) can be monitored at the boundary of the project annually according to <Emission standard for environmental noise at boundary of industrial enterprises> (GB12348-2008). d) Environment-Land- Solid waste Pollution from Hazardous wastes (EL02): The waste oil produced by transformer operation and maintenance is hazardous waste. The waste oil will be collected and stored in a temporary site and treated by qualified organization regularly. The hazardous waste oil storage is in accordance with "Hazardous Waste Storage Pollution Control Standard" (GB 18597-2023) /93/. Management records or contract will be saved every batch. e) Environment-Land-Solid waste Pollution from E-wastes (EL04): Waste PV modules may be generated during the operation of PV power plants, these PV modules are collected and stored at specific locations and are regularly collected by the special facility and treated by qualified company. Solid waste pollution from E-wastes is properly disposed as per Measures for the Administration of the Prevention and Control of Environmental Pollution by Electronic Waste/71/, the impact is within legal limit, and the contract and replacing records for quantity of e-waste generation, disposed or recycled is monitored. f) Environment-Land-Solid waste Pollution from end-of-life products/ equipment (EL06): End-of-life products/ equipment may be generated during operation period, these end-of-life products/ equipment are collected and stored at specific locations and are regularly collected by the special facility and treated by qualified company. Solid waste pollution from end-of-life products/ equipment is properly disposed as per Measures for the Administration of the Prevention and Control of Environmental

	Pollution by Electronic Waste/71/, the impact is within legal limit, and the contract and replacing records for quantity of end-of-life products/ equipment is monitored. g) Environment-Land- land use change (change from cropland /forest land to project land) (EL08): The project is located in Gobi area which does not involve land use change from cropland or forest land to project land. According to "Preliminary review opinions on land use"/66/ of this project, land of project site belongs to State owned unused land. Utilization of unused land is encouraged according to article 39 of "Law of the People's Republic of China on Land Administration"/67/. h) Environment-Water- Water Consumption from ground and other sources (EW02): According to FSR/23/, water used for construction and operation of the project is from local water supply company. No underground water was used. i) Environment-Water-Generation of wastewater (EW03): The quantity of waste water will be monitored by septic tank cleaning records. The treated domestic sewage will be monitored by qualified company. The monitoring records will be maintained every batch. In all, the project will not cause any net harm to the environment, net Score marked 7 is reasonable. The detailed matrix has been included in appendix 5 of the report.
Findings	CL05, CL06 was raised and resolved.
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	The Project Owner has chosen to apply for this certification label. The assessment of the impact of the project activity on the social safeguards has been carried out in section E.2 of the PSF/17/. 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. a) Social-Jobs-Long-term jobs (> 10 year) created/ lost (SJ01): The number of people employed as long-term worker monitored via roster records or payroll annually and make sure it could meet the criteria and requirement define in the labor's law of China/74/. b) Social-Jobs- Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04): Project owner ensure that there is no discrimination when hiring people from different race, gender, religion, etc, which will in line with labor's law of China/74/. This parameter is monitored by roster or payroll annually. c) Social- Health& Safety- Reducing/increasing accidents/Incidents/fatality (SHS03): There is a possibility of accidents/incidents in project sites. Accident that happened at the project site will be monitored and recorded. Emergency plan has been set which could help staff to manage the accident. Accident recording logs and emergency plan (latest version) will be saved by the project owner. d) Social- Health& Safety- Sanitation and waste management (SHS08): During construction and operation period, solid waste and domestic waste water produced by operation staff will be proper managed to avoid pollution and reduce disease. Septic tank will be provided onsite for treatment and disposal of sewage. Domestic solid waste is collected and stored at designated place before transferred

	to waste management site. Septic tank cleaning log and domestic management log will be maintained by the project owner every batch. e) Social-Education-specialized training / education to local personnel (SE01): The project owner has employed local personnel and will provide training to them. Project owner provides relevant training courses for the staff during construction and operation period. Training records will be saved by the project owner annually. f) Social- Welfare- Community and rural welfare (indigenous people and communities) (SW02): The project is located in Gobi area, which is not suitable for living. Construction of this project will not bring negative impact to local rural community because no local residents living around the project site. Via on-site visit and interviewing with local staff, CTI confirmed that the construction of the project didn't occupy the farm land or any other land that cause negative impact to local community. g) Social- Welfare- Women's empowerment (SW06): Project owner ensure that there is no discrimination when hiring people from different race, gender, religion, etc. Women will be equally empowered for rewards and punishments, as well as for the promotion, which is in line with Labor Law of the People's Republic of China/74/. It imparts a positive impact by empower the women equal opportunities. Roster and training records will be saved annually by the project owner. h) Social- Welfare- Exploitation of Child labour (Human rights) (SW08): It's illegal to hire child labor. Project owner will follow the national labor's law and make sure all staff are adult. Roster and training records will be saved annually by the project owner. i) Social- Welfare- Avoidance of human trafficking and forced labour (Human rights) (SW12): Project owner set up the working time management procedure and rules about vacation. This will limit overtime working and guarantee enough time to rest, which will protect staff's health and living quality. There is no parameter to be monitored during the entire monitoring period in comparison to the pre-project scenario. Therefore, this aspect should be marked as N/A. The net score marked 8 is reasonable, the project activity will not cause any net harm to society. The detailed matrix has been included in appendix 6 of the report.
Findings	CL07 was raised and resolved.
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	The Project Owner has chosen to apply for this certification label. 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 3 SDGs: a) Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all, SDG target 7.2 "By 2030, increase substantially the share of renewable energy in the global energy mix." $EG_{facility,y}$ is monitored as performance indicator. The monitoring parameter will be calculated based on the electricity delivered to the grid

	by the project ($EG_{export,y}$) and the electricity consumed by the project which is imported from the grid ($EG_{import,y}$). $EG_{facility,y} = EG_{export,y} – EG_{import,y}$ $EG_{export,y}$ and $EG_{import,y}$ will be continuously monitored by means of 4 bi-directional meters are installed at the outlet of main transformer, with 0.2s accuracy class. b) Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, SDG Target 8.5 "By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value". 30 long-term jobs were created by the project, and the roster will be maintained annually by the project owner. c) Goal 13. Take urgent action to combat climate change and its impact, SDG Target 13.2 "Integrate climate change measures into national policies, strategies and planning". The electricity generated by the project and electricity delivered to the grid will be monitored continuously and recorded monthly. CO_2 emission reductions will be calculated accordingly. An appropriate monitoring plan has been put in place to monitor both the elements. The detailed matrix has been included in appendix 7 of the report.
Findings	No finding was raised.
Conclusion	Based on the documentation review the verification team can confirm that Project Activity is likely to contribute to the United Nations Sustainable Development Goals and would have a positive impact, hence, is eligible to achieve additional SDG+ certifications

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

Means of Project Verification	A declaration under section A.5 of the PSF/17/ has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 25/06/2016 to 24/06/2026. By checking the China electric power yearbook/48/ and relevant project information on CDM/36/, VCS/37/, CCER/85/ and GS/38/ website, CTI confirmed that the project is neither registered nor under process of registration with any GHG program. No double counting will occur in the scope of this project since GCC is the only program applied, which complied with Standard on Avoidance of Double Counting/95/.The copy of Host country attestation is not issued for project yet.
Findings	FAR 01 was raised.
Conclusion	CTI confirmed that 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	As the Project Owner does not intend to use/sell/transfer/retire the carbon credits (ACCs) generated by the Project Activity for offsetting purposes to Airlines under ICAO's CORSIA requirements. Thus, this section is not applicable to the project.
Findings	Not applicable
Conclusion	Not applicable

Section E. Internal quality control

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The final project verification report has undergone a technical review by a qualified independent reviewer before requesting registration of the project activity. The technical review was performed by a technical reviewer qualified in accordance with CTI's qualification scheme for GCC project verification and emission reductions verification that meets the criteria of GCC guidelines for

qualification.

Section F. Project Verification opinion

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The GCC Project Verifier [Shenzhen CTI International Certification Co., Ltd (CTI)], has verified and certifying that the GCC Project Activity [Jinchang Xipo 100MW solar power project]:

(a) has correctly described the Project Activity in the Project Submission Form (version 3.0, dated 01/04/2024) including the applicability of the approved methodology [ACM0002: "Grid-connected electricity generation from renewable sources" (Version 21.0)] and meets the methodology applicability conditions, is additional and is expected to achieve the forecasted real and additional GHG emission reductions, complies with the monitoring methodology, has appropriately conducted local and global stakeholder consultation processes and has calculated emission reduction estimates correctly and conservatively;

(b) is likely to generate GHG emission reductions amounting to the estimated [1,222,820] tCO_{2eq}, 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, and therefore requests the GCC Program to register the Project Activity;

(c) is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and therefore requests the GCC Program to register the Project Activity, which is likely to achieve the requirements of the Environmental No-net-harm Label (E+) and the Social No-net harm Label (S+); and

(d) is likely to contribute to the achievement of United Nations Sustainability Development Goals (SDGs), comply with the Project Sustainability Standard, and contribute to achieving a total of [3] SDGs (SDG 7, 8, 13), which is likely to achieve the [Silver] SDG certification label (SDG+).

