المجلس العالمي للبصمة الكربونية
GLOBAL CARBON COUNCIL

Project Verification Report

V3.1 - 2020

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COVER PAGE Project Verification Report Form (PVR)	
BASIC INFORMATION	
Name of approved GCC Project Verifier / Reference No. (also provide weblink of approved GCC Certificate)	verico SCE Certificate No: GCCV006/00 https://www.globalcarboncouncil.com/wp-content/uploads/2022/02/GCCV006-00_Verico-SCE_GCC-Verifier-Certificate_21022022.pdf
Type of Accreditation	☐ Individual Track[1] ☐ CDM Accreditation ☒ ISO 14065 Accreditation DAkkS, Accreditation Certificate D-VS-19003-01-00 Period of validity: 12.02.2020 to 22.01.2024 https://www.dakks.de/en/accredited-bodies-search.html?Regnr=D-VS-19003-01-00
Approved GCC Scopes and GHG Sectoral scopes for Project Verification	GHG Sectoral scopes 1 to 15 Environmental No-harm (E+) Social No-harm (S+) Sustainable Development Goals (SDG+)
Validity of GCC approval of Verifier	21/02/2022 to 22/01/2024
Title, completion date, and Version number of the PSF to which this report applies	Kaskelen 50 MWp Solar Power Plant Version 2.1 Dated 05/12/2023
Title of the project activity	Kaskelen 50 MWp Solar Power Plant
Project submission reference no.	S00259
Eligible GCC Project Type[2] as per the Project Standard	☒ **Type A:** ☐ Type A1

[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.

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

	☒ Type A2 (Sub-Type 1) ☐ **Type B – De-registered CDM Projects:** ☐ Type B1 ☐ Type[3] B2
Date of completion of Local stakeholder consultation	10/09/2019
Date of completion and period of Global stakeholder consultation. Have the GSC comments been verified. Provide web-link.	GSC was conducted from 3 Jul. 2022 to 17 Jul. 2022 https://www.globalcarboncouncil.com/global-stakeholders-consultation/ No comments were received for this project.
Name of Entity requesting verification service	Climate Bridge (Shanghai) Ltd.
Contact details of the representative of the Entity, requesting verification service	projects@climatebridge.com Contact person: Mr. Zhiwen Gao
Country where project is located	The Republic of Kazakhstan
GPS coordinates of the Project site(s)	43.620267N (43° 37′ 12.96″ N), 76.97287E (76° 58′ 22.34E)
Applied methodologies	Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers (GCCM001, version 4.0)
GHG Sectoral scopes linked to the applied methodologies	GHG SS#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

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

	☒ Meet applicability conditions in the applied methodology ☒ Credible Baseline ☒ Additionality ☒ Emission Reduction calculations ☒ Monitoring Plan ☒ No GHG Double Counting ☒ Local Stakeholder Consultation Process ☒ Global Stakeholder Consultation Process ☒ United Nations Sustainable Development Goals (Goal No 13-Climate Change)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria ☒ United Nations Sustainable Development Goals (in additional to SDG 13) ☒ CORSIA requirements
Project Verifier's Confirmation: The *GCC Project Verifier* has verified the GCC project activity and therefore confirms the following:	The GCC Project Verifier, verico SCE, certifies the following with respect to the GCC Project Activity: Kaskelen 50 MWp Solar Power Plant. ☒ The Project Owner has correctly described the Project Activity in the Project Submission Form (version 2.1, dated 05/12/2023) including the applicability of the approved *Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers (GCCM001, version 4.0)* 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 46,954 tCO_2e annually, as indicated in the PSF, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable GCC rules, including ISO 14064-2 and ISO 14064-3. ☒ The Project Activity is not likely to cause any net-harm to the environment and/or society and complies with the Environmental and Social Safeguards Standard, and is likely to achieve the following labels: ☒ Environmental No-net-harm Label (**E^+**)

	☒ Social No-net-harm Label (**S+**) ☒ The Project Activity is likely to contribute to the achievement of United Nations Sustainable Development Goals (SDGs), complies with the Project Sustainability Standard, and contributes to achieving a total of *[3]* SDGs, with the following[4] SDG certification label (**SDG+**): ☐ Bronze SDG Label ☒ Silver SDG Label ☐ Gold SDG Label ☐ Platinum SDG Label ☐ Diamond SDG Label The Project Activity complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, as per Clarification No 1., v1.3 paragraph 23-25, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore requests GCC Steering Committee to append CORSIA Certification label (C+) to this project. However, Host country Attestation (HCLOA) on Double Counting required by CORSIA will be provided during the Emission Reduction verification. ☒ 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：GCC007-S00259 Date of approval: 29/12/2023 by TR Luis Robles Olmos
Name of the authorised personnel of GCC Project Verifier and his/her signature with date	Sergio Degener  Date 18/01/2024

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

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

1. PROJECT VERIFICATION REPORT

Section A. Executive summary

Brief Summary of the Project Activity

Kaskelen 50 MWp Solar Power Plant (hereafter referred to as “the project”) is a solar photovoltaic power plant with a total capacity of 50.83884 MWp. The project locates in 6km southwest of Zhanaarna Village, Almaty State, the Republic of Kazakhstan. The project is invested and operated by Mistral Energy LLP, a subsidiary of Kaskelen Solar LLP.

The aim of the project is to generate electricity from solar energy and supply it to Kazakhstan Electricity Grid Operating Company (KEGOC).

The project involves 14 PV arrays with a unit capacity of 3.57 MW. The PV arrays are connected through 35kV lines to the onsite 220kV substation and then connected to KEGOC. The project is expected to supply renewable power of 67,289 MWh on an annual average to KEGOC during the fixed 10-year crediting period and 63,464 MWh on an annual average during the 25-year of lifetime.

The project was in operation since 6 August 2020. The emission reductions (annual average) from the project activity are estimated to be 46,954 tCO_2e per year over the fixed 10-year crediting period.

Scope of Verification

The scope of the services provided by Verico SCE (hereafter referred to as “verico”) for the project is to perform Project Verification and Emission Reduction Verifications of concerned GCC Project Activity and implemented safeguards aimed to achieve environmental and social impacts without causing any net harm. The contribution of the project activity towards the United Nations Sustainable Development Goals would also be verified. The compliance for the project activity related to CORSIA requirement for C+ label is also checked as a part of scope. The scope of verification is to assess the claims and assumptions made in the Project Submission Form (PSF) against the GCC criteria, including but not limited to, GCC PS, GCC VS, applied CDM methodology, relevant CDM tools, ICAO-CORSIA requirements for GCC projects and other relevant rules and requirements established under Program process.

Verification Process and Methodology

The verification process was undertaken by a competent verification team and involved the following,

- 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 owner/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)

Conclusion

The review of the PSF, supporting documentation and subsequent follow-up actions (on-site audit and interviews) have provided verico with sufficient evidence to determine the fulfilment of stated criteria. Verico is of the opinion that the project “Kaskelen 50 MWp Solar Power Plant” as described

in the final PSF/V01/ meets all relevant requirements of GCC and host country (legal requirements for producing power) criteria and has correctly applied the CDM approved methodology GCCM001 Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers, ver 4.0. Therefore, the project is being recommended to GCC Steering Committee for registration. During the crediting period, the project shall achieve the emission reduction which are real, measurable and additional. The project has also fulfilled all the requirements related to Environmental Safeguards (E+ label), Social Safeguards (S+ label) and has forecasted to contribute to 3 UN SDGs. The project complies with all the applicable requirement of the GCC Program and ICAO's requirements on CORSIA Emissions Unit Eligibility Criteria and CORSIA Eligible Emissions Units, and the ACCs expected to be issued during the crediting period is likely to be CORSIA eligible and can be used by International Airlines for offsetting their emissions during all phases of CORSIA and therefore request GCC Steering Committee to append CORSIA Certification label (C+) to this project; However, Host country Attestation (HCLOA) on Double Counting as required by CORSIA will be provided during the Emission Reduction verification stage and FAR has been raised in this report in accordance with GCC Standard on double counting. Therefore, the project is being recommended to GCC Steering Committee for request for registration.

Section B. Project Verification team, technical reviewer and approver

B.1. Project Verification team

No.	Role	Type of resource	Last name	First name	Affiliation	Involvement in			
						Desk/document review	On-site inspection	Interviews	Project Verification findings
1.	Team Leader	IR	Betzenbichler	Werner	Central office Langenbach, Germany	x			x
2.	Team member and Local Expert	IR	Maksut	Aida	verico member, Astana, Kazakhstan		x	x	x
3.	Team member and Financial Expert	IR	Wang	Jing (Robin)	verico member, Beijing, P.R.China	x			x

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

No.	Role	Type of resource	Last name	First name	Affiliation
1.	Technical reviewer and Financial Expert	IR	Robles Olmos	Luis	verico member, Madrid, Spain
2.	Approver	IR	Alejandro Degener	Sergio	verico member, Kleinostheim, Germany

Section C. Means of Project Verification

C.1. Desk/document review

The verification was performed primarily as a document review of the initial PSF and the revised / final PSF.

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

In accordance with Verification Standard – paragraph 28, it is mandatory for GCC Verifiers to conduct on-site visit and inspections during project verification for proposed GCC Project Activities if:

(a) The Project Activity's estimated average annual GHG emission reductions or net anthropogenic GHG removals are more than 100,000 tCO_2eq;

The local auditor performed physically the on-site visits and interviews with representatives of the project owner on 16 September 2022, based on project-specific checklists prepared by the verification team.

Duration of on-site inspection: 16/09/2022				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Solar power facilities	Project site	16/09/2022	Aida Maksut
2	Interview of local stakeholders	Office of the operator		Aida Maksut
3.	Document review and close meeting			Aida Maksut

During the on-site mission, the central office of the project owner and the production site, including all solar power units implemented as the project activity were visited. All evidence (records, databases, documents) that have been checked during the strategic analysis, the on-site mission and on request thereafter are listed in Annex 3.

At the end of the on-site mission a preliminary findings list has been provided to the project owner indicating the need for further clarifications or additional proofs (clarification requests), as well as identified non-compliances (corrective action requests) which would require the revision of documents and calculations (see Annex 4).

Annex 5 to this report provide some impressions of areas visited for inspection.

C.3. Interviews

No.	Interview			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Shakenova	Zhanel	The operator	16/09/2022	Project development	Aida Maksut
2.	Burbaeyv	Yersain	The operator	16/09/2022	Project development/ Environmental/ Social /SDG impact	Aida Maksut
3.	Abdrakhmanov	Dulat	The operator	16/09/2022	Project development/ operation	Aida Maksut
4.	Yerkin	Eren	The operator	16/09/2022	Environmental/ Social /SDG impact	Aida Maksut
5.	Maratov	Abay	Local residence	16/09/2022	Environmental/ Social /SDG impact	Aida Maksut

C.4. Sampling approach

Not applicable as no sampling has been used during the project verification.

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	CL#01		
General description of project activity	A_1, A_2, B_1, B_2			
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	CL#02		
- Demonstration of additionality including the Legal Requirements test	A_1, A_2, B_1, B_2	CL#03 CL#04		
- Estimation of emission reductions or net anthropogenic removals	A_1, A_2, B_1, B_2	CL#05		

- Monitoring plan	A_1, A_2, B_1, B_2	CL#06		
Start date, crediting period and duration	A_1, A_2, B_1, B_2			
Environmental impacts	A_1, A_2, B_1, B_2		CAR#01	
Local stakeholder consultation	A_1, A_2, B_1			
Approval & Authorization- Host Country Clearance	A_1, A_2, B_1, B_2			
Project Owner- Identification and communication	A_1, A_2, B_1, B_2	CL#07	CAR#02	
Global stakeholder consultation	A_1, A_2, B_1			
Others - To address the GCC Completeness check observations	A_1, A_2, B_1, B_2		CAR#04	
VOLUNTARY CERTIFICATION LABELS				
Environmental Safeguards (E^+)	A_1, A_2, B_1		CAR#03	
Social Safeguards (S^+)	A_1, A_2, B_1	CL#08		
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			
CORSIA Eligibility (C^+)				
Total		8	4	0

Section D. Project Verification findings

D.1. Identification and eligibility of project type

Means of Project Verification	In the PSF, Type A2 (Sub-Type 1) was identified for the project type by Project Owner's (hereafter referred to as the PO). The verification team verified the given start date of the operation (06/08/2020) by checking ➢ Checking the signed Power Purchase Agreement (PPA) and the Grid Connection Agreement with Kazakhstan Electricity Grid Operating Company (KEGOC) on 06/08/2020; /V04/ ➢ Checking public information of solar power projects connected to Kazakhstan Electricity Grid; /V05/ ➢ Checking the Engineering Procurement and Management (EPM) contract signed on 12/06/2019. /V06/ It was found that the operation start date of the project to be 06/08/2020 is credible and subsequently Type A2 (Sub-Type 1) identified for the project is appropriate in accordance with para.11(a) of the Project Standard /G02/. Furthermore, in accordance with para.16 (a) and (b) of Project Standard /G02/, the verification team checked the business licenses of the Mistral Energy LLP, the legal owner of Kaskelen 50 MWp Solar Power Plant /V07/, its mother company Kaskelen Solar LLP /V08/, and Climate Bridge (Shanghai) Ltd. the PO of the project /V09/. Based on the confirmation of the legitimacy of the parties involved, the verification team assessed the FSR /V10/, EIA /V11/ and the accreditation of assessment organization Kazakh Institute of Oil and Gas /V12/ of the project in terms of relevant government regulations or laws to development of grid connected renewable power. Based on the expertise and knowledge of the local auditor, the verification team was able to confirm that the project was voluntarily implemented by the PO and development of grid-connected renewable power such as solar photovoltaic technologies was not required by legal mandate and does not implement a legally enforced mandate in the host country. /V09/,/V10/. In addition, in accordance with para.16 (c) and (d) of Project Standard /G02/, the verification team checked the project design(FSR)/V10/ and equipment specification/V12/. Based on the installed capacity of solar arrays/V04/ and operational records of the project/V15/, the verification team was able to confirm that the project can deliver real, measurable and additional emission reductions by applying methodology GCCM001 version 4.0/G13/. The verification team verified the double-counting issue of the project activity by searching the title of the PO and the Project Legal Owner, project title as well as geographical coordinates, in relevant publicly available data for other registries like CDM, Verra /V53/, Gold Standard/V54/, i-REC/V55/ and other domestic or international carbon trading schemes Therefore, it was concluded that the project activity was not registered under any other GHG and non-GHG program, and the project activity is confirmed to be eligible as Type A2 – Sub Type 1 under GCC program which covers project activities already commissioned/operational after 01/01/2016 but not registered with any other programs.

Findings	**CL#01** was raised for demonstration to justify the eligibility of project type. It was closed after the description about start date of project operation (06/08/2020) was added in section A.1 and A.5 of the last version of the PSF.
Conclusion	Hence, the verification team was able to confirm that in accordance with para.11 (a) and para.16 of the Project Standard and GCC Clarification No.01 table 1, the project is an existing operational project, not submitted to any program, which has started operation after 01/01/2016, and is eligible as Type A2 (Sub-Type 1) project.

D.2. General description of project activity

Means of Project Verification	In accordance with para.36 of the Project Standard/G02/, the verification team checked project description in section A of the PSF including specification list and schematics, against the FSR of the project and found consistent/V09/. In accordance with para.37 of the Project Standard, the verification team checked the FSR of the project /V10/ issued by Kazakh Institute of Oil and Gas (an accredited party by Kazakhstan government/V12/) and found that the project development complies with all the applicable host-country legal requirements with compliance focused at project level scope and the business license of the Legal Owner was available prior to the start of commercial operation of the power plant. /V07/ Hence the proprietary or contractual right of the power plant, equipment, process or measures that generates GHG emission reductions can be confirmed. Furthermore, the verification team verified the Authorization Letter to the PO signed by the Legal Owner of the Kaskelen 50 MWp Solar Power Plant on 20/04/2022 and found substantial and credible/V20/. Hence the verification team was able to confirm that according to the consensus reached by above both parties, the ownership of GHG emission reductions generated by the project is accorded to the PO. In accordance with para.38 and 39 of the Project Standard, the verification team checked the information of section A.5 of the PSF, i.e. the crediting period from 06/08/2020 to 05/08/2030 (10 years) against the project design (FSR), EPM contract/V06/, equipment purchase contracts/V14/ and operation records of the power plant/V15/. According to the assessment on the relevant laws/ regulations of renewable energy in the host country/R01/ and the research report of international organization (IEA) in 2020/V21/, it can be confirmed that the project development is voluntary not required by a legal mandate and it does not implement a legally enforced Mandate (government regulation or law) through knowledge of the relevant legislation and policies by the local verifier of the host country./V09/ According to the requirements of CDM EB 48 Annex 11/UN07/, the verification team checked the power generation capacity and Plan Load Factor (PLF) of 14.49% with the original design in the FSR of the project and found the consistent. /V10/ In the FSR, the expected lifetime of the project is 25 years and the plant load factor of the project during the lifetime is 14.49% and the total attenuation ratio of the solar PV module will be lower than 20% by the end of lifetime. The annual average of 67,289 MWh of zero-emission electricity to KEGOC during the fixed 10 year crediting period of GCC scheme, is only used for the calculation of emission

	reductions /V02/ The details regarding installed capacities, applied technology and operational lifetime have been verified by a consistency check of equipment purchase records, manufacture specifications/V13/, power connection diagram/V14/ and project acceptance records/V16/. The capacity of the project has been checked against the equipment list (Table 1 of section A.3) with the project design plan of the FSR and found consistent. Therefore, it can be confirmed that the project can deliver measurable and additional emission reductions in accordance with the methodology GCCM001 version 4.0. In accordance with para 41 and 42 of the Project Standard/G02/, the verification team checked the spreadsheet of emission reduction calculation provided by the PO/V02/ and was able to confirm that the estimate of expected annual emission reductions over the 10-year crediting period has been declared appropriately in section A.5 with the 10-year crediting period as of 06/08/2020. The correctness of the specified coordinates of the project location as described in section A.2 has been checked by the use of Google Earth/V25/. The title of the PO as described in section A.4 has been checked against the information of GSC and the authorization letter between the Legal Owner and the PO./V20/ Information regarding any other schemes where the project might have been registered has been discussed during the interviews with the Legal Owner. The verification team also checked the GCC website and performed secondary research (internet) to determine if the project was applied other GHG Program prior to commencement of this verification/V53/,/V54/,/V55/. It was found that the project was not submitted to any GHG trading scheme for registration apart from GCC and that it is not a debundled activity regarding another GCC project submission.
Findings	**CAR#01** was raised for more specific geographical coordinates of the power plant .It was closed after the coordinates of the inflection point of all PV arrays were added in section A.2 of the updated PSF. It was found that the coordinates provided in the PSF were obtained from actual measurements and more accurate.
Conclusion	The verification team confirms that in accordance with applicable Project Verification requirements related to the description of the project activity in the Verification Standard/G03/ and Project Standard/G02/: ➢ the project development complies with all the applicable host-country legal requirements; ➢ the project description as contained in the last version of the PSF was found appropriate, correct and complete to deliver real, measurable and additional emission reductions compared to its baseline, is in accordance with GCCM001 version 4.0; and ➢ No double counting risk needs to be considered for the project since GCC is the only program applied.

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

D.3.1 Application of methodology and standardized baselines

<table>
<tr><td>Means of Project Verification</td><td>
The information provided regarding the applicability of the methodology (GCCM001 ver.4.0) has been verified through a review of the PSF and supporting evidence.

In accordance with the applicable conditions, the verification team assessed the project features and discussed them with the interviewed persons.

The project is a greenfield solar PV power plant.

Methodology GCCM001 ver.4.0

Applied CDM tools:
➢ am-tool-01-ver.7.0.0 Tool for the demonstration and assessment of additionality;
➢ am-tool-05-v3.0 Tool to calculate baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation;
➢ am-tool-07-ver.7.0 Tool to calculate the emission factor for an electricity system;
➢ am-tool-24-ver.03.1 Common practice;
➢ am-tool-27-ver.12.0 Investment analysis.

<table>
<tr><th colspan="2">Applicability for GCCM001, Version 04.0</th></tr>
<tr><th>Applicability criterion</th><th>Assessment</th></tr>
<tr><td>The project activities shall employ following renewable energy generation technologies and supply generated electricity to a national or a regional grid:

(i) Solar Photovoltaic; (ii) On-shore or Off-shore Wind; (iii) Tidal; (iv) Wave.</td><td>The verification team checked the PPA signed with KEGOC/V04/ and the FSR /V10/ of the project activity, and was able to confirm that the project was newly built solar PV plant which supplies power to the national power grid.</td></tr>
<tr><td>The project activities can also involve setting up and implementation of a BESS along with the renewable energy generation plant.</td><td>By checking the PPA/V04/, it can be confirmed that the project activity does not involve BESS.</td></tr>
<tr><td>The project activity wherein a BESS has been deployed, can either be a greenfield installation wherein the BESS had been conceptualized along with the renewable energy generation unit or may be retrofitted into an existing setup of renewable energy project, whether or not registered with GCC.</td><td>By checking the PPA/V04/, it can be confirmed that the project activity does not involve BESS.</td></tr>
</table>
</td></tr>
</table>

In case the Project Owners want to claim carbon credits due to retrofit of BESS into existing renewable energy generation unit, they would need to demonstrate that historically the renewable energy unit was subject to curtailed output due to low grid stability or capacity limitation in the grid infrastructure for handling the increased generation. This must be through evidence of existence of technical and regulatory/commercial constraints.	By checking the PPA/V04/, it can be confirmed that the project activity does not involve BESS.
The project activities shall not involve combined heat and power (co-generation) systems.	By checking the PPA/V04/, it can be confirmed that the project activity does not involve co-generation.
The project activities shall not involve co-firing of fossil fuel of any kind.	By checking the PPA/V04/, it can be confirmed that the project activity does not involve co-firing of fossil fuel of any kind.
The project activities may have consumption of electricity (grid on on-site generation) for site offices.	Based on the availability of solar energy, the consumption of grid power is a normal situation.
DPPs that supply electricity also for domestic, commercial or industrial captive purposes either wholly or in addition to supply to grid, shall demonstrate that grid connection was available on the site before the implementation of project activity.	By checking the PPA/V04/ and on-site inspection, it can be confirmed that the project is an USPP not DPP.
Under no condition would the battery storage system (BESS) be charged from the grid except in case of emergency situations like deep discharge or exceptional operational situations due to requirements from regulatory authorities in order to safeguard the safety and operational integrity of the connected grid system. BESS which consumes grid power or fossil fuel-based captive power for auxiliary load associated with BESS setup and employ cooling and/or fire suppression systems based on refrigerants or clean agents with the global warming potential (e.g. Hydrofluorocarbon (HFC) or Chlorofluorocarbon (CFC)) are not included under this methodology.	By checking the PPA/V04/ and on-site inspection, it can be confirmed that the project activity does not involve BESS.