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
ACM	Approved Consolidated Methodology
BE	Baseline Emissions
BM	Build Margin
CAP	Installed Capacity
CAR	Corrective Action Request
CCER	Chinese Certified Emission Reduction
CDM	Clean Development Mechanism
CL	Clarification request
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CTI	Shenzhen CTI International Certification Co., Ltd
CM	Combined Margin
DNA	Designated National Authority
EIA	Environmental Impact Assessment
ER	External Resources
FAR	Forward Action Request
FSR	Feasibility Study Report
GCC	Global Carbon Council
GHG	Green House Gas
GS	Gold Standard
GSC	Global Stakeholder Consultation
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
IR	Internal Resources
IRR	Internal Return Rate
ISO	International Organization for Standardization
LSC	Local Stakeholder Consultation
NWCPG	Northwest China Power Grid
OM	Operating Margin
PE	Project Emissions
PLF	Plant Load Factor
PO	Project Owner
PS	Project Standard
PSF	Project Submission Form
PVR	Project Verification Report
SDG	Sustainable Development Goal
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard

Appendix 2. Competence of team members and technical reviewers

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CTI 华测认证 CTI CERTIFICATION

CERTIFICATE OF APPOINTMENT

Mr. Ziqi LI

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification						
Status	GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	√	√	√	√	-	√

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 3: Energy demand	TA 3.1: Energy demand
SS 4: Manufacturing industries	TA 4.1. Cement and lime production
SS 5: Chemical industry	TA 5.1: Chemical industry
	TA 5.2: Caprolactam, nitric and adipic acid
SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	TA 11.1: Emissions of fluorinated gases
	TA 11.2: Refrigerant gas production
SS 12: Solvents use	TA 12.1: Chemical industry
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater
	TA 13.2: Manure

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:
Wu LIN Wu Lin
Technical Competent Manager
Shenzhen, 25/10/2022

CTI 华测认证 CTI CERTIFICATION

CERTIFICATE OF APPOINTMENT

Ms. Wenting ZHANG

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification						
Status	GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	√	-	√	-	-	-

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN Wu Lin

Technical Competent Manager

Shenzhen, 25/10/2022

CTI 华测认证 CTI CERTIFICATION

CERTIFICATE OF APPOINTMENT

Ms. Yazi CHEN

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification						
Status	GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	-	-	-	-	-	√

Scope	Technical Area
Financial Expert	Financial Expert

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN Wu Lin

Technical Competent Manager

Shenzhen, 10/01/2022

CTI 华测认证 CTI CERTIFICATION

CERTIFICATE OF APPOINTMENT

Ms. Shunrong LIN

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification						
Status	GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	√	√	√	√	√	√

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 3: Energy demand	TA 3.1: Energy demand
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater
	TA 13.2: Manure
SS 14: Afforestation and reforestation	TA 14.1: Afforestation and reforestation
SS 15: Agriculture	TA 15.1: Agriculture

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:
Wu LIN Wu Lin
Technical Competent Manager
Shenzhen, 25/10/2022

CTI 华测认证 CTI CERTIFICATION

CERTIFICATE OF APPOINTMENT

Mr. Tian FENG

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification						
Status	GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	√	√	√	√	-	-

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 8: Mining/mineral production	TA 8.1: Mining/mineral production
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater
	TA 13.2: Manure

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by: Wu Lin

Wu LIN

Technical Competent Manager

Shenzhen, 25/10/2022

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
/1/	GCC	GCC-Project-Framework version 2.1	https://www.globalcarboncouncil.com/wp-content/uploads/2021/10/GCC-Program-Framework-v2.1.pdf	Others
/2/	GCC	GCC-Program-Manual version 3.1	https://www.globalcarboncouncil.com/wp-content/uploads/2021/10/GCC-Program-Manual-v3.1.pdf	Others
/3/	GCC	Program-Process version 4.0	https://www.globalcarboncouncil.com/wp-content/uploads/2021/10/GCC-Program-Processes-v4.pdf	Others
/4/	GCC	Project-Standard version 3.1	https://www.globalcarboncouncil.com/wp-content/uploads/2021/10/Project-Standard-v3.1.pdf	Others
/5/	GCC	Verification-Standard version 3.1	https://www.globalcarboncouncil.com/wp-content/uploads/2021/10/Verification-Standard-v3.1.pdf	Others
/6/	GCC	Environment-and-Social-Safeguards-Standard version 3.0	https://www.globalcarboncouncil.com/wp-content/uploads/2022/10/Environment-and-Social-Safeguards-Standard.V3.0_-1.pdf	Others
/7/	GCC	Project-Sustainability-Standard version 3.1	https://www.globalcarboncouncil.com/wp-content/uploads/2023/01/Project-Sustainability-Standard_V3.1_.pdf	Others
/8/	UNFCCC	ACM0002: “Grid-connected electricity generation from renewable sources” version 21.0	https://cdm.unfccc.int/methodologies/DB/HF3LP6O41YY0JIP1DK6ZRJO9RSCX3S	Others
/9/	UNFCCC	Tool 01: Tool for the demonstration and assessment of additionality version 7.0.0	https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf/history_view	Others
/10/	UNFCCC	Tool 05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation version 3.0	https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-05-v3.0.pdf/history_view	Others

/11/	UNFCCC	Tool 07: Tool to calculate the emission factor for an electricity system version 7.0	https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf/history_view	Others
/12/	UNFCCC	Tool 24: Common practice version 3.1	https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-24-v1.pdf/history_view	Others
/13/	UNFCCC	Tool 27: Investment analysis version 12.0	https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v12.pdf/history_view	Others
/14/	GCC	Clarification No. 01 version1.3	https://www.globalcarboncouncil.com/wp-content/uploads/2022/09/Clarification-No.1-v1.3-.pdf	Others
/15/	GCC	Clarification No. 03 version1.0	https://www.globalcarboncouncil.com/wp-content/uploads/2022/04/Clarification-No.-03.pdf	Others
/16/	Gansu ruicarbon Technology Consulting Co., Ltd	Initial version of PSF submitted for GSC	V1.0 29/05/2022	PO
/17/	Gansu ruicarbon Technology Consulting Co., Ltd	Final version of PSF	V3.0 01/04/2024	PO
/18/	Gansu ruicarbon Technology Consulting Co., Ltd	ER Sheet (revised/final)	29/05/2022 01/04/2024	PO
/19/	Gansu ruicarbon Technology Consulting Co., Ltd	Final version of IRR Sheet	01/04/2024	PO
/20/	PO	EPC contract signed between Jinchang Zhenxin Xipo Solar Power Co., Ltd and Jiangsu Huayuan New Energy Technology Co., Ltd & Zhenfa New Energy Technology Co., Ltd	26/07/2014	PO
/21/	PO	Supplementary EPC contract signed between Jinchang Zhenxin Xipo Solar Power Co., Ltd and Jiangsu Huayuan New Energy Technology Co., Ltd & Zhenfa New Energy Technology Co., Ltd	29/06/2015	PO
/22/	PO	Local stakeholder consultation questionnaires	15/04/2014	PO
/23/	Gansu Provincial	Feasibility Study Report (FSR)	11/2013	PO

	Institute of Water Resources and Hydropower Survey, Design and Research			
/24/	PO	LOA	01/06/2022	PO
/25/	PO	Business license	26/08/2021	PO
/26/	PO	Notice of Grid Connection for Quality Supervision and Inspection of Electric Power Engineering	25/06/2016	PO
/27/	Gansu Provincial Development and Reform Commission	Project Registration and Filing Notice	06/12/2013	PO
/28/	Jinchang Zhenxin Xipo Solar Power Co., Ltd.	Grid-connection scheduling protocol	11/06/2016	PO
/29/	Lanzhou Coal Mine Design & Research Institute	Environmental Impact Assessment (EIA)	07/2013	PO
/30/	Gansu Provincial Department of Environmental Protection	EIA approval	22/08/2013	PO
/31/	Gansu Provincial Department of Land and Resources	Preliminary review opinions on construction land	30/08/2013	PO
/32/	Jinchang Zhenxin Xipo Solar Power Co., Ltd.	Commencement Approval Form	10/08/2014	PO
/33/	Gansu Electric Power Company	Contract for purchase of electricity	05/2014 11/2019	PO
/34/	Jinchang Zhenxin Xipo Solar Power Co., Ltd.	Septic tank cleaning account	/	PO
/35/	Ministry of Ecology and Environment of the People's Republic of China	2019 Baseline Emission Factors for Regional Power Grids in China, published by Chinese DNA	29/12/2020 https://www.mee.gov.cn/ywgz/ydqhbh/wsqtkz/202012/t20201229_815386.shtml	Others
/36/	CDM	https://cdm.unfccc.int/Projects/projsearch.html	/	Others

/37/	VCS	https://registry.verra.org/app/search/VCS	/	Others
/38/	Gold Standard	http://www.goldstandard.org/about-us/projectregistry	/	Others
/39/	GCC	https://projects.globalcarboncouncil.com/pages/gcc_home	/	Others
/40/	IREC	https://evident.app/IREC/device-register/table	/	Others
/41/	PO	Meter installation photos	/	PO
/42/	PO	Power wiring diagram	/	PO
/43/	NDRC	Notice Regarding the Regulations for Electricity Generation from Renewable Energy, Fa gai neng yuan [2006] No.13	05/01/2006 https://www.ndrc.gov.cn/xxgk/zcfb/tz/200602/t20060206_965901.html	Others
/44/	Standing Committee of the tenth National People's Congress	Renewable Energy Law of the People's Republic of China	01/01/2006 https://www.gov.cn/ziliao/flfg/2005-06/21/content_8275.htm	Others
/45/	Standing Committee of the twelfth National People's Congress	Environmental Protection Law of the People's Republic of China	24/04/2014 https://www.gov.cn/zhengce/2014-04/25/content_2666434.htm	Others
/46/	State Power Corporation of China	Interim Rules on Economic Assessment of Electric Engineering Retrofit Projects	China Electric Power Press, 2002	Others
/47/	PO	Technical Specification	03/2023	PO
/48/	China Electric Power Press/China DNA	China Electric Power Yearbook, 2014~2018. 2019 Baseline Emission Factors for Regional Power Grids in China	29/12/2020 http://www.mee.gov.cn/ywgz/ydqhbh/wsqtkz/202012/t20201229_815386.shtml	Others
/49/	China Statistic Press//China DNA	China Energy Statistical Yearbook, 2014~2018. 2019 Baseline Emission Factors for Regional Power Grids in China	29/12/2020 http://www.mee.gov.cn/ywgz/ydqhbh/wsqtkz/202012/t20201229_815386.shtml	Others
/50/	GCC	GCC Projects Portal	13/06/2022 https://projects.globalcarboncouncil.com/project/522	Others
/51/	Shanxi Finance and Economics University	Economic Development Difference in Different Area of China	10/2010	Others
/52/	Economic Geography	Economic Development Difference and Reason Analysis of China, Vol. 30, No.5	05/2010	Others
/53/	National Development and Reform Commission	Notice of the National Development and Reform Commission on Leveraging Price to Promote the Healthy Development of the Photovoltaic Industry (FGJG [2013] No. 1638)	30/08/2013	Others

/54/	Gansu Provincial Development and Reform Commission	Notice of Gansu Provincial Development and Reform Commission on Adjusting Electricity Prices (GFGSJ [2011] No. 2077)	30/11/2011	Others
/55/	National Law/regulations/policy	Interim regulations of the People's Republic of China on value added tax	19/11/2017 https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MTE4NGY5YjE2ZDA	Others
/56/	National Law/regulations/policy	Enterprise income tax law of the People's Republic of China	29/12/2018 https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYyMTA2YWNkMTE3ODQ%3D	Others
/57/	State Administration of Taxation	Notice of the State Administration of Taxation on the Implementation of Enterprise Income Tax Preferential Policies for Public Infrastructure Projects Supported by the State (Guo Shui Fa [2009] No. 80)	2009 http://www.yongdatax.com/show.aspx?id=6946&cid=328	Others
/58/	National Law/regulations/policy	Provisional Regulations of the People's Republic of China on Urban Maintenance and Construction Tax, Guo Fa [1985] No.19	08/02/1985 http://1www.catax.cn/f/platform/taxdoc/view/9073ed1ae57e4012b64e40911828fe40	Others
/59/	National Law/regulations/policy	Provisional regulations of the People's Republic of China on education tax	20/08/2005	Others
/60/	Gansu Provincial People's Government	Administrative Measures for the Collection and Use of Local Education Surcharges in Gansu Province (Gan Zheng Ban Fa [2010] No. 107)	19/05/2010 https://www.doc88.com/p-6751103561871.html	Others
/61/	National Law/regulations/policy	Enterprise income tax law of the People's Republic of China	https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjEzNWY0NjAxNmYyMTA2YWNkMTE3ODQ%3D	Others
/62/	State Administration of Taxation	Notice of the State Administration of Taxation on Doing a Good Job in the Subsequent Management of Cancelled Enterprise Income Tax Approval Projects (Guo Shui Fa [2003] No. 70)	2003 https://www.chinatax.gov.cn/chinatax/n810341/n810765/n812198/200307/c1206267/content.html	Others
/63/	The People's Bank of China	Financial institutions' benchmark interest rate for RMB loans	07/2012 http://www.pbc.gov.cn/zhengcehuobisi/125207/125213/125440/125838/125888/2862314/index.html	Others
/64/	PO	Electricity transaction notes (ETNs)	2016-2023	PO
/65/	PO	Cash flow	2022	PO
/66/	Gansu Provincial Department of	Preliminary review opinions on land use	30/08/2013	PO

	Land and Resources			
/67/	The Standing Committee of the National People's Congress	Land Administration Law of the People's Republic of China	http://www.npc.gov.cn/npc/c30834/201909/d1e6c1a1eec345eba23796c6e8473347.shtml	Others
/68/	Gansu Lingyue Testing Technology Co., Ltd	Environmental Impact Assessment Acceptance Report	10/12/2019	PO
/69/	Ministry of Ecology and Environment of China	Emission standard for industrial enterprises noise at boundary (GB12348-2008)	01/10/2008	Others
/70/	PO	Photovoltaic panel replacement record	2022-2023	PO
/71/	National environment protection bureau	Management Measures for the Prevention and Control of Environmental Pollution by Electronic Waste	27/09/2007	Others
/72/	National environment protection bureau	Standards for irrigation water quality (GB5084-2021)	01/07/2021	Others
/73/	PO	Roster	10/2022	PO
/74/	National People's Congress	Labour Law of the People’s Republic of China	http://www.npc.gov.cn/npc/c30834/201901/ffad2d4ae4da4585a041abf66e74753c.shtml	Others
/75/	PO	Training records	2016	PO
/76/	PO	Safe Production Regulations	/	PO
/77/	National People's Congress	Law of the People’s Republic of China on Work Safety	29/06/2002	Others
/78/	National People's Congress	Constitution of the People's Republic of China	22/03/2018 https://www.gov.cn/guoqing/2018-03/22/content_5276318.htm	Others
/79/	National People's Congress	Law of the People's Republic of China on the Protection of the Rights and Interests of Women	26/10/2018 https://www.gov.cn/guoqing/2021-10/29/content_5647634.htm	Others
/80/	National People's Congress	Law of the People's Republic of China on the Protection of Minors	26/05/2005 https://www.gov.cn/banshi/2005-05/26/content_982.htm	Others
/81/	the State Council	Provisions on the Prohibition of Child Labor	01/10/2002 https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE2ZjNjYmIzYzAxNmY0MGExYjcyMzA1ODM	Others
/82/	Gansu	Gansu Development Yearbook 2022	2022	Others

	Province Bureau of Statistics		http://tjj.gansu.gov.cn/tjj/c117896/info_disp.shtml	
/83/	National Energy Administration	Opinions on Promoting the Application of Advanced Photovoltaic Technology Products and Industrial Upgrading	01/06/2015 http://zfxxgk.nea.gov.cn/auto87/201506/t20150608_1935.htm	Others
/84/	PO	PPA	05/2014, 11/2019	PO
/85/	CCER	As the application of CCER was suspend in 03/2017, website of CCER stopped operation for quite a while Please see below notification from authority as below: https://www.ndrc.gov.cn/xxgk/zcfb/gg/201703/t20170317_961176.html?code=&state=123	/	Others
/86/	PO	Electricity Business License	20/12/2017-19/12/2037	PO
/87/	NDRC	Prohibited of small-scale thermal power plants with a capacity under 135 MW	2006	Others
/88/	China Certified Emission Reduction public available statistics and relevant project information on CDM, VCS, GS and GCC website	Common solar power projects in Gansu province (50 MWp to 150 MWp): Before 26/07/2014 http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/20141008067p.pdf http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/20151010299p.pdf http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/20160219533p.pdf http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/20160219537p.pdf http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/2016060620160405645p.pdf http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/2016062920160512723p.pdf http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/2016071920160603739p.pdf http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/2016071920160603728p.pdf http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/20160816794p.pdf https://registry.verra.org/app/projectDetail/VCS/1453 https://registry.verra.org/app/projectDetail/VCS/1362 https://registry.verra.org/app/projectDetail/VCS/1444 https://registry.verra.org/app/projectDetail/VCS/1406 https://cdm.unfccc.int/Projects/DB/TECO1348832160.15/view https://cdm.unfccc.int/Projects/DB/China%20Quality1372055565.71/view	Before 26/07/2014	Others