Applicability of the applied CDM tools	
Applicability criterion	**Assessment**
Tool 01: Tool for the demonstration and assessment of additionality (Version 07.0.0)	

	The use of the "Tool for the demonstration and assessment of additionality" is not mandatory for project owners when proposing new methodologies. Project owners 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 tool is included by an approved GCC methodology (GCCM001)/G13/ and which is the applied methodology. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met.
	Once the additionally tool is included in an approved methodology, its application by project owners using this methodology is mandatory.	The tool is included by an approved GCC methodology (GCCM001)/G13/ and which is the applied methodology. Thus, the application of this tool was found to be acceptable, and the applicability criterion is met.
	Tool 05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation (Version 03.0)	
	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.	Not Applicable. This tool is not used for baseline/project/leakage mission calculation in the project.This tool is only used by the project activity to monitor the amount of electricity generated in the project scenario, as the electricity generated in the project scenarios is supplied to the grid.
	This tool can be referred to in methodologies to provide procedures to	This project belongs to scenario-I as this is a grid connected solar

	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.	power project. The electricity generated in the project scenarios is supplied to the grid and the applicability criterion is met.
	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 CO2 emissions.	Not applicable. There are no captive renewable power generation technologies are installed to provide electricity in the project.
	Tool 07 :Tool to calculate the emission factor for an electricity system (Version 07.0)	
	This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	Photovoltaic power station grid-connection agreement/V04/ confirmed that this project involves generation electricity through solar energy power plant where generated electricity is delivered to the grid. This project replaces grid power supply and uses this tool to calculate the values of OM, BM and CM of this project.Thus, the applicability criteria are found to be met.
	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 owners, 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	Applicable The emission factor for this project electricity system was calculated for grid connected power plants.

	and not to other aspects such as transmission capacity.	
	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.	This condition is not relevant, there is no part of the power system of this project located in Annex I countries.
	Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	This condition is not relevant, this project is a solar power project.
	TOOL 27: Investment analysis (Version 12.0)	
	This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify 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	Applicable The project applies the methodological tool "Tool for the demonstration and assessment of additionality".
	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.	Not applicable
	TOOL 24: Common practice (Version 3.1)	
	This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality.	Applicable This project applies the methodological tool "Tool for the demonstration and assessment of additionality".
	In case the applied approved baseline and monitoring methodology defines approaches for the conduction of the common practice test that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	Not applicable
Findings	No findings were raised.	
Conclusion	The verification team confirms that the selected GCC methodology and CDM methodological tools for the project activity is applicable.	

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

Means of Project Verification	It has critically assessed each applicability condition listed in the selected methodology/tool and the relevant information contained in the PSF against these criteria.
Findings	No findings were raised.
Conclusion	The verification team assessed the justification on the applicability and found appropriate.

D.3.3 Project boundary, sources and GHGs

Means of Project Verification	As per the applied methodology GCCM001 ver.4.0, the project boundary is the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the Kazakhstan Electricity Grid 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. 12 of the applied methodology. The verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified. /V04/, /V05/, /V10/ It can be 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 a flow diagram in the PSF Section B.3 and duly verified against the Power Purchase Agreement signed with KEGOC/V04/.
Findings	No findings were raised.
Conclusion	The verification team confirms that the project boundary and emission sources justified for the project were found appropriate.

D.3.4 Baseline scenario

Means of Project Verification	In accordance with the para.13 of the applied methodology GCCM001 ver.4.0, prescribes a standardized baseline scenario for all greenfield projects, the baseline scenario of the project was identified appropriately in PSF Section B.4, i.e. the baseline scenario is that the electricity delivered to KEGOC by the project activity would be generated by the operation of grid-connected power plants and by the addition of new generation sources into KEGOC. No project and leakage emissions were considered in the PSF which is in line with the applied methodology. The data source that 89.55% in 2018 and 89.01% in 2020 of grid power resources share of KEGOC was generated by fossil fuels fired power plants, was checked against the data of IEA database /R03/. The verification team has also verified the baseline scenario of the power sector of the host country against the national energy structure and annual statistics/V21/ available at the time of FSR completion and the investment decision-making of the

	Project Legal Owner in 2018, and found that the relevant policy issues were taken into account for the implementation of the project activity. By referring to the IEA's statistics/V21/, it was found that renewable energy accounted for only 1.4% of the energy resources mix of Total Primary Energy Supply(TPES) in 2018. Share in electricity generation was 10.4% in 2018, of which most is hydro electricity, though a 53.2% surge in non-hydro renewables output in 2019 took the segment' s overall share of power generation in Kazakhstan to a shade still less than 1.0%, and a ratio that rising only marginally to 1.4% in 2028 as the forecasts. Therefore, it can be confirmed that thermal power generation still occupies the dominant position in the host country during the crediting period of the project activity.
Findings	**CL#02** was raised for a specific data source that the grid power of KEGOC. It was closed after the data source with analysis of the international authority was provided.
Conclusion	Based on its expertise in relevant national and/or sectoral policies, regulations and circumstances (E+/E-), the verification team was able to confirm that ➢ the baseline scenario identified for the proposed GCC project activity is in accordance with the applicable Project Verification requirements related to the establishment of the baseline scenario in the Project Standard /G02/,Verification Standard/G03/ and GCCM001 ver.4.0/G13/. ➢ the data sources referred to substantiate the demonstration are credible and appropriate. ➢ the baseline scenario was identified appropriately.

D.3.5 Demonstration of additionality

Means of Project Verification	In accordance with the two components included in para.45 of Project Standard /G02/ that stipulated for demonstration of additionality and the applicable methodology GCCM001 ver.4.0, the verification team assessed the approach for demonstrating additionality: (a) A Legal Requirement Test (as per para.46 to 48 of Project Standard); and (b) An Additionality Test either based on a Positive List test point 15 (Tool 32) /UN06/ or a projects-specific additionality test (as per para.49 to 54 of Project Standard /G02/). The verification team retrieved relevant policies/regulations for Renewable Energy implemented in the host country /R01/ and found that the development of renewable energy is encouraged and with a special policy i.e. the Kazakhstani Government was actively attracting a greater investment into the renewable energy sector, implementing a 15-year feed-in-tariff (FiT) mechanism in 2013. In 2018, the Ministry of energy shifted to a new stage of support: the country began to conduct renewable auctions. The auction mechanism allowed, on the one hand, to make transparent and understandable the process of selection of projects and investors, on the other hand, to bet on more efficient technologies and projects that allow to minimize the impact on tariffs for end consumers from the introduction of renewable energy capacities.

	Hence, the verification team was able to confirm that the development of renewable energy including solar power is not enforced in the host country and the conclusion in PSF section B.5 is appropriate. Additionality of the project is demonstrated by using the approved CDM tool am-Tool-01-v7.0.0 Tool for the demonstration and assessment of additionality/UN02/. Step 1 The identification of the two alternatives and legality were assessed and found in line with the Tool. Step 2 Sub-step 2a & 2b The benchmark analysis (Option III) was chosen appropriately depending on the bank lending rate of National Bank of the Republic of Kazakhstan, at the time of the investment decision (August 2018) i.e. 13.60% Project IRR as the financial indicator/V22/. The verification team verified the validity of benchmark 13.60% (Project IRR post-tax) chosen by the PO and found in line with para 15 of the investment tool (Tool 01 ver.7.0.0), the local commercial lending rate is chosen as the appropriate benchmark for the project IRR. The data source of the bank lending rate of National Bank of the Republic of Kazakhstan with interest rate from 2018 to 2022 has been checked/R03/. Taking into account that from 2016, the country was in a high inflation cycle, the interest rate was 20% in 2016 then slowed to 12% in 2020, but rose again to 16% in 2022, averaging 13.70% from Jan 2002 to Jan 2023, as per statistics of Kazakhstan Bank Lending Rate data/V22/. The verification team also crosschecked with statistic data published by World Bank and found the same/V29/. Based on the verification team's sectoral and financial expertise, it is confirmed that this benchmark adopted by the project is conservative for renewable energy investments in the host country. Sub-step 2c Based on the benchmark of Project IRR (on real time, post-tax) is 13.60%, the financial parameters were listed in Table 2 "*Basic parameters of the project IRR calculation*". It was checked with the parameters designed in the FSR dated 2018 by a qualified third party as per Kazakhstan energy industry standards/regulations, and found consistent/V30/. Subsequently, the calculation of IRR was verified and found that without carbon credits the Project IRR is 9.58%. /V03/ According to CDM VVS para 101, the investment decision was soon made in August 2018, two months after the finalization of the FSR and the time period was sufficiently short. The verification team searched the relevant industrial policies of solar PV including tariff, tax subsidies as well as market pricing of photovoltaic panels, and found no significant changes within that short period. Hence it can be

confirmed that it is unlikely in the context of the underlying project activity that the input values would have materially changed.

As the project is already commissioned, according to para 6 of Methodological tool: Tool for the demonstration and assessment of additionality, version 7.0.0., the verification team verified the suitability of the input values such as project cost, O & M costs, feed in tariff, electricity generation, loan interest, loan tenure, moratorium period etc. against the actual values evidenced by the Project Owner, e.g. Records of power generation since August 2020 /V15/.

The verification team checked key input values from the FSR against the relevant evidence, and the details are as below.

Parameter and Value applied	**Basis and verification**
Installed capacity - 50MW	It is considered at investment decision stage based on the approved FSR/V10/ which is used for the project approval. Final capacity is also verified with the EIA /V11/ and the grid Connection Agreement/V04/.
Annual electricity supply (lifetime average) 63,464.33MWh	Annual electricity supply at investment decision stage based on the FSR/V10/ which is used for the project approval. The FSR/V10/ 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 the photovoltaic power station system design, photovoltaic array layout, environmental conditions, various reduction factors, and the attenuation rate of photovoltaic modules are considered comprehensively. Based on data modelling, the FSR has expected that 50.83884 MWp solar PV (polysilicon module) shall generate about 1,586,608 MWh over the period of 25 years, which comes to 63,464 MWh per year. The annual equivalent utilization hours considered in the analysis are 1269 hours, which is confirmed from FSR/V10/. It is confirmed in the FSR/V10/ that estimation and calculation procedures are in accordance with various national standards as applicable law in Kazakhstan. It was expected from back-calculation of next generation that the PLF of the project will remain as 14.49% (=1269/8760 × 100%). According to "Guideline for the reporting and verification of plant load factors, EB48 annex11, the plant load factor defined has been verified based on the following criteria: (a) The plant load factor was determined by a third-party design institute (Inner Mongolia Electric Power Survey

<table>
<tr><td></td><td></td><td>and Design Institute) which was contracted by the project owner and is professional third-party expert;

(b) The plant load factor has been provided to the government while applying the project activity for implementation approval.

Thus, it is confirmed that the net annual generation and (indirectly - plant load factor) is valid and applicable at the time of investment analysis.

The project has already commissioned and is under operation from Aug 2020. The generation records/V15/ along with meters readings from Aug 2020 till Feb 2023 have been provided by the PO. It is confirmed that average generation from last 3 years is in line with the FSR estimation and covered in the sensitivity analysis. The verification team does not envisage major change in PLF from the estimation.