/89/	Hydropower and Water Resources Planning and Design Institute	Preparation Measures for Feasibility Study Reports of Photovoltaic Power Generation Projects (Trial) (GD003-2011)	2011	Others
/90/	State Grid Corporation of China	Technical Regulations for the Connection of Photovoltaic Power Stations to the Power Grid of State Grid Corporation of China (Trial)	07/2009	Others
/91/	The Standing Committee of the National People's Congress	Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases	https://www.gov.cn/banshi/2005-08/01/content_19023.htm	Others
/92/	The Standing Committee of the National People's Congress	Employment Promotion Law of the People's Republic of China	https://www.gov.cn/guoqing/2021-10/29/content_5647636.htm	Others
/93/	Ministry of Ecology and Environment	Hazardous Waste Storage Pollution Control Standard (GB 18597-2023)	https://www.mee.gov.cn/ywgz/fgbz/bz/bzwb/gthw/wxfwjbffbz/202302/t20230224_1017500.shtml	Others
/94/	Jinchang Zhenxin Xipo Solar Power Co., Ltd.	Investment Return Discussion Meeting	12/11/2013	PO
/95/	GCC	Standard on Avoidance of Double Counting version 1.0	https://www.globalcarboncouncil.com/wp-content/uploads/2022/03/Standard-on-Avoidance-of-Double-Counting-V1-1.pdf	Others
/96/	CCER	Guohua Sunit Right Banner 50MWp Photovoltaic Power Generation Project (Reg. No.696)	http://cdm.ccchina.org.cn//archiver/cdmcn/UpFile/Files/ccer/20160629201605126 96p.pdf	Others
/97/	General Administration of Quality Supervision	Verification Regulation of Electrical Meters for Measuring Alternating-current Electrical Energy (JJG596-2012)	https://www.doc88.com/p-8522868540952.html	Others
/98/	PO	Septic tank cleaning record	04/2023	PO

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:** 06/02/2023
Description of CL				
As per section A.3 of the PSF template, the project owner shall describe the technologies/measures to be employed and/or implemented by the Project Activity, including: (a) A list of the facilities, systems and equipment that will be installed and/or modified under the Project Activity. (b) The arrangement of the facilities, systems and equipment. (c) The monitoring equipment and their location in the systems. Parameters of facilities should be supplemented in this section.				
Project Owner's response				**Date:** 01/04/2024

Main facilities employed by the project are listed in section A.3 of PSF v3.0:

Parameters of Solar Panels				
Brand	Yin Xing	Yu Hui	Ri Tuo	Shange
Quantity	30780	192080	86114	5681
Rated maximum power (P_{max})	310W	260W	450W	290W
Short-circuit current (I_{sc})	8.71A	8.95A	10.82A	8.65A
Open circuit voltage (V_{oc})	45.58V	37.6V	52.9V	44.1A
Optimum operating voltage (V_{mp})	1000V	1000V	1000V	1000V
Optimum operating current (I_{mp})	15A	13A	14.4A	15.2A
Lifetime (years)	25	25	25	25

Parameters of inverters			
Brand	Yishite	Shangneng	Hewang
Type	EA500KTF	EP-0500-A	HPSP1000
Quantity	147	25	2
Rated output voltage	270AC	315V/AC	520v/AC
Rated output power	500kW	500kW	100kW
Lifetime (years)	25	25	25

Parameters of box transformers		
Brand	Jiangsu Huapeng	TBEA
Type	ZGSF11-Z.G-1000/35	ZGS11--2000/38.5
Quantity	83	2
Rated capacity	1000/500-500KVA	2000KVA
Lifetime (years)	25	25

Main transformer	
Type	SZ11-50000/110
Rated capacity	50000 / 50000 / 15000kVA
Raged voltage	115±8x1.25%/38.5/10.5 kV
Lifetime (years)	25

Documentation provided by Project Owner	
Final submitted PSF v3.0 dated 01/04/2024 and Technical Specification/47/.	
GCC Project Verifier assessment	**Date:** 03/04/2024

The updated PSF is checked, the main facilities employed by the project have been clarified by checking the technical specification/47/. Thus, this CL is closed.

CL ID	02	**Section no.**	D.3.5	**Date:** 06/02/2023
Description of CL				
When conducting the common practice analysis, as per TOOL24 “Applicable geographical area - should be the entire host country. If the project participants opt to limit the applicable geographical area to a specific geographical area (such as province, region, etc.) within the host country, then they shall provide justification on the essential distinction between the identified specific geographical area and rest of the host country” Therefore, the project owner should justify essential distinction between the identified specific geographical area i.e. Gansu province and rest of the host country.				
Project Owner’s response				**Date:** 01/04/2024
In each region of China, the factors affecting the economy of photovoltaic projects are different, such as the investment environment, solar energy resources, power grid structure, electricity price mechanism, the cost and type of labor and services, etc. These factors make the costs and profits of photovoltaic projects in each region of China very different, so Gansu Province is chosen as the applicable geographical region. The explanation is updated in the PSF.				
Documentation provided by Project Owner				
Final submitted PSF v3.0 dated 01/04/2024				
GCC Project Verifier assessment				**Date:** 03/04/2024
The updated PSF is checked, the essential distinction between the identified specific geographical area i.e. Gansu province and rest of the host country have been clarified. Thus, this CL is closed.				

CL ID	03	**Section no.**	D.3.5	**Date:** 06/02/2023
Description of CL				
As per Para 33 of PSF template, “Present in a transparent manner, in the form or in a separate appendix, all data used (variables, parameters, data sources, etc.) and how the additionality of the Project Activity is demonstrated.” The project owner should provide data source of basic parameters for financial evaluation in section B.5, sub-step 2c.				
Project Owner’s response				**Date:** 01/04/2024
Most of the data source used for additionality are from FSR. Besides, other data that used in PSF are cited from national regulation, on site readings, evidence from project owner etc. Data sources are updated in section B.5 of PSF.				
Documentation provided by Project Owner				
Final submitted PSF v3.0 dated 01/04/2024				
GCC Project Verifier assessment				**Date:** 03/04/2024
The updated PSF is checked, the data source of basic parameters for financial evaluation has been clarified. Thus, the CL is closed.				

CL ID	04	**Section no.**	D.3.7	**Date:** 06/02/2023
Description of CL				
Project owner should provide detailed information of the electricity meters, i.e., the location, serial number and accuracy class.				
Project Owner’s response				**Date:** 01/04/2024

Location of meters and relevant information about the meters that used for ER calculation, and relevant calibration information have been updated in section B.7.1 of updated PSF. Information about the meters is as below:

Electricity meter M1 (main meter at 1# transformer)	
Type of meter	2000-6E20-1C31-141
Location of meter	Main meter at 1# transformer
Accuracy of meter	0.2S
Calibration frequency	Calibration at least every 6 years
Serial number of meter	This information will be provided in MR during monitoring period.
Date of Calibration/ validity	
Reference No. of Calibration Certificates	
Calibration status	

Electricity meter M2 (backup meter at 1# transformer)	
Type of meter	2000-6E20-1C31-141
Location of meter	Backup meter at 1# transformer
Accuracy	0.2S
Calibration frequency	Calibration at least every 6 years
Serial number of meter	This information will be provided in MR during monitoring period.
Date of Calibration/ validity	
Reference No. of Calibration Certificates	
Calibration status	

Electricity meter M3 (main meter at 2# transformer)	
Type of meter	2000-6E20-1C31-141
Location of meter	Main meter at 2# transformer
Accuracy	0.2S
Calibration frequency	Calibration at least every 6 years
Serial number of meter	This information will be provided in MR during monitoring period.
Date of Calibration/ validity	
Reference No. of Calibration Certificates	
Calibration status	

Electricity meter M4 (backup meter at 2# transformer)	
Type of meter	2000-6E20-1C31-141
Location of meter	Backup meter at 2# transformer
Accuracy	0.2S
Calibration frequency	Calibration at least every 6 years
Serial number of meter	This information will be provided in MR during monitoring period.
Date of Calibration/ validity	

Reference No. of Calibration Certificates		
Calibration status		
Documentation provided by Project Owner		
Final submitted PSF v3.0 dated 01/04/2024		
GCC Project Verifier assessment		**Date:** 03/04/2024
The updated PSF is checked, the detail information of the electricity meters has been clarified. Thus, this CL is closed.		