<table>
<tr><td>Year</td><td>Annual electricity supply</td><td>Estimated value</td><td>Unit</td></tr>
<tr><td>Aug 2020-Jul 2021</td><td>86,552.82</td><td>70,995.54</td><td>MWh</td></tr>
<tr><td>Aug 2021-Jul 2022</td><td>76,471.18</td><td>68,865.67</td><td>MWh</td></tr>
<tr><td>Aug 2022-Feb 2023</td><td>40,275.40</td><td>39,881.748</td><td>MWh</td></tr>
<tr><td>Total electricity supply to the grid over the previous three years FSR</td><td>203,300.02</td><td>179,742.958</td><td>MWh</td></tr>
<tr><td>% Change</td><td colspan="2">13.11</td><td>MWh</td></tr>
</table>

This variation observed in normal as solar power generation slightly varies as per the Light duration and intensity observed during the particular year.</td></tr>
<tr><td></td><td>Construction Period - 1 Year</td><td>It is considered based on the approved FSR which are used for respective project approvals.</td></tr>
<tr><td></td><td>Operation Period - 25 Years</td><td>It is considered based on the FSR which are used for the project approval. The FSR/V10/ mention the lifetime of solar cells/modules as 25 years and accordingly 25 years as lifetime of project plant and assessment period</td></tr>
</table>

		for investment analysis has been considered by the project investors. Further, as per the Para 6, of the Tool 27: Investment analysis - " 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 plant, which is higher 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. Currently project owner has considered the 5% of static investment as fair value Therefore, the election of the project lifetime is deemed within the reasonable range, and acceptable by the verification team.
	Static investment - 13,635,600,000 KZT	The total static investment applied in the analysis is 13,635,600,000 KZT is sourced from the approved FSR. The FSR/V10/ of the project was completed by qualified third party KAZAKH Institute Of Oil And Gas in June 2018. Verification team has verified the value applied in the analysis against the FSR, and confirmed they are consistent. It is also been checked from the Equipment specification and purchase contracts/V06//V13//V14/. The EPM contract was signed on 12 June 2019 and the price was 34,447,928.04$. Considering the tenge exchange rate for the US dollar was 384.21 (1$=384.21 KZT) on 12 June 2019, the EPM contract price was calculated as 13,235,238,448 KZT. Thus the actual project cost is 97.06% of the estimated total static investment: 13,235,238,448/13,635,600,000=99.86%. Therefore, the verification team was able to confirm that the static total investment estimated in the Financial analysis report was reasonable.
	Working capital - 6,000,000 KZT	The Working Capital applied in the analysis is 6,000,000 KZT is sourced from the approved FSR/V10/, which was completed by qualified third party KAZAKH Institute Of Oil And Gas in June 2018.
	Tariff (incl VAT)- 28,896 KZT/MWh	It is considered based on the FSR which is used for the project approval. The verification team cross-checked it with the PPA signed with the grid company/V04/.and found it reliable.

	VAT rate -12%	VAT is considered based on the approved FSR/V10/ which is used for the project approval. The rates and application of the VAT are cross checked with "The Code of the Republic of Kazakhstan"/V30/. According to Article 236 of "The Code of the Republic of Kazakhstan "On taxes and other obligatory payments in the budget" (the Tax Code)", the standard VAT rate is 12%. The link is: https://www.oecd-ilibrary.org/sites/9789264269606-9-en/index.html?itemId=/content/component/9789264269606-9-en The verification team checked the link and found it credible.
	Income tax rate- **0% (Year 2-11)** **20% (Year 12-26)**	The income tax rates are considered in the FSR/6/ and cross-checked with "The Code of the Republic of Kazakhstan"/V30/ and "Entrepreneurial Code of the Republic of Kazakhstan" /V31/. According to Article 147 of "The Code of the Republic of Kazakhstan "On taxes and other obligatory payments in the budget" (the Tax Code)", the standard tax rate is 20%. According to article 290 of "Entrepreneurial Code of the Republic of Kazakhstan", there is an income tax deduction for 10 years for investment priority project. The verification team considered the value of income tax rate correctly considered and applied.
	Depreciation period and rate- 20 Years with 4.75%	It is considered based on the approved FSR/V10/ which is used for the project approval.
	Residual value ratio (of fixed asset)- 5%	The 5% residual rate (fair value) is applied in investment analysis according to the approved FSR/V10/. The consideration of residual rate is also in according with the Tool 27: Investment Analysis. Moreover, the 5% residual value of the project activity assets has been included as a cash inflow in the final year at the end of the assessment period.
	Long-term interest rate-14.76%	It is considered based on the approved FSR which is used for the project approval. The verification team cross-checked it with the public available information from the Development Bank of Kazakhstan and found it consistent and reasonable /V36/. .
	Annual O&M cost-187,876,680 KZT	The O&M cost is consistent of maintenance fee, insurance fee, material fee, staff salary and welfare, and other cost. Each component has been verified by the verification team. A detailed calculation is broken down

	in the IRR spreadsheet. The annual operating cost in the IRR spreadsheet is verified by verification team and confirmed to be traceable from the FSR/V10/ with each value. The assessment team also applied sensitivity up to a 100% reduction in the operation cost at which the project IRR is still 11.20%. therefore it can be concluded that the benchmark would not be breached even if the O&M cost in actual is reduced by 100% Therefore, it is concluded that the value applied for annual operating cost in the investment analysis and its underlying assumptions are considered conservative at the time of investment decision.

Based on its specific local and sectoral expertise, the verification team was able to confirm the validity and suitability of the above input values.

According to CDM VVS para 102, the verification team checked all relevant input values in the IRR spreadsheet and found to be appropriately included in the spreadsheet. /V03/ All assumptions and estimates used for input values were checked against the relevant sources and the specific formulas in the financial calculations are readable and correct.

Sub-step 2d

Four (4) key factors of

- Total static investment;
- Annual O&M cost;
- Annual electricity supply; and
- Tariff,

The above factor constitute more than 20%of either total project costs or total project revenues were chosen appropriately as per the CDM tool am-tool-27/UN05/ for investment analysis. as shown in Table 5 of the PSF/V01/.

The likelihood of the project activity over the benchmark IRR was assessed as follows.

Key factors	**Assessment of possibility**
Total static investment: decrease 22.96%	It is not possible to happen as the actual costs including EPM contracts as verified already constitute more than 97% of the Total static investment./V06/,/V14/
Annual electricity delivered to the grid: increase 27.67%	According to the manufacturing specification of the silicon modules (CS3U-355P, Module Efficiency in range 17.89% at 355W to 18.65% at 370W), the variation range is only 4% and the attenuation during its

	lifetime is irreversible. Hence the power generation over 27.67% is impossible to happen though there was an over generation by 13% in the first two years operation.
Annual O&M cost	When the OM cost decreases 100%, the IRR would be 11.20%, which is still lower than the benchmark of 13.60%. It was also compared with the curve of Average Monthly Wages of Kazakhstan from 2018 to 2022 and found an increase by 20% on average/V32/. Therefore, it's highly unlikely that the OM cost decreases significantly for 25 years project lifetime.
Electricity tariff	According to the signed PPA, once the tariff of the project set by auction, it will be fixed in principle during the operation period, and will only be fine-tuned per CPI after negotiation by both parties/V04/. The tariff is unlikely to increase by 27.67% for the whole lifetime.

Step 4

Common practice analysis for the project was assessed and found in line with the methodological Tool 24: Common practice version 3.1 and its step-wise approaches as below:

Sub-step 4a-1

- The applicable capacity calculated as +/-50% of total design capacity of proposed project activity was 25 to 75 MWp ;

Sub-step 4a-2

- The applicable geographic area is throughout Kazakhstan where the project is located.

  It has been demonstrated by the project owner and verified by the assessment team that the Investment environment, regulations in the host country.

- The applicable measure is power generation based on solar energy, same as the project;

  The applicable project is to produce electricity power and connected to national grid, same as the project.

- The projects that were in commercial operation before the start date of the project under CDM scheme i.e. 12/06/2019(the date of signing the EPM contract) /V07/. It has been assessed against the definition of start date provided in "Glossary CDM terms"i.e."*for the CDM project activity, where a contract is signed for such expenditures, it is the date on which the contract*

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is signed. In other cases, it is the date on which such expenditures are incurred." and found appropriate.

Finally, the solar power projects with installed capacity 25MW~75MW, have started commercial operation before 12/06/2019 in Kazakhstan were chosen from public information reported by international authority (IEA) /V21/ for this analysis and two solar power projects were identified for analysis.

Sub-step 4a-3

The verification team also cross-checked with the public information for those projects as listed below.
<table>
<tr><th>Project no.</th><th>Conclusion of verifier</th></tr>
<tr><td rowspan="2">1</td><td>Burnoye Solar Plant / 50MW solar power generation project /V34/</td></tr>
<tr><td>Started operation in 2015, was financed by EBRD with 1.25% loan interest rate.</td></tr>
<tr><td rowspan="2">2</td><td>Burnoye Solar Plant Extension / 50MW solar power generation project /V35/</td></tr>
<tr><td>Started operation in 2018, was financed by EBRD with 1.25% loan interest rate.</td></tr>
</table>
Sub-step 4a-4

Subsequently, the verification team checked the analysis and confirmed the discrepancy in the investment environment between the project activity and the two identified projects /V36/, and hence the calculation in Sub-Step 4a-5 is appropriate, i.e.

D_{all}=2, and D_{diff}=2.

F = 1-N_{diff}/N_{all} = 1 – 1=0 less than 0.2.

Hence, it can be concluded that the PO has appropriately considered all the relevant projects as per the applicable selection criteria defined for the common practice analysis of current project and there is no project activity applicable under the applied capacity range and not registered/applied for any carbon revenue mechanism.
</td>
</tr>
<tr>
<td>Findings</td>
<td>
CL#03 was sought for relevant law for renewable power in the host country.

CL#04 was for evidence of the investment decision made by the Legal Owner of the project.

CL#05 was raised for further analysis on critical point of the four key factors for Sensitive Analysis.
</td>
</tr>
<tr>
<td>Conclusion</td>
<td>
The information mentioned in the PSF is duly supported by evidence quoted therein. The verification team has assessed all steps taken, and sources of information used to cross-check the information contained in the PSF. The verification team was able to confirm that the evidence assessed is credible, and in accordance with the applicable Project Verification requirements related to the demonstration of additionality in the Verification Standard, Project Standard and GCCM001 ver.4.0.

Hence the project is additional.
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</tr>
</table>

D.3.6 Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	For Section B.6, the verification team searched public information by relevant National Authority or Designated National Authority (DNA) and concluded that there is no available emission factor for Kazakhstan grid can be applied. Alternatively in accordance with the methodology GCCM001 (version 4.0), the project chooses option (iv) to determine $EF_{grid,y}$ and refers to Harmonized IFI Default Grid Factors 2021 v3.2 from IFI database, the latest $EF_{grid,y}$ for intermittent energy (e.g., Solar, Wind, Tidal) of Kazakhstan is 0.6978 tCO_2/MWh. The verification team checked the calculation sheet entitled "ER calculation-clean.xlsx" against the data of the FSR and found the appropriateness. In accordance with "Guidelines for the Reporting and Validation of Plant Load Factors (version 01)" (EB 48 Annex 11)/UN07/, the verification team checked the installed capacity, solar resources and PLF of the project against the FSR of the project and hence was able to confirm that the average annual power supplied to the grid is 67,289 MWh during the 10-year crediting period is credible and appropriate. /V10/ As a solar power generation project, Project Emissions and Leakage can be considered to be zero, i.e. $PE_y = 0$, $LE_y = 0$ $ER_y = BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ $= 672,89 \times 0.6978$ $= 46,954\ tCO_2e$
Findings	**CL#06** was sought for specific data source of the emission factor of Kazakhstan grid.
Conclusion	Therefore, the verification team can confirm that: ➢ All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PSF; ➢ All equations and parameters used in the PSF are considered reasonable in the context of the proposed project activity; ➢ The baseline methodology and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions; ➢ All estimates of the emissions can be replicated using the data and parameter values provided in the PSF /V01/ and ER spreadsheet /V02/; ➢ No sampling has been applied in the project activity.

D.3.7 Monitoring plan

<table>
<tr><td>Means of Project Verification</td><td>
The monitoring plans for installing technologies or implementing measures and operating and monitoring the project as set out by the applied Baseline and Monitoring Methodology were described in Section B.7.

There is one bi-directional electricity meter with accuracy class of 0.2S installed at 220 kV substation as shown in Figure 2 of the PSF section B.3. In accordance with para.69 of the Project Standard, the verification team on-site verified the installation of meter and cross-checked the line diagram in the PPA and found consistent /V04/.

<table>
<tr><td>$EG_{facility,y}$</td><td>Quantity of net electricity generation supplied by the project plant/unit to the grid in year y

The net electricity generation is a calculated parameter based on directly monitored/measured value of exports and imports by the project activity.

Net electricity generation will be calculated by deducting the import values of the project activity from the total export values. The export/import values are directly monitored parameters and will be continuously monitored by a bi-directional electricity meter.

The information of the meter, including the type, location, accuracy, serial number, date of calibration validity has been checked by the verification team during the site visit and found consistent with that provided in the PSF.

In the case of malfunction of the meters, the meter supplier will provide technical support to engage the problem promptly and emission reductions during the corresponding period will be calculated conservatively.

In accordance with applied methodology, the calibration of meter, including the frequency of calibration will be done in accordance with national standards or requirements set by the grid operators. calibrated in accordance with the domestic technology standards of “KZ.П.02.1245”. The accuracy of meters will be of no less than 0.5S and shall be calibrated every six years.

The project owner has also defined the management structure, data collection procedures and management and quality assurance procedures in Section B.7.4 of the PSF. The same has been checked and found appropriately sufficient to deliver the adequate and quality data for calculation of emission reductions. The monitoring parameter will be recorded for emission reduction on monthly basis in accordance with the applied methodology.</td></tr>
</table>

Parameters related E+/S+/SDG+ impacts are added by the project owner for monitoring under positive impacts under B.7.1 and Negative impacts under B.7.2 of PSF. These parameters contain all the impacts positive as well as adverse which are anticipated from the project activity. The project owner will be monitoring these parameters in order to quantify the positive impacts from the project activity as well as to keep a check on the regulatory limits for any adverse impact.
</td></tr>
</table>

There is no parameter or impact identified as negative, which requires to develop any risk mitigation plan.

1	CO_2 emission	The PSF identifies that being a renewable energy project,it will have positive impact on the environment by means of reduction in the CO_2 emissions. Reduction of CO_2 emissions due to implementation of project that would otherwise be emitted by the grid connected power plants will be monitored. The monitoring of parameter will be done in each verification based on calculation from the continuously monitored electricity generation. The calculation procedures for the reduction in CO_2 emission reductions are correctly defined in the PSF. The parameter is being monitored to assess to contribution SDG goal-13 Climate Change also the positive environmental impact. Adequate details for monitoring/reporting/recording are defined in the PSF.
2	Solid waste from Hazardous wastes	The project is solar power project and does not expect to generate Hazardous waste due to regular operations. The solid waste pollution from hazardous wastes comes from waste transformer oil. This will be temporarily stored in the hazardous waste temporary storage room after being collected by special facilities and treated by qualified company. Monitoring frequency: Regular Monitoring, Aggregation annually The project owner shall keep records for the monitoring parameter and can be checked at the time of ER verification stage to ensure the compliance.
3	Solid waste from E-wastes	Waste defunct/damaged PVR modules, inverter transformer, cable and other waste may be generated during the operation of PV power plants. These E- wastes are collected and stored at specific locations and collected by qualified company. The details of E-wastes will be maintained in records for future verification.
4	Solid waste Pollution from end- of-life equipment	Solid waste pollution from end-of-life equipment may be generated by the project. Solid waste from end-of-life equipment will be recycled by authorized waste recycling company. Non-recyclable parts will be collected and sent to Sanitation department for treatment. The details of solid waste from end-of-life equipment will be maintained in records for future verification.
5	Reducing / increasing accidents	There may be a fire/electrocution hazard in the photovoltaic power plant, which may cause accident and injury to employees The construction and installation of photovoltaic power plants was standardized, the operation and maintenance of photovoltaic power plants was strengthened, employee

			training on job HSE was provided and PPE's (Personal Protective Equipment) required was complied. Monitoring frequency: Regular Monitoring, Aggregation annually The project owner provides Number of incident/accidents and Number of HSE training conducted and compliance of use of PPE's. to minimize the risk. Employee training records/V24/ and PPE compliance records of 2022 are provided by project owner and checked It is confirmed that the project activity does regular trainings to its employees for skill development and there is a system in place to monitor the same. The project owner has committed to conduct such training at once a quarter frequency. The details of training records and PPE compliance records in the project site will be maintained in records for future verification.
	6	Generation of wastewater	The project is solar power project and wastewater generated from the project is mainly cleaning wastewater and domestic sewage. The solar panels cleaning wastewater mainly includes dust, which does not require treatment. The domestic sewage is treated by wastewater treatment facility and then used as greening water. The project owner shall keep records for the monitoring parameter and can be checked at the time of ER verification stage to ensure the compliance.
	7	Electricity supplied to the power grid by the project	The project is a renewable energy project and the electricity supplied to the power grid by this project will be monitored. Monitoring frequency: Measured continuously and recorded monthly in order to show the contribution towards UN SDG goals
	8	Long-term jobs (> 1 year) created/ lost	The project owner, in assessment of S+ label, has mentioned that project activity shall generate the employment for the people in terms on long-term jobs. The project owner has defined employment of more than 1 year as long-terms employment, which is deemed appropriate to the verification team. It was confirmed by the project owner during the on-site inspection that under the Staff roster/V39/ for employment,the project owner shall also maintain records for the employment provided to the females in order to demonstrate equal opportunity. The PO has claimed that at any given point there would be at least 12 people employed by the project. Thus, it was concluded that the project does generate employment and there is a system in place to monitor the same.

			This parameter will be continuously monitored by means of employment records and adequate details for monitoring /reporting/recording are defined in the PSF. The project is expected to generate positive social impact by creation of the long-term jobs and equal employment opportunity. The project owner shall keep records for the monitoring parameter and can be checked at the time of ER verification stage to ensure the compliance.
	9	Job related training imparted or not	The project owner has claimed under S+ section that regular trainings will be provided to the employees. Training on HSE (Health, Safety and Environment) of 2022 are provided by project owner and checked. It is confirmed that the project does regular training on HSE (Health, Safety and Environment) and there is a system in place to monitor the same. The staff prior to being assigned to a position shall be certified. Job related training will be recorded and make attendance sheets.
	The verification team confirms that the parameters are sufficient to calculate the emission reductions in accordance with the methodology and relevant GCC standards and are correctly reported in the PSF in order to identify the GHG reductions and E+/S+/SDG+ impacts.		
Findings	No Findings were raised.		
Conclusion	The verification team confirms that: ➢ The monitoring plan described in the PSF is complying with the requirements of the selected methodology. ➢ 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. ➢ There are no host country requirements pertaining to monitoring of any sustainable development indicators. Therefore, there are no such parameters identified in the PSF.		

D.4. Start date, crediting period and duration

Means of Project Verification	The start date of the project activity is stated as 06/08/2020 as the date of the project in full operation. The expected operational lifetime of the project activity is stated as 25 years.

	A crediting period of a maximum length of 10 years selected by the PO. The start date was verified against the commissioning records of the project and found consistent /V16/. It can be confirmed that the start date of project operation is determined in compliance with the requirement of the Project Standard e.g., - para.38, the project start date is the date of start of operations of the project; - para.40, 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. The operational lifetime was checked against the manufacturer's specifications of the solar PV modules, and found consistent /V13/,/V14/.
Findings	No findings were raised.
Conclusion	The start date of the project activity indicated has been verified and found it is deemed reasonable.

D.5. Environmental impacts

Means of Project Verification	In the PSF Section D, the relevant categories of environmental impacts are stated as per the conclusions or opinions in the approved Environmental Impact Assessment (EIA) of the project. The verification team checked below evidence with on-site witness and interview with local stakeholders, and found substantial. ➢ The Environmental Impact Assessment (EIA) completed by KAZAKH Institute of Oil And Gas in 2019 /V11/;
Findings	**CAR#01** was raised for environmental impacts in terms of the construction stage and operation stage.
Conclusion	The verification team has assessed environmental impact in accordance with the applicable Project Verification requirements related to the environmental impacts in the Verification Standard and Project Standard, can thus confirm that the approval procedure is complying to the environmental regulations in the host country. As concluded in the EIA approval, the environmental impact during the project construction was temporary and not significant, and the environmental impact caused by noise and solid waste during the project operation will be minor.

D.6. Local stakeholder consultation

Means of Project Verification	On 10/09/2019, the project owner carried out a survey of the local residents around the project location at the office of the project proponent. The verification team confirms that the local stakeholder consultation was performed by the project owner before the submission of the project for global stakeholder consultation. The objective of the stakeholder consultation was to identify the concerns, comments raised and the impacts of project on local communities. The analysis

	has been done to identify the impact/influences of different stakeholders due to the project. Invitations to the LSC meeting were sent out ten days before the stakeholder meeting by means of phone calls, SMS, postal mails, etc., 25 representatives of local stakeholders, including village council members, residents of the nearby villages, and local government authorities attended the meeting to discuss the questionnaires collected and further introduce the project. No negative opinion on construction of the project is heard and environmental considerations expressed by stakeholders are discussed on the meeting. According to the survey results, all local stakeholders are supportive to the implementation of the project, believing that the Project will help improve the life of local people and promote local economic development without adverse environmental impact. Thus, verification team concludes that appropriate local stakeholder consultation was conducted by the project owner. During the audit process some of the Local Stakeholders (Local villagers) were interviewed by the local expert of the verification team. The Local Stake holders confirmed taking of their feedback by the project owner and positive opinions regarding the project activity. During on-site inspection local stakeholders confirmed - Employment generated by the project activity, - No negative environmental impacts like noise pollution, shadow flickering or water pollution or solid waste - No negative social impacts due to project - Economically beneficial and environmentally friendly to the Village - Overall opinion is to support the project as it contributes to the sustainable development of the region. 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	**CAR#02** was raised for details of local stakeholder consultation process.
Conclusion	The verification team confirms that the summary of stakeholders' comments reported is complete /V18/,/V19/. In the opinion of the team, the local stakeholder consultation process was adequately conducted by the project participant to receive unbiased comments from the all the stakeholders. The verification team confirms that the LSC was in accordance with the requirements related to the local stakeholder consultation in the Verification Standard and Project Standard.