CL ID	05	**Section no.**	D.10	**Date:** 06/02/2023
Description of CL				
For the noise pollution, the project owner should describe the monitoring approach and the parameters (KPI) to be monitored. The frequency of monitoring to be specified as well including the data source as per PSF Template v4.0.				
Project Owner's response				**Date:** 01/04/2024
In the updated PSF, data source, monitoring approach and monitoring frequency are listed in section E.1				
Documentation provided by Project Owner				
Final submitted PSF v3.0 dated 01/04/2024				
GCC Project Verifier assessment				**Date:** 03/04/2024
The updated PSF is checked, the monitoring approach of noise pollution has been clarified. Thus, this CL is closed.				

CL ID	06	**Section no.**	D.10	**Date:** 06/02/2023
Description of CL				
As per Appendix 01 of Environment-and-Social-Safeguards-Standard.V3.0, land use change shall be assessed at a minimum which are missing in the PSF.				
Project Owner's response				**Date:** 01/04/2024
Parameter "land use change (change from cropland /forest land to project land) (EL08)" is added in section B.7.2 of updated PSF.				
Documentation provided by Project Owner				
Final submitted PSF v3.0 dated 01/04/2024				
GCC Project Verifier assessment				**Date:** 03/04/2024
The updated PSF is checked, land use change has been discussed in section E.1 of PSF. Thus, this CL is closed.				

CL ID	07	**Section no.**	D.11	**Date:** 06/02/2023
Description of CL				
As per Appendix 01 of Environment-and-Social-Safeguards-Standard.V3.0, the following social aspects and impacts shall be assessed at a minimum which are missing in the PSF: 1. Child labour/ forced labour 2. Social inequality/ safeguards 3. Threatened livelihood 4. Accidents/Incidents/fatality 5. Communal Harmony 6. Sanitation/ health issues 7. Women empoerment				
Project Owner's response				**Date:** 01/04/2024
Relevant aspects have been added in section B.7.2 and section E of updated PSF.				
Documentation provided by Project Owner				
Final submitted PSF v3.0 dated 01/04/2024				
GCC Project Verifier assessment				**Date:** 03/04/2024
The updated PSF is checked, the description in the table of section B.7.1 has been clarified. Thus, this CL is closed.				

Table 2. CARs from this Project Verification

CAR ID	01	Section no.	Others	Date: 06/02/2023
Description of CAR				
Project owner is requested to update the document correspond to the latest PSF template v4.0.				
Project Owner's response				**Date:** 01/04/2024
PSF has been updated in latest template 4.0.				
Documentation provided by Project Owner				
Final submitted PSF v3.0 dated 01/04/2024				
GCC Project Verifier assessment				**Date:** 03/04/2024
The updated PSF is checked, the PSF has been updated according to the latest version of template. Thus, this CAR is closed.				

Table 3. FARs from this Project Verification

FAR ID	01	Section no.	Others	Date: 06/02/2023
Description of FAR				
Host country letter of authorization was not submitted along with request for registration.				
Project Owner's response				**Date:** 01/04/2024
Project owner will follow FAR and apply for HCA if C+ label required in the future.				
Documentation provided by Project Owner				
GCC Project Verifier assessment				**Date:**

Appendix 5. Environmental and social safeguards assessment matrix

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

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

					then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as ***Harmless*** */If the project has a positive impact on the environment mark it as "harmless" as well.*	*and shall be indicated as* ***Harmful***						
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 13 (e) (ii)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 22*		*Paragraph 24 and Paragraph 26 (a) (i)*
Environment - *Air*	*SO_x emissions (EA01)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	NO_x emissions (EA02)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	CO_2 emissions (EA03)	Solar energy is used to generate electricity for the project. It could replace electricity generated by fossil power plants connected to NWCPG and reduce CO_2 emissions.	No national regulatory requirement or legal limits related the construction of solar power plant. It's not forbidden to use electricity from the grid. However, it'll lead CO_2 emission	N/A	Harmless Operation of the project will supply electricity without CO_2 emissions. It'll alleviate climate change and benefit to the environment.	N/A	N/A	N/A	The net electricity generated by the project will be monitored continuously and CO_2 emission reduction will be calculated accordingly.	+1	Chinese national power grid is still dominated by fossil fuel based power generation. This project uses solar energy generation to replace the equivalent amount of electricity provided by the national power grid, thereby reducing CO_2 emissions, which will be regularly	Based on the assessment above, it is confirmed that purpose of the project is to generate CO_2 emission reductions by using the solar power resource for electricity generation. Thus, the project has positive impact from reducing CO_2 emissions. Based on the available public information,

			form operation of fossil power plants connected to the grid.								monitored and verified ex-post and therefore, it is eligible to be scored.	there are no laws nor regulations which limit the CO_2 emissions reductions by solar power generation projects in China. By checking the monitoring plan in the PSF, it is confirmed that the CO_2 emission reductions will be calculated based on the monitored net electricity supply through the meters installed and the emission factor of the grid. Thus, it is concluded that the impact regarding CO_2 emissions is positive and the CO_2 emissions are monitored properly.
	CO emissions (EA04)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Suspended particulate matter (SPM) emissions (EA05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Fly ash generation (EA06)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Non-Methane Volatile Organic Compounds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	(NMVOCs) (EA07)											
	Odor (EA08)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Noise Pollution (EA09)	Noise could potentially cause environmental impact to local residents. During construction period, noise is mainly from operation of construction equipment. Noise during operation period is mainly from transformers and other electrical devices.	The noise can meet the Class 2 standard requirements of the "Noise Emission Standard at the Boundary of Industrial Enterprises" (GB12348 - 2008).	N/A	Harmless	N/A	N/A	N/A	N/A	+1	"Environmental Impact Assessment Acceptance Report" that finalized by Gansu Lingyue Testing Technology Co., Ltd in 07/2021 confirmed that noise at the project boundary didn't exceed 50dB(A) during daytime and night time, which meets the criteria of "Emission standard for industrial enterprises noise at boundary" (GB 12348—2008). The project does not produce significant noise pollution and there is no impact to local people. Project owner will organize annually monitoring and the parameter is eligible to be scored.	Via checking the EIA and through on-site inspection and interviewing with the key staff, it is confirmed that noise during the construction period mainly came from construction equipment operation while during the operation period mainly comes from transformers. The EIA stipulated that the noise level during both construction and operation is estimated to be under the legal limits. By checking the Environmental Impact Assessment Acceptance Report/68/ and the "Emission standard for industrial enterprises noise at boundary (GB12348-2008)"/69/, CTI confirmed that the noise level was within the legal limit. Furthermore, by checking the monitoring plan in PSF, it is confirmed that

												the noise level during the operation period will be monitored annually. Thus, CTI confirms that the noise generated from the project activity is not likely to cause any net harm to the environment and the monitoring KPI has been fairly addressed.
	Others (EA10)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Add more rows if required and corresponding notation with EA as prefix)											
Environment - *Land*	*Solid waste Pollution from Plastics (EL-01)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Solid waste Pollution from Hazardous wastes (EL02)	The hazardous waste oil during the operation period of this project is mainly the waste oil produced by transformer operation and maintenance. Waste oil is a hazardous waste. After being collected, it is temporarily stored in a hazardous waste temporary storage site and is regularly sent to an organization with	Hazardous waste oil storage is in accordance with "Hazardous Waste Storage Pollution Control Standard" (GB	N/A	harmless	N/A	N/A	N/A	Storage pools are under the main transformer and each box transformers, which are used to store waste oil leaked during fault period. when the pool is full, project owner will entrust qualified company to managed the	+1	Management records or contract could be monitored in case such management has taken place during every verification process.	The hazardous waste oil will be temporarily stored in storage pools under the main transformer and box transformers, which is in accordance with "Hazardous Waste Storage Pollution Control Standard" (GB

		hazardous waste treatment qualifications for processing.	18597-2023).						waste oil. Project owner will record and keep the management process when it occurred.			18597-2023)/93/. By checking the treatment record, CTI confirmed the waste oil will be sent to an organization with hazardous waste treatment qualifications for processing. The pollution from hazardous waste oil will not cause any net harm to the environment and the monitoring KPI has been fairly addressed.
	Solid waste Pollution from Bio-medical wastes (EL03)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Solid waste Pollution from E-wastes (EL04)	The solid waste pollution from E-wastes come from PV modules and other electrical devices (such as inverters, transformers, cables, etc.) that replaced during operation period if they're damaged. Waste PV modules will be collected and managed by the special facility and treated by qualified agency.	Measures for the Administration of the Prevention and Control of Environmental Pollution by Electronic Waste is issued by national environment protection bureau on 27th Sep 2007, provides the utilization and dispose method of	N/A	Harmless	N/A	N/A	N/A	Quantity of E-wastes will be monitored and recorded by project owner every batch. Replacing log and transfer log of the E-waste could be monitored during verification.	+1	These E-wastes will be collected and stored in proper place after the replacement. After the fixed asset disposal procedure, they will be transferred to qualified company for proper management. The quantity of E-wastes will be monitored by replacing log and transfer log every batch when replacement happened. Therefore, it is	The E-waste from the power plant will be collect by the licensed recycling organizations as confirmed via checking the Photovoltaic panel replacement record/70/ which complies with the requirement of the "Management Measures for the Prevention and Control of Environmental Pollution by Electronic Waste"/71/.Thus , CTI confirms that the Pollution from E-waste of

			electronic waste.								eligible to be scored.	this project will not cause any net harm to the environment and the monitoring KPI has been fairly addressed.
	Solid waste Pollution from Batteries (EL05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Solid waste Pollution from end-of-life products/ equipment (EL06)	Solid waste pollution from end-of-life equipment may be generated by the project. These equipment will be collected and managed by the qualified agency.	Measures for the Administration of the Prevention and Control of Environmental Pollution by Electronic Waste is issued by national environment protection bureau on 27th Sep 2007, provides the utilization and dispose method of electronic waste.	N/A	Harmless	N/A	N/A	N/A	The quantity of waste equipment generated and recycled will be monitored every batch. It could be checked from the disposal contract and records.	+1	Solid waste from end-of-life equipment will be collected and stored at specific locations, which will be collected by special facilities and treated by qualified company. The quantity of waste equipment will be monitored every batch by disposal contract and records. Therefore, it is eligible to be scored.	The end-of-life products/ equipment from the power plant will be collect by the licensed recycling organizations as confirmed via checking the Photovoltaic panel replacement record/70/ which complies with the requirement of the "Management Measures for the Prevention and Control of Environmental Pollution by Electronic Waste"/71/.Thus, CTI confirms that the pollution from end-of-life products/ equipment of this project will not cause any net harm to the environment and the monitoring KPI has been fairly addressed.
	Soil Pollution from Chemicals	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	(including Pesticides, heavy metals, lead, mercury) (EL07)											
	land use change (change from cropland /forest land to project land) (EL08)	The project is located in Gobi area which does not involve land use change from cropland or forest land to project land. According to <Preliminary review opinions on land use> of this project, land of project site belongs to State owned unused land. Utilization of unused land is encouraged according to article 39 of < Land Administration Law of the People's Republic of China >.	Land use of the project should follow < Land Administration Law of the People's Republic of China >.	N/A	N/A	N/A	N/A	N/A	N/A	0	The project does not involve diversion of any cropland or forest land. Land of project is state owned unused land and the usage of land is approved by local authority. Therefore, this aspect should be marked as 0.	Through on-site ground inspection and interview with plant staff and local residents, by checking the "Preliminary review opinions on land use"/66/, it is confirmed that the land used for the project belongs to state owned unused land. Thus, it is confirmed that the land use change of the project is in line with the legal requirement and will not cause any net harm to the environment.
	Others (EL09)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Add more rows if required											
Environment - *Water*	*Reliability/ accessibility of water supply (EW01)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Water Consumption from ground and other	Over exploitation ground water will cause damage of local ground water resource. Proper management procedure	No laws forbid the project owner to use	N/A	N/A	N/A	N/A	N/A	N/A	0	No ground water will be consumed in all sites of the project activity.	Through on-site ground inspection and interview with plant staff and

	sources (EW02)	should be followed to avoid over usage of local water resource.	ground water.								Therefore, this aspect should be marked as 0.	local residents, by checking the EIA/29/, it is confirmed that no ground water will be consumed in all sites of the project activity and will not cause any net harm to the environment.
	Generation of wastewater (EW03)	Waste water discharged without treatment will cause soil and underground water pollution. The wastewater is mainly generated from the domestic wastewater of construction workers and operation staffs. Domestic waste water will be collected in Septic tank. Cleaning and pumping of wastewater will be handled periodically by professional cleaning company.	Waste water discharged should meet the criteria of standard for dry farming of *Standards for irrigation water quality* (GB5084-2021) according to EIA.	N/A	Harmless	-	N/A	N/A	During construction period, waste water was mainly came from domestic sewage of construction team and it'll be collected and managed by project owner. During operation period, waste water will be collected by septic tank and cleaned by professional agency every batch. It could be check from septic tank cleaning record.	+1	During operation period, domestic waste water will be managed by qualified company and no harm will be caused. The quantity of waste water will be monitored by septic tank cleaning records. According to "Environmental Impact Assessment Acceptance Report" that finalized by Gansu Lingyue Testing Technology Co., Ltd in 07/2021, value of PH, COD, BOD, suspended solids and ammonia meet the criteria of standard for dry farming of "Standards for irrigation water quality" (GB5084-2021). Therefore, it is eligible to be scored.	Through site-inspection, checking the EIA/29/ and interviewing with onsite staff, it is confirmed that the wastewater is mainly the domestic wastewater from the construction workers and the operational staff. By checking the Environmental Impact Assessment Acceptance Report/68/, it is confirmed that the wastewater treated by septic tank meets "Standards for irrigation water quality (GB5084-2021)"/72/. Furthermore, by checking the monitoring plan in the PSF, it is confirmed that the wastewater will be monitored by septic tank cleaning records. Thus, CTI confirms that the wastewater generated by the project will not cause any net

												harm to the environment and the monitoring KPI has been fairly addressed.
	Wastewater discharge without/with insufficient treatment (EW04)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Pollution of Surface, Ground and/or Bodies of water (EW05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Others (EW07)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Add more rows if required											
Environment – *Natural Resources*	*Conserving mineral resources (ENR01)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Protecting/ enhancing plant life (ENR02)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Protecting/ enhancing species diversity (ENR03)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Protecting/ enhancing forests (ENR04)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Protecting/ enhancing other depletable natural resources (ENR05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Conservin g energy (ENR06)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Replacing fossil fuels with renewable sources of energy (ENR07)	The project utilizes solar energy to generate electricity, which will replace the electricity generated by fossil fuel.	No legal limit on replacing fossil power plant with solar power project.	N/A	Harmless	N/A	N/A	N/A	The electricity generated from solar energy and imported to the grid will be monitored continuously by meters throughout the crediting period.	+1	This project is expected to supply an annual average of 156,908 MWh renewable electricity to NWCPG during 10-year crediting period. The electricity generated by this project will be monitored throughout the crediting period. Therefore, it is eligible to be scored.	Through the assessment above, it is confirmed that the project is a solar power project which utilizes solar power for electricity generation and delivers to NWCPG, which replaces the equivalent amount of electricity generated by NWCPG using fossil fuels. The net electricity generated by the project is continuously monitored. Thus, CTI confirms that the project has a positive impact on the environment through replacing fossil fuels with renewable sources of energy.

	Replacing ODS with non-ODS refrigerants (ENR08)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Others (ENR09)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Add more rows if required											

Net Score:	+7	The Project Activity will not cause any net harm to Environment.
Project Owner's Conclusion in PSF:	+7	The Project Owner confirms that the Project Activity will not cause any net harm to Environment.
GCC Project Verifier's Opinion:	+7	The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to environment.

Appendix 6. Social safeguards assessment matrix

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards							Project Owner's Conclusion		GCC project Verifier's Conclusion (To be included in Project Verification Report only)
		Description of Impact (*positive or negative*)	**Legal requirement /Limit, Corporate policies / Industry best practice**	**Do-No-Harm Risk Assessment (Choose which ever is applicable)**			**Risk Mitigation Action Plans (for aspects marked as Harmful)**	**Performance indicator for monitoring of impact.**	**Ex-ante scoring of environmental impact**	**Explanation of the Conclusion**	**3rd Party Audit**
				Not Applicable	**Harmless**	**Harmful**	**Operational / Management Controls**	**Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)**	**Ex- Ante scoring of social impact of the project**	**Ex- Ante description and justification/explanation of the scoring of social impact of the project**	**Verification Process** **Will the Project Activity cause any harm?**
Social Aspects on the identified categories[7] indicated below.	*Indicators for social impacts*	*Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all sources during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control*	*Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts*	*If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If social impacts exist but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Harmless****), project having*	*If negative social impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm and shall be indicated as* ***Harmful***	*Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source*	*-1* *0* *+1*	*Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/regulatory limits (if any) including basis of conclusion*	*Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful aspects how has the project owner adopted Risk Mitigation Action / management actions plans and policies to mitigate the risks of negative social impacts to levels that are unlikely to cause any harm.*