D.7. Approval and Authorization- Host Country Clearance

Means of Project Verification	As per the GCC program guidelines, the submission of HCLOA on double counting is required by CORSIA labelled project after 31/12/2020 and the project owner has applied for the CORSIA eligibility. Paragraph 33(d) of GCC Program

	Process requires Project Owner to submit the HCLOA together with the project documentation required for submission of request for registration of the project so that project activity can be displayed as having market eligibility flag (C+) on the GCC Project website and GCC registry. However, Para 16 of Standard on Avoidance of Double Counting, version 1.0 also allows project owners to submit the HCLOA at the time of issuance stage provided they make a declaration under the PSF. Currently project owner is not able to submit the HCLOA letter and has declared under section A.6 of the PSF to provide the same at the time of emission reduction verification/issuance stage and thus accepted.
Findings	Due to the project crediting period is beyond 31/12/2020, FAR#01 has been raised for submission of the HCLOA at issuance stage.The project owner needs to submit HCLOA at the emission Reduction verification stage. Project shall demonstrate the compliance to CORSIA requirements for the credits claimed beyond 31 December 2020 with respect to double counting and HCLOA requirements and also future CORSIA requirements applicable time to time for the project activity. FAR Remains OPEN.
Conclusion	The verification team confirms that no HCA approval is required for CORSIA labelled project activity and the HCA will be required during the first or subsequent verification, when the issuance of carbon credit is considered beyond 1st Jan 2021.

D.8. Project Owner- Identification and communication

Means of Project Verification	The information and contact details of the representation of the project owner (Climate Bridge (Shanghai) Ltd.) and project owners themselves has been appropriately incorporated in Appendix 1 of the PSF. The verification team checked against the Authorization letter issued by Mistral Energy LLP the Legal Owner of the solar power plant, on 20/04/2022 and found the authenticity./V20/ In the Authorization letter , the authorized representative declared that Climate Bridge (Shanghai) Ltd. to act as the PO and have the legal ownership of the ACCs generated by this project activity
Findings	**CL#07** was raised for the Authorization letter between the Legal Owner and the PO /V20/.
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 and authorization letter were found to be consistent.

D.9. Global stakeholder consultation

Means of Project Verification	The PSF was made available through the dedicated interface on the GCC website. The duration of the period for submission of comments for the global stakeholder consultation was from 03/07/2022 to 17/07/2022 There were no comments received during this period.
Findings	No findings were raised

Conclusion	The PSF ver.1.0 dated 25/05/2022 had been made public available for receiving global stakeholder feedback and no comments were raised during the GSC process. The PSF has been updated according to the Observations and the publication of a revised PSF ver. 2.1 dated 05/12/2023 for global stakeholder consultation is not necessary.

D.10. Environmental Safeguards (E+)

Means of Project Verification	The verification team checked the description in section E.1 of the PSF and found that the anticipated and actual significant environmental aspects and impacts were identified and described as per the para.12(a) of the Environment and Social Safeguards Standard V2.0 (E&SSS)/G04/. Furthermore, in accordance with para.24 to para.26 of the E&SSS, the verification team assessed the process of Net-Harm Assessment against para.13 and section 6 (para.21 and 22) of the E&SSS. The detailed steps are as follows: 1. Assessed the identified environmental aspects during the construction and operations, of the project activity, as per para.13 (a)(Step 1) and section A (Renewable energy projects) of Appendix 01 of the E&SSS ; 2. Assessed the identified environmental impacts, as per para.13 (b)(Step 2) of the E&SSS; 3. Assessed relevant national legal regulations existing for the defined aspects / impacts to determine compliance threshold limits, para.13 (c)(Step 3) of the E&SSS; 4. Assessed “Do-No-Harm” risk assessment, as per para.13 (d)(Step 4) and Appendix 02 (Evaluation of impacts and scoring flow-chart) of the E&SSS, particularly the three categories classified under the identified impacts i.e. “Not Applicable”, “Harmless” and “Harmful”; 5. Assessed Risk Mitigation Action Plans, for each impact identified as “Harmful”, as per para.13 (e) (Step 5) of the E&SSS; 6. Assessed the monitoring approach and identified parameters including source of monitored data and frequency, for each impact identified as “Harmful” and “Harmless”, as per para.13 (f) (Step 6) and para.12(c) of the E&SSS; 7. Assessed the rating and scoring of the impacts, as per para.13 (g) (Step 7) and para.21 and 22 in section 6 of the E&SSS. 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: The 6 scores are identified in Table E.1: Score 1st CO_2 emissions It has been implemented normally by the monitoring methodology. Score 2nd PRMA01 - Solid waste Pollution from Hazardous wastes The hazardous wastes during the operation period that comes from waste capacitors, reactors and transformers and transformer oil generated were identified appropriately to be Harmless. During on-site inspection, it was found that the amount of waste capacitors, reactors and transformers and transformer oil generated has been recorded by

	the operating department, properly placed in the storage room, and regularly handed over to the qualified company for disposal. The verification team checked the Waste Management Plan /V26/ and was able to confirm that the disposal procedures meet the requirement of "Environmental code of the republic of Kazakhstan" /R05/ to properly to remove this negative potential as described in the monitoring plan (section B.7.2). Hence, the impact can be scored (+1). Score 3rd PRMA02 - Solid waste Pollution from E-wastes The solid wastes during the operation period that comes from waste PV modules were identified appropriately to be Harmless. During on-site inspection, it was found that these PV modules were collected and stored at specific locations, and are regularly collected by the special facility and treated by qualified company. The verification team checked the Waste Management Plan /V26/ and was able to confirm that the disposal procedures meet the requirement of domestic law on the prevention and control of environmental pollution by solid wastes, and the impact can be scored (+1) and the parameter has been monitored regularly as described in the monitoring plan (section B.7.2). Score 4th PRMA03 - Solid waste pollution from end-of-life equipment The solid wastes during the construction and operation period that comes from end-of-life equipment such as PV modules and parts were identified appropriately to be Harmless. During the on-site inspection, it was found that this kind of waste was recycled by waste recycling companies or disposed of properly. Hence the impacts can be scored (+1) and the parameter has been monitored regularly as described in the monitoring plan (section B.7.2). Score 5th PRMA04 - Generation of wastewater The waste water during the construction period was only small amount of domestic sewage, and during the operation period it is mainly from washing the PV panels. During the on-site inspection, it was found that the main component of the washing water is suspended solids, and thus can be discharged to the land for natural evaporation and thus can be identified as Harmless as per the "Environmental code of the republic of Kazakhstan" /R05/ on environmental pollution by wastewater" for the mitigation actions and can be scored (+1) and the parameter has been monitored regularly as described in the monitoring plan (section B.7.2). Score 6th - Replacing fossil fuels with renewable sources of energy The verification team was able to confirm that the project activity supplies renewable power to KEGOC and reduces GHG emissions from fossil fuels, and thus the identification of a positive impact and scored (+1) to be monitored throughout the crediting period as specified in section B.7.1, can be considered appropriate. All impacts given scores have been incorporated into monitoring plan as specified in respective tables of section B.7.

Findings	**CAR#03** was raised for analysis of impacts including Solid waste pollution from Hazardous wastes and E-waste as well as the scoring.
Conclusion	In accordance with para.22,24 to 26 of the E&SSS and thorough assessment against documented evidence, public data sources and on-site inspection, 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. As listed in section B.7., an appropriate monitoring plan has been put in place to monitor the parameters at the defined frequency to demonstrate their effect on the environment or society and that the Project Activity has not caused any net harm to the environment.

D.11. Social Safeguards (S+)

Means of Project Verification	The verification team checked the description in section E.2 of the PSF and found that the anticipated and actual significant environmental aspects and impacts were identified and described as per the para.12(a) of the latest Environment and Social Safeguards Standard V2.0(E&SSS). Further, in accordance with para.24 to para.26 of the E&SSS, the verification team assessed the process of Net-Harm Assessment against para.13 and section 6 (para.21 and 23) of the E&SSS. The detailed steps are as follows: 1. Assessed the identified social aspects during the construction and operations, of the project activity, as per para.13 (a)(Step 1) and section A (Renewable energy projects) of Appendix 01 of the E&SSS ; 2. Assessed the identified social impacts, as per para.13 (b)(Step 2) of the E&SSS; 3. Assessed relevant national legal regulations existing for the defined aspects / impacts to determine compliance threshold limits,para.13 (c)(Step 3) of the E&SSS; 4. Assessed “Do-No-Harm” risk assessment, as per para.13 (d)(Step 4) and Appendix 02 (Evaluation of impacts and scoring flow-chart) of the E&SSS, particularly the three categories classified under the identified impacts i.e.“Not Applicable”, “Harmless” and “Harmful”; 5. Assessed Risk Mitigation Action Plans, for each impact identified as “Harmful”, as per para.13 (e)(Step 5) of the E&SSS; 6. Assessed the monitoring approach and identified parameters including source of monitored data and frequency, for each impact identified as “Harmful” and “Harmless” , as per para.13 (f)(Step 6) and para.12(c) of the E&SSS; 7. Assessed the rating and scoring of the impacts, as per para.13 (g)(Step 7) and para.21 and 23 in section 6 of the E&SSS. Out of all the safeguards no risks to the social due to the project implementation were identified and the following have been indicated as positive impacts: The 3 scores are identified in section E.2 “Social Safeguards” of the PSF and found appropriate: Score 1st - Long-term jobs (> 1 year) created/ lost During on-site inspection, the verification team assessed the description of the PSF against the employment records of the project operator./V28/

	It was found that the project activity creates direct employment for around 12 people for operation and maintenance of the power plant, which provides the positive impact on society which would have not been available in the absence of the project activity, and hence is deemed Harmless and scored (+1). The employment records have been included in the monitoring procedures as listed in section B.7.1. Score 2nd - PRMA05 Reducing / increasing accidents In accordance with national employment regulations (eg. Law of Labour of Kazakhstan), the verification team checked the on-job training records of the power plant /V24/ and confirmed the sufficiency of the training to minimize the risk during the daily operation. Hence it is deemed Harmless and scored (+1) and the parameter has been monitored regularly as described in the monitoring plan (section B.7.2). Score 3rd - Social -Education-: Job related training imparted or not In accordance with labour law of the host country, the verification team verified the records of the quarterly-based job training and found the impact is deemed positive and scored (+1) /V24/.
Findings	**CL#8** was sought for evidence of job related training for employees.
Conclusion	In accordance with para.23 to 26 of the E&SSS and thorough assessment against documented evidence, public data sources and on-site inspection, 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 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 three (3) SDGs/UN08/: SDG 7 Energy: SDG Target 7.2 “By 2030, increase substantially the share of renewable energy in the global energy mix” - The project contributes towards this goal by replacing the generation of fossil fuel dominated grid in baseline by renewable wind-based power generation. The contribution towards SGD goal is being monitored by the parameter monitoring of net electricity generated by the project activity in the monitoring plan and is found adequate. This discussed under section D.3.7 of the report. SDG 8 Employment: SDG Target 8.5: Generate job opportunities - The project activity contributes towards this goal by providing employment opportunities to at least 7 people in the project. The contribution towards SGD goal is being monitored in the monitoring plan and is found adequate. This discussed under section D.3.7 of the report. SDG 13 Climate Change: SDG Target 13.2 “Integrate climate change measures into national policies, strategies and planning”. - The contribution towards SGD goal is being monitored by the parameter ‘CO_2 Emissions’ in the monitoring plan and is found adequate. This discussed under section D.3. of the report.
Findings	No Findings were raised

Conclusion	Based on the documentation review and onsite interviews the verification team can confirm that project 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 has been included for offsetting the approved carbon credits (ACCs) for the entire crediting period from 06/08/2020 to 05/08/2030. Currently project owner is not able to submit the HCLOA letter and has declared under PSF to provide the same at the time of emission reduction verification / issuance stage and thus accepted. This is as per Para 16, Standard on Avoidance of Double Counting, version 1.0, which allows the project owner to opt for this option.
Findings	Due to the project crediting period is beyond 31/12/2020, FAR#01 has been raised for submission of the HCLOA at issuance stage.The project owner needs to submit HCLOA at the emission Reduction verification stage. Project shall demonstrate the compliance to CORSIA requirements for the credits claimed beyond 31 December 2020 with respect to double counting and HCLOA requirements and also future CORSIA requirements applicable time to time for the project activity. FAR Remains OPEN.
Conclusion	The project owner has clarified the intent of use of carbon credits for CORSIA hence no double counting will take place.