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

					*positive impact on society. To the BAU / baseline scenario must also mark their aspect as **"harmless"***						*Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.*
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 ©*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 © (i)*	*Paragraph 12 © and Paragraph 13 (f)*	*Paragraph 23*		*Paragraph 24 and Paragraph 26 (a) (ii)*
Social – *Jobs*	*Long-term jobs (> 10 year) created/ lost (SJ01)*	30 long-term jobs will be supplied to local people to enhance local employment situation. Project owner will employ these staff according to their personal ability and follow Labour Law of the People's Republic of China.	Salary and relevant welfare will be paid according to Labour Law of the People's Republic of China.	N/A	Harmless	N/A	N/A	The number of employees will be monitored and recorded by internal designated staff by project owner and management team on yearly basis.	+1	Roster and payroll records could prove that job created and positive impact of the project. Therefore, this target is eligible to be scored.	By checking the roster/73/ and interview with the staff from the HR department, it is confirmed that the 30 people are working for the project as long-term employees by the date when CTI conducted the on-site visit, i.e.,06/02/2023. All employees signed the formal contract and are provided with the social security insurance, health insurance, housing allowance and some other welfares in line with the Labor Law of the People's Republic of China/74/. Furthermore, by checking the monitoring plan in the PSF, it is confirmed that roster or labor's contract will be monitored annually. Thus, CTI confirms that the project creates

											long-term job opportunities which has a positive impact on the society and the relevant monitoring KPI has been fairly addressed.
	New short-term jobs (< 1 year) created/ lost (SJ02)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Sources of income generation increased / reduced (SJ03)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04) *(Human rights)*	Project owner established the recruitment policy confirmed that people should be hired base on their ability on the job, instead of considering the gender, religion, political status etc. This will ensure that no discrimination when hiring people from different race, gender, religion, etc.	Labour Law of the People's Republic of China Employment Promotion Law of the People's Republic of China	N/A	Harmless.	N/A	N/A	Number and Identity characteristics of the staff hired will be recorded by project owner. Officially issued recruitment policy should be in place to make sure no discrimination when hiring people.	+1	Owner of the project will monitor the implementation of the employment policies and employee grievances if any, through the separate HR manager and site in charge. Quantity of employment for both men and women will be monitored and recorded through	By interview with the staff, CTI confirmed the project owner will not make discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities and will not cause any net harm to the society. Thus, CTI confirms that the relevant monitoring KPI has been fairly addressed.

										employment records which will include name, gender, age, health condition and nation etc. Therefore, this parameter will be monitored and scored.	
Social – *Health & Safety*	*Disease prevention (SHS01)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Occupational health hazards (SHS02)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reducing / increasing accidents /Incidents/fatality (SHS03)	There is a possibility of accidents/incidents in project sites. Working guide were supplied to avoid accidents. Emergency plan were set up to minimize the negative impact.	Law of the People's Republic of China on Work Safety	N/A	Harmless	N/A	N/A	Accident that happened at the project site will be monitored and recorded. Emergency plan is in place which could help staff to manage the accident.	+1	Accident recording logs and emergency plan (latest version) will be supplied for check when verification occurred. This parameter is eligible to be scored.	By checking the EPC contract/20/, training records/75/ and Safe Production Regulations/76/, it is confirmed that the plant construction, operation and the internal regulations on safety production are in line with the requirement of "Law of the People's Republic of China on Work Safety"/77/. Thus, CTI confirms that the project is not likely to cause any accidents/Incidents/fatality which may have negative impact on the society. The relevant monitoring KPI

											has been fairly addressed.
	Reducing / increasing crime (SHS04)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reducing / increasing food wastage (SHS05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reducing / increasing indoor air pollution (SHS06)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Efficiency of health services (SHS07)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Sanitation and waste management (SHS08)	During construction and operation period, solid waste and domestic waste water produced by operation staff should be proper managed which would otherwise cause pollution and disease.	Law of the People's Republic of China on the Prevention and Treatment of Infectious Diseases	N/A	Harmless	N/A	N/A	Septic tank will be provided onsite for treatment and disposal of sewage, thereby minimizing the impacts of wastewater discharge. Domestic solid waste is collected and stored at designated place before transferred to waste management site.	+1	Septic tank cleaning log and domestic management log will be supplied when verification occurred.	By checking the “Environmental Impact Assessment Acceptance Report”/68/ ,the septic tank cleaning record/98/, and interview with the staff, CTI confirmed that the domestic waste is regularly cleared and transported by the project owner to the designated location by the environmental sanitation department. The waste water will be managed by septic tank.

											Therefore, CTI confirms that the project is not likely to cause any sanitation and waste hazard which may have negative impact on the society. The relevant monitoring KPI has been fairly addressed.
	Other health and safety issues (SHS09)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Add more rows if required										
Social – *Education*	*specialized training / education to local personnel (SE01)*	Project owner provides relevant training courses for the staff before project start operation and during operation period. At least one major-relevant training course should be supplied to technical staff before operation started. Workers should pass the exam before they start working. During operation period, training and related examination should be held when new regulations/standards related to the job are issued.	No legal requirements on training issue of such project. But for some special type of work (e.g., electricians) should get qualified certificate before they start working.	N/A	Harmless	N/A	N/A	Local people who's qualified for the position were hired and got trained base on their position. Training will be supplied to all staff constantly for the benefit of staff and smooth operation. Besides, training courses will be supplied to staff regarding safety issues and standard operations at least 3 times per year. Training records were provided by project owner for monitoring annually.	+1	Training records can be adopted as monitoring indicator. Training is not mandatory and it won't cause negative impact. Copies of staff ID would be kept by project owner as well to prove local people were hired and got well trained during their working here.	By checking the training records/75/ and interviewing with staff during site visit, it is confirmed that all staff have received job related training which is in line with the Law of the People's Republic of China on Work Safety/77/. Furthermore, by checking the monitoring plan in the PSF, it is confirmed that the training records will be monitored annually. Thus, CTI confirms that the project provides job related training

											for all local people who's qualified which has a positive impact on the society and the monitoring KPI has been fairly addressed.
	Educational services improved or not (SE02)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Project-related knowledge dissemination effective or not (SE03)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Other educational issues (SE03)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Add more rows if required (SE04)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Social – *Welfare*	*Improving/ deteriorating working conditions (SW01)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Community and rural welfare (indigenous people and communities)	The project is located in Gobi area, which is not suitable for living. Construction of this project will not bring negative impact to local rural community because no local residents living around the project site.	No relevant law or regulation.	N/A	Harmless	N/A	N/A	Project site is in Gobi area and neither living land nor farm land were occupied by the project. No negative impact on local rural welfare.	+1	Construction of the project didn't occupy the farm land or any other land that cause negative	By checking the EPC contract/20/, preliminary review opinions on land use/66/ and interview with staff on-site, CTI confirmed that the project is located in Gobi desert.

	(SW02)									impact to local community. Verifier could check the operation situation and on-site interview with local residents during verification period.	Thus, it is confirmed that the project is not likely to cause any Community and rural hazard which may have negative impact on the society.
	Poverty alleviation (more people above poverty level) (SW03)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Improving / deteriorating wealth distribution/ generation of income and assets (SW04)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Increased or / deteriorating municipal revenues (SW05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Women's empowerment (SW06) *(Human rights)*	Recruitment policy was established by project owner which could make sure no discrimination when hiring people from different race, gender, religion, etc. Women could be equally hired,	Labour Law of the People's Republic of China Employment Promotion Law of the People's Republic of China	N/A	Harmless	N/A	N/A	Hiring notice required just ability instead of the gender which is consist with the recruitment policy. Once female is hired, roster will be updated and	+1	In case new female staff is hired, roster will be updated and ID info will be recorded by project	By checking the roster/73/ and interview with female staff during site visit, it is confirmed that women in the project enjoy equal rights with

		empowered, get rewards and get promotion.	Law of the People's Republic of China on the Protection of Women's Rights and Interests					training courses will be supplied base on her/their position.		owner. Roster and training records could be checked when verification.	men, such as equal pay for equal work which is in line with the Constitution of the People's Republic of China/78/, the Law of the People's Republic of China on the Protection of the Rights and Interests of Women/79/ and the Labor Law of the People's Republic of China/74/. Since there are specific laws in China that protects the women's rights and all individuals or organizations must comply with the laws. CTI confirms that the project is not likely to cause any net harm to the society regarding Women's empowerment. The monitoring KPI has been fairly addressed.
	Reduced / increased traffic congestion (SW07)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Exploitation of Child labour *(Human rights)* *(SW08)*	It's illegal to hire child labour. Project owner will follow the national labour law and make sure all staff are above 18 years old.	Labour Law of the People's Republic of China Law of the People's Republic of China on Protection of Minors	N/A	Harmless	N/A	N/A	Recruitment policy was issued by project owner and confirm that all recruitment activities follow the laws. No people under 18 will be hired by the project owner.	+1	No child labour hired by the project owner. Recruitment policy, roster and age could be checked	By checking the roster/73/ and interview with project owner and ground inspection during site visit, it is confirmed that there is no child labor involved in the project which