D.14. CORSIA Eligibility (C+)

Means of Project Verification	The project activity meets the CORSIA Eligibility since the crediting period is after 01/01/2016 and the project is applying for registration under GCC which is one of the approved programme for eligibility.
Findings	No findings were raised.
Conclusion	The project activity meets the CORSIA eligibility.

Section E. Internal quality control

Before the report is approved, an internal review is conducted by a lead auditor (Technical Reviewer) assigned to it by the verification body who was not himself a member of the audit team. The focus of this process is the assessment of the completeness and traceability of the project verification carried out on the basis of the internal and external PVR. If necessary, the verification team will be asked to catch up on missing test steps or to correct or supplement the test report to increase transparency.

This particular review has been conducted by Luis Robles Olmos, who is appointed as Technical Reviewer of ISO 14064 Part 2 activities, for scopes 1,3,7,10,13,14,15. His appointment certificate is also given under Annex 6.

Section F. Project Verification opinion

Verico SCE has undertaken the project verification of the proposed project «Kaskelen 50 MWp Solar Power Plant » in Republic Kazakhstan to be implemented by Project Owner "Climate Bridge (Shanghai) Ltd.," based on the requirements defined by GCC program for the project activity, and other rules applicable to the project verification including the host country's legislation and its specific requirements for sustainable development.

The purpose of the project is to build a solar PV project which results in reductions of GHG emissions of 46,954 tCO_2e annually during the fixed 10 year crediting period to replace the electricity generated by fossil fuel dominated power grid in the host country. It is demonstrated that the project is not a likely baseline scenario and the emission reductions attributable to the project are, hence, additional to any that would occur in the absence of the project activity. The project correctly applies the approved baseline and monitoring GCCM001 ver.4.0 and is assessed against latest valid Project Standard, Verification Standard and Environment and Social Safeguards Standard and/or other applicable GCC/CDM Decisions/Tools/Guidance.

To arrive at the final verification conclusions and opinion, verico SCE carried out desk reviews, background investigations and an on-site mission, taking into account the sustainable development related regulations/laws in the host country and specific GCC rules/requirements as well as applicable CDM standards, in particular the approved methodology GCCM001 ver.4.0.

Through the project verification process, the verification team identified four (4) corrective action requests and eight (8) clarification requests. The Project Owner has taken actions to address the findings and submitted to verico SCE several sets of project document revisions resulting in a final Project Submission Form, version 2.1 dated 05 December 2023 substantiated by supporting evidence. All findings have been appropriately closed before the issuance of this project verification statement.

The verification team is of the opinion that the GCC project: «Kaskelen 50 MWp Solar Power Plant» with the verified final version of Project Submission Form:

a. is in accordance with all the relevant GCC program requirements as well as the host country's national requirements and if implemented as designed, is likely to achieve the verified emission reduction estimations of 46,954 tCO_2e annually, following the monitoring provisions fixed in the final documentation;

b. 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 Nonet-harm Label (E+) and the Social No-net-harm Label (S+); and

c. 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 (7, 8 and 13), which is likely to achieve the Silver SDG certification label (SDG+).

The project meets all of the GCC Rules and criteria for CORSIA and the project owner has clarified the intent use of carbon credits for the pilot phase of CORSIA hence for carbon credits issued generated during 01/01/2016 to 31/12/2020, HCA is not required for CORSIA labelled credits.

Therefore, verico SCE hereby certifies that the Project Submission Form version 2.1 dated 05 December 2023 of the proposed GCC project «Kaskelen 50 MWp Solar Power Plant » is in accordance with the above stated requirements.

Appendix 1. Abbreviations

Abbreviations	Full texts
ACC	Approved Carbon Credits
BE	Baseline Emissions
BESS	Battery Energy Storage System
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CM	Combined Margin
DNA	Designated National Authority
DAkkS	Deutsche Akkreditierungsstelle
DPPs	Distributed Power Plants
KEGOC	Kazakhstan Electricity Grid Operating Company
EIA	Environmental Impact Assessment
EPM	Engineering Procurement and Management
E&SSS	Environment and Social Safeguard Standard
FAR	Forward Action Request
FSR	Feasibility Study Report
GCC	Global Carbon Council
GHG	Green House Gas
GSC	Global Stakeholder Consultation
IPCC	Intergovernmental Panel on Climate Change
LSC	Local Stakeholder Consultation Process
MP	Monitoring Plan
OM	Operating Margin
PLF	Plant Load Factor
PSF	Project Submission Form
PSS	Project Sustainability Standard
PE	Project Emissions
PO	Project Owner
PS	Project Standard

PV	Photovoltaic
PVR	Project Verification Report
SDG	Sustainable Development Goal
UNFCCC	United Nations Framework Convention on Climate Change
USPP	Utility Scale Power Plant
VS	Verification Standard

Appendix 2. Competence of team members and technical reviewers

Lead Auditor:

Werner Betzenbichler	Appointed for scopes: CDM 1 to 13

Auditor(s):

Aida Maksut	Appointed for scopes: CDM ??
Jing (Robin) Wang	Appointed for scopes: CDM 1, 3, 8, 10

Technical Reviewer:

Luis Robles Olmos	Appointed for scopes: CDM 1,3,7,10,13,14,15

The appointment certificates confirming the qualification of the team members are provided under Annex 6 of this report.

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
GCC requirements				
G01	GCC	GCC Program Manual	Version 3.1	
G02	GCC	Project Standard	Version 3.1	
G03	GCC	Verification Standard	Version 3.1	
G04	GCC	Environment and Social Safeguard Standard	Version 2.0	
G05	GCC	Project Sustainability Standard	Version 2.1	
G06	GCC	Project Submission Form	Version 3.2	
G07	GCC	Clarification No.01 V1.3-2022	Version 1.3	
G08	GCC	Clarification No.03 V1.0-2022	Version 1.0	
G09	GCC	Standard on Avoidance of Double Counting	V1.0-2022	
G10	ICAO	CORSIA Eligible Emissions Units containing approval and conditions for GCC Program	November 2022 https://www.icao.int/	
G11	GCC	Project Submission Form Template	V3.2-2020	
G12	GCC	Project Verification Report Template	V3.1-2020	
G13	GCC	GCCM001	V4.0	
UNFCCC requirements				
UN01	UNFCCC	Methodology ACM0002	version 20.0	Publicly available
UN02	UNFCCC	Tool for the demonstration and assessment of additionality.	Tool-01-ver.7.0.0	Publicly available
UN03	UNFCCC	Tool to calculate the emission factor for an electricity system.	Tool-07-ver.7.0	Publicly available
UN04	UNFCCC	Common Practice.	Tool-24-ver.03.1	Publicly available
UN05	UNFCCC	Investment analysis.	Tool-27-ver.12.0	Publicly available
UN06	UNFCCC	Positive List of technologies	Tool-32-ver.03.0	Publicly available
UN07	UNFCCC	Guidelines for the Reporting and Validation of the power generation capacity and Plan Load Factors	CDM EB 48 Annex 11 Version 01	Publicly available

UN08	UN	UN SDG targets and indicators	https://unstats.un.org/sdgs/indicators/indicators-list/	Publicly available
UN09	UNFCCC	Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation	Tool-05-ver.3.0	Publicly available
Project-specific background				
R01	Kazakhstan government	Renewable Energy Law in Kazakhstan 5th edition, dated Aug.2022	https://www.researchgate.net/publication/366030668_Renewable_energy_law_in_Kazakhstan/link/638f2dc7e42faa7e759d7de1/download https://adilet.zan.kz/eng/docs/Z090000165_	PO
R02	National Bank of the Republic of Kazakhstan	Bank lending rate of National Bank of Kazakhstan, in August 2018	https://www.ceicdata.com/en/indicator/kazakhstan/bank-lending-rate	Verifier
R03	IEA	The power generation resources of Kazakhstan grid from IEA database	https://www.iea.org/countries/kazakhstan.	Verifier
R04	Kazakhstan government	Harmonized IFI Default Grid Factors 2021 ver.3.2 from IFI database, dated April 2022	https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twg-list-of-methodologies	PO
R05	Kazakhstan government	Environmental code of the republic of Kazakhstan	https://adilet.zan.kz/rus/docs/K2100000400	PO
Project-specific documents				
V01	PO	Project Submission Form Kaskelen 50 MWp Solar Power Plant GSC version 1.0 25/05/2022 Final version 2.1 05/12/2023	https://projects.globalcarboncouncil.com/project/220	PO
V02	PO	ER_Calculation_sheet.xlsx		PO
V03	PO	IRR_Calculation_sheet.xls dated March 2023		PO
V04	KEGOC	Power Purchase Agreement (PPA) and Grid Connection Agreement signed between Mistral Energy LLP and Kazakhstan Electricity Grid Operating Company (KEGOC) on 06/08/2020		PO
V05	Project operator	Public information of solar power projects connected to Kazakhstan Grid dated	https://en.trend.az/business/energy/3301150.html	PO

		26/06/2020		
V06	Project operator	Engineering Procurement and Management (EPM) contract signed on 12/06/2019		PO
V07	Kazakhstan government	Business License of Mistral Energy LLP (Legal Owner), issued by Kazakhstan government Code:180440034436		PO
V08	Kazakhstan government	Business License of Kaskelen Solar LLP (the mother company of the Legal Owner), issued by Kazakhstan government Code:200540007791		PO
V09	PO	Business License of Climate Bridge (Shanghai) Ltd. issued by China government Code:13012619820906035X		PO
V10	Kazakh Institute of Oil and Gas	Feasibility Study Report (FSR) of the project, dated June 2018		PO
V11	Kazakh Institute of Oil and Gas	Environment Impacts Assessment (EIA) of the project, dated 2019		PO
V12	Kazakhstan government	Accreditation of Kazakh Institute of Oil and Gas Code:030140004289		PO
V13	Project operator	Equipment specifications		PO
V14	Project operator	Silicon modules contract		PO
V15	Project operator	Records of power generation from 2020 to 2023		PO
V16	Project operator	Completion acceptance 06/08/2020		PO
V17	PO	Calibration certificates of the energy meter issued by “Каз Знерго Страндарт” dated 25/05/2020（valid for 6 years）		PO
V18	Project operator	LSC report dated 10/09/2019		PO
V19	Project operator	Questionnaires of LSC dated 10/09/2019		PO
V20	Project operator	Letter of Authorization between the Legal Owner and the PO dated 20/04/2022		PO
V21	IEA	Kazakhstan Energy Profile dated April 2020	https://www.iea.org/reports/kazakhstan-energy-profile	Verifier
V22	National Bank of the Republic of Kazakhstan	Footnote 10: Bank lending rate of National Bank of the Republic of Kazakhstan	https://www.ceicdata.com/en/indicator/kazakhstan/bank-lending-rate	PO
V23	Kazakhstan government	Energy Resource Guide - Kazakhstan - Renewable Energy	https://www.trade.gov/energy-resource-guide-kazakhstan-renewable-energy	Verifier

V24	Project operator	Training records of the project operator		PO
V25	Google Earth	GPS screen-shot by Google Earth		Verifier
V26	Project operator	Waste Management Plan		PO
V27	Project operator	Water supply permit approved by local water utility company		PO
V28	Project operator	Employee salary and welfare sheet of the project operator	Project operator	PO
V29	World Bank	The lending interest rate of Kazakhstan	https://data.worldbank.org/indicator/FR.INR.LEND?locations=KZ	Verifier
V30	Government of the host country	The Code of the Republic of Kazakhstan	https://www.oecd-ilibrary.org/sites/9789264269606-9-en/index.html?itemId=/content/component/9789264269606-9-en	PO
V31	Government of the host country	Article 290 of Entrepreneurial Code of the Republic of Kazakhstan	https://invest.gov.kz/invest-guide/support/investment-activity1/tax-incentives1/	PO
V32	Public information in solar industry	Kazakhstan Average Monthly Wages (from 2018 to 2022) published by Trading Economics	https://tradingeconomics.com/kazakhstan/wages	Verifier
V34	European Bank for Reconstruction and Development	Data source of Burnoye Solar Plant	https://www.ebrd.com/work-with-us/projects/psd/burnoye-solar-power-plant.html	PO
V35	European Bank for Reconstruction and Development	Data source of Burnoye Solar Plant Extension	https://www.ebrd.com/work-with-us/projects/psd/burnoye-solar-plant-extension.html	PO
V36	Development Bank of Kazakhstan	The loan interest rate of the project	https://www.kdb.kz/en/projects/on-financing/	Verifier
V37	UNFCCC	Harmonized IFI Default Grid Factors 2021 v3.2	https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twg-list-of-methodologies	PO
V38	Legal provisions of Kazakhstan	On the Rights of a Child in the Republic of Kazakhstan	https://adilet.zan.kz/rus/docs/Z020000345_	PO
V39	PO	Staff roster		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.1	Date:08/10/2022
Description of CL				
The project activity categorization as Type A2 is considered as being suitable and correct. It has not been registered under any GHG program. The PSF provides a starting as of 06/08/2020 (the date of operation of the project) which has been evidenced by reliable sources. Furthermore, in accordance with the section 4 of Project Standard Ver.3.1, for Type A2 projects, their start date of operations shall be after 1 January 2016 but before 5 July 2022. However, the date of operation of the project was not mentioned in section A of PSF ver.1.0 dated 25/05/2022. It is necessary to be stated to justify the eligibility of project type.				
Project Owner's response				Date:01/11/2022
The Engineering Procurement and Management (EPM) was signed on 12/06/2019 and put into operation on 06/08/2020, which is after 01/01/2016 but before 05/07/2022. Thus, the project complies the eligibility of the project type A2. The above content has been added in section A.1 of revised PSF.				
Documentation provided by Project Owner				
Updated Project Submission Form				
GCC Project Verifier assessment				Date:16/03/2023
The start date of the proposed project has been added in the PSF section A.1 to make the project description in the section more complete. Hence the CL is closed.				

CL ID	02	Section no.	D.3.4	Date:03/10/2022
Description of CL				
In Section B.4, it is stated that the fossil fuels fired power plants generated 89.21% of the total electricity in Kazakhstan. The data source (https://www.iea.org/countries/kazakhstan#analysis) is referenced from IEA database. However, the data of 89.21% can not be found on the weblink. Please provide the specific source form EA database.				
Project Owner's response				Date: 01/11/2022
The weblink is updated and the relevant data downloaded from the weblink is provided to Project Verifier.				
Documentation provided by Project Owner				
The weblink is updated as follows: https://www.iea.org/countries/kazakhstan.				
GCC Project Verifier assessment				Date: 16/03/2023

The data source taken from IEA statistics has been checked and confirmed to be consistent. Hence the CL is closed.

CL ID	03	Section no.	D.3.5	Date:03/10/2022
Description of CL				
In Section B.5, it was simply stated that solar power project is not required by a legal mandate and it does not implement a legally enforced Mandate (government regulation or law). In accordance with the Section 4 of Project Standard Ver.3.1, it is necessary to be further discussed, e.g. list down the relevant national and provincial (if any) regulations or laws which have to be considered when establishing a power generation project.				
Project Owner's response				Date: 01/11/2022
According to "Law of the Republic of Kazakhstan on Encouraging Utilization of Renewable Energy Resources", Renewable Energy Resources including solar power projects are encouraged while not enforced by law, which has been supplemented in section B.5 of the updated PSF.				
Documentation provided by Project Owner				
The weblink about "Law of the Republic of Kazakhstan on Encouraging Utilization of Renewable Energy Resources" is as follows: https://online.zakon.kz/Document/?doc_id=30445263&show_di=1				
GCC Project Verifier assessment				Date: 16/03/2023
The corresponding laws/regulations of the host country were discussed in the updated PSF/R01/. It can be confirmed that the implementation of the project activity was encouraged by the government and not enforced by a legal mandate. Hence the CL is closed.				

CL ID	04	Section no.	D.3.5	Date:08/10/2022
Description of CL				
In section B.5, the data of bank lending rate of Kazakhstan at the time of the investment decision was in June 2018. It is also stated that the FSR was completed by qualified third party KAZAKH Institute Of Oil And Gas in May 2018, then the investment decision taken by the project participant in June 2018. Please provide the evidence of the investment decision made by the project proponent.				
Project Owner's response				Date:01/11/2022
The FSR was completed by qualified third party KAZAKH Institute Of Oil And Gas in June 2018, which was also the investment decision taken by the project participant in June 2018. The PSF has be updated accordingly.				
Documentation provided by Project Owner				
Updated Project Submission Form				

GCC Project Verifier assessment	Date:16/03/2023
The relevant paragraph for investment decision of the project participant in the FSR of the project has been checked and found credible for making investment decision of the Legal Owner of the power plant. The date description in the PSF has also been corrected. Hence the CL is closed.	

CL ID	05	Section no.	D.3.5	Date:08/10/2022
Description of CL				
With regards to the analysis in Sensitive Analysis, a further analysis for critical point at which the IRR will past the benchmark, is necessary.				
Project Owner's response				Date:01/11/2022
The relevant analysis per each parameter has been added in the PSF section B.5 Sensitive Analysis.				
Documentation provided by Project Owner				
Updated PSF				
GCC Project Verifier assessment				Date:16/03/2023
The added analysis has been checked and found robust to support the financial attractiveness of the project activity. Hence the CL is closed.				

CL ID	06	Section no.	D.3.6	Date:08/10/2022
Description of CL				
It is stated that according to the IFI database, the latest $EF_{grid,y}$ of Kazakhstan is 0.6978 tCO_2/MWh. Please specify the data source of 0.6978 tCO_2/MWh, particularly, the year and version, based on the footnote 13, i.e. https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twg-list-of-methodologies				
Project Owner's response				Date:01/11/2022
According to Harmonized IFI Default Grid Factors 2021 v3.2 from IFI database, the latest $EF_{grid,y}$ for intermittent energy (e.g., Solar, Wind, Tidal) of Kazakhstan is 0.6978 tCO_2/MWh.				
Documentation provided by Project Owner				
Harmonized IFI Default Grid Factors 2021 v3.2 from IFI database has been provided.				
GCC Project Verifier assessment				Date:16/03/2023

The data source provided in excel sheet named "Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0.xlsx"/V37/ have been checked and found appropriate. Hence the CL is closed.

CL ID	07	Section no.	D.8	Date:08/10/2022
Description of CL				
As the description in the PSF and relevant evidence provided, it is found that Mistral Energy LLP is the developer and operator of the solar power plant. Hence, an Authorization letter to Climate Bridge (Shanghai) Ltd. (the PO of the GCC project activity, as stated in Appendix 1 of the PSF) signed by the two parties is needed.				
Project Owner's response				Date:01/11/2022
The Authorization letter to Climate Bridge (Shanghai) Ltd. (the PO of the GCC project activity, as stated in Appendix 1 of the PSF) has been signed by the two parties.				
Documentation provided by Project Owner				
/19/ the sample of Questionnaires of LSC				
GCC Project Verifier assessment				Date:16/03/2023
The copy of the Authorization letter between the Legal Owner and PO has been checked and found substantial. Hence the CL is closed.				

CL ID	08	Section no.	D.11	Date:08/10/2022
Description of CL				
In section E.2, it is stated that the project owner provides job related training for employees. Please provide the relevant evidences.				
Project Owner's response				Date:01/11/2022
The job related training for employees has been provided to Project Verifier.				
Documentation provided by Project Owner				
The copy of evidence of job related training for employees /V24/.				
GCC Project Verifier assessment				Date:16/03/2023
The evidence entitled records of job related training has been assessed against the feedback during on-site interview,and found consistent. Hence the CL is closed.				

Table 2. CARs from this Project Verification

CAR ID	01	Section no.	D.5	Date: 08/10/2022
Description of CAR				
In Section D.1, the analysis of environmental impacts is not specified in terms of the construction stage and operation stage. Please improve the analysis accordingly.				
Project Owner's response				Date: 01/11/2022
The analysis of environmental impacts is specified in the updated PSF in terms of the construction stage and operation stage.				
Documentation provided by Project Owner				
Updated Project Submission Form				
GCC Project Verifier assessment				Date: 16/03/2023
The required description have been checked against the assessment of the EIA and found applicable. Hence the CL is closed.				

CAR ID	02	Section no.	D.6	Date:08/10/2022
Description of CAR				
In PSF section G.1, it is not stated the date and address of the meeting organized for local stakeholder consultation. Please specify the missed information.				
Project Owner's response				Date:01/11/2022
The local stakeholder consultation meeting was held on 10/09/2019 in the office of the project participant. Stakeholders from local government, Social Organizations and local residents were invited to attend the meeting and fill the questionnaires. 25 questionnaires in total were distributed to collect comments stakeholders, and all questionnaires have been recollected.				
Documentation provided by Project Owner				
Updated Project Submission Form				
GCC Project Verifier assessment				Date:16/03/2023
The required information has been added in the PSF. The verification team can confirm that the process of LSC was in accordance with the requirement of EIA regulation of the host country. The date and address as well as the details of the process have been confirmed during on-site interview with the local residents. Hence the CAR is closed.				

CAR ID	03	Section no.	D.10	Date:08/10/2022
Description of CAR				

Section E.1 emphasizes mainly projects benefits while it does not deliver a comprehensive do-no-harm risk assessment. Furthermore, it only covers risks during operations while during the construction phase and any resulting measures have not been considered. This issue addresses inter alia, 1. Land-Solid waste pollution from Hazardous wastes The impact and treatment solutions of waste transformer oil is not identified in the pollution from hazardous wastes. 2. Land-Solid waste pollution from E-waste : It is not considered, but it could be assumed that there will be some replacement by spare parts over the lifetime of the project. 3. Natural Resources - Replacing fossil fuels with renewable sources of energy : Conserving fossil fuels with a renewable sources is not a direct positive impact of a pure renewable energy project, and here the score of +1 is not justified.

Project Owner's response	Date:01/11/2022
1. Waste transformer oil will be collected and recycled by the affiliated entity of local power grid company, which has been supplemented in section E.1 of the PSF. 2. The regular maintenance of project equipment may produce a certain amount of waste electronic devices, which will be collected and handed over to the entity with the qualification