										by verifier to make sure no child labour.	is in line with Law of the People's Republic of China on the Protection of Minors/80/, the Provisions on the Prohibition of Child Labor/81/ and Labor Law of the People's Republic of China/74/. Since there is clear laws and regulations on preventing child labor and protecting the rights of children in China, CTI confirms that the project is not likely to cause any net harm to the society regarding child labor exploitation. The monitoring KPI has been fairly addressed.
	Minimum wage protection *(Human rights) (SW09)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Abuse at workplace. (With specific reference to women and people with special disabilities / challenges)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	(Human rights) (SW10)										
	Other social welfare issues (SW11)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Avoidance of human trafficking and forced labour *(Human rights)* *(SW12)*	Project owner set up the working time management procedure and rules about vacation. This will limit overtime working and guarantee enough time to rest, which will protect staff's health and living quality. Staff is allowed to ask for leave according to company's regulations, and such leave should be recorded.	Labour Law of the People's Republic of China	N/A	N/A	N/A	N/A	N/A	N/A	Procedure could make sure no extra working time and life quality could be guaranteed. There is no parameter to be monitored during the entire monitoring period in comparison to the pre-project scenario. Therefore, this aspect should be marked as N/A.	By interview with staff and ground inspection during site visit, it is confirmed that there is no human trafficking and forced labour involved in the project which is in line with Labor Law of the People's Republic of China/74/. Since there is clear laws and regulations on preventing human trafficking and forced labour and protecting the rights of staff in China, CTI confirms that the project is not likely to cause any net harm to the society regarding human trafficking and forced labour.
	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	(Human rights) *(CW13)*										
	Provisions of resettlement and human settlement displacement *(Human rights)* *(CW14)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Add more rows if required										
Net Score:		+8									
Project Owner's Conclusion in PSF:		The Project Owner confirms that the Project Activity will not cause any net harm to society.									
GCC Project Verifier's Opinion:		The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to society.									

Appendix 7. United Nations Sustainable Development Goals (SDG) Assessment Matrix

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

Goal 3. Ensure healthy lives and promote well-being for all at all ages	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 5. Achieve gender equality and empower all women and girls	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 6. Ensure availability and sustainable management of water and sanitation for all	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all	SDG target 7.2 "By 2030, increase substantially the share of renewable energy in the global energy mix."	Yes	Provide affordable renewable energy with modern power technology for residents in the areas covered by the power grid.	Target of the project is to deliver 148,927 MWh zero emission electricity to local power grid annually during 25-year life time and contribute to renewable energy supply,	The equipment will be well managed and proper operated aiming to generate and supply 3,723,169MWh zero emission electricity to	The project increases the renewable energy share in Chinese energy system. It'll be easily for Chinese residents to achieve affordable clean energy, and	Project operation team will continuously monitor the quantity of net electricity supplied to the grid and double check with	Through checking FSR/23/, the Notice of Grid Connection for Quality Supervision and Inspection of Electric Power Engineering/26/ and interview with on-site staff and ground inspection, it is confirmed that the project is a solar power	Yes

				which will benefit for local people to access affordable modern energy. During whole life time, electricity supplied to the grid which will increase renewable energy share of local grid. This is consistent with relevant UN and national SDG target. Construction of the project is not mandatory in host country and the SDG goal is a voluntary commitment by project owner. This goal is related with EA03 and ENR07.	the grid during whole life time. Such contribution started on 25/06/2016 when project started operation. Target is expected to be achieved by the end of each operation year.	increase the portion of renewable energy in Chinese grid system.	electricity transaction notes (ETN) or invoice. The parameter is measured continuously by meter and recording monthly by project staff.	project which generates electricity and deliver to NWCPG, the annual net electricity is estimated to be 148,927MWh during the entire project lifetime. The project has already started operation since 25/06/2016 and the net electricity supply will be continuously monitored by the OM team. Thus, CTI confirms that the project is likely to achieve the project level SDG target.	
Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all	SDG Target 8.5 "By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work	Yes	supply decent working opportunities and create 30 long term jobs directly hired by the project owner for local people during operation period.	Target of the project is to create 30 long-term jobs for qualified people. It's not mandatory to supply long-term contract by law. Project owner voluntary to do so which is benefit for workers and local economy and society.	Project started operation and long-term jobs are created. Long -term labour contract signed between worker and project owner should be considered as proper action for the goal. Signing contract can be considered	Jobs created by the project can increase the employment and accommodating more labour force. Staff are well trained about new technology on renewable energy. They will be well paid with salary and relevant welfare as per national regulations. Besides, tax will	Roster will show the number of workers employed by the project during operation and could be checked when verification conducted. Labour contract can be monitored as well and	By checking the roster/73/, the Annual average remuneration of employment personnel in urban non-private units in Gansu province in 2021 /82/ issued by Gansu Province Bureau of Statistics and through on-site interview, it is confirmed that the project has employed 30 people as long-term staff with annua average salary from 75000 RMB higher	Yes

	of equal value"			This goal is related with SJ01 and SJ04.	as target achieved.	be paid to local government during operation period which will be great help to local economic growth	checked when verification conducted.	than the local average level of 47,212 RMB in 2021. Thus, CTI confirms that the project has contributes to the project level SDG target: create about 30 long-term decent job opportunities by the end of 2022.	
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 10. Reduce inequality within and among countries	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 12. Ensure sustainable consumption and production patterns	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 13. Take urgent action to combat	SDG Target 13.2 "Integrate	Yes	The Project generates renewable energy based	The Project involves installation of	148,927 MWh of clean electricity	The project activity will avoid emission of	Monitoring the supplied electricity to	Through checking FSR/23/, the Notice of Grid Connection for Quality Supervision	Yes

climate change and its impacts	climate change measures into national policies, strategies and planning"		electricity and mitigates the CO_2 emissions which would have been generated from the fossil fuel based power plants. Operation of this project would raise awareness about renewable energy usage in local area.	100MW solar project in China. Electricity generated will replace fossil fuel based electricity in NWCPG and reduce 122,282 tCO_2e GHG emission per year during crediting period. The project will operate 25 years and people from Gansu Province where project located would be employed. Therefore awareness of renewable energy and contribution to climate change of the project could be achieved by operation of the project. This goal is related with EA03 and ENR07.	would be generated by the project annually during life time of solar power plant, i.e., 25 years of operation. This would be a great awareness enhancement for local people and great contribution on increase in proportion of renewable energy of Chinese grid.	122,282 tCO_2e annually over the project's technical lifetime, which is estimated to be 25 years.	NWCPG by the project. The GHG emission reduction is calculated accordingly.	and Inspection of Electric Power Engineering /26/ and interview with on-site staff and ground inspection, it is confirmed that the project is a solar power project which generates electricity and deliver to NWCPG, the annual ER is estimated to be 122,282 tCO_2e during the 10-years credit period. The project has already started operation since 25/06/2016 and the net electricity supply will be continuously monitored by the OM team and the emission reductions will be calculated accordingly. Thus, CTI confirms that the project is likely to achieve the project level SDG target.	
Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 15. Protect, restore, and	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertificatio n, and halt and reverse land degradation and halt biodiversity loss									
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 17. Strengthen the means of implementati on and revitalize the global partnership for sustainable development	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SUMMARY						**Targeted**		**Likely to be Achieved**	

Total Number of SDGs	**3**	**3**
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	**Silver**	**Silver**

DOCUMENT HISTORY

Version	Date	Comment
V 3.1	31/12/2020	▪ The name of GCC Program's emission units has been changed from "Approved Carbon Reductions" or ACRs to "Approved Carbon Credits" or ACCs.
V 3.0	23/08/2020	▪ Revised version released on approval by the Steering Committee as per the GCC Program Process; ▪ Revised version contains the following changes: ○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC); ○ Considered and addressed comments raised by the Steering Committee: ➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and ➢ electronic consultations EC01-Round 04 (17.08.2020 – 22.08.2020). ▪ Feedback from the Technical Advisory Board (TAB) of ICAO on GCC submissions for approval under CORSIA[8];
V 2.0	25/06/2019	▪ Revised version released for approval by the GCC Steering Committee. ▪ This version contains details and information to be provided, consequent to the latest worldwide developments (e.g., CORSIA EUC).
v1.0	01/11/2016	▪ Initial version released for approval by the GCC Steering Committee under GCC Program Version 1

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

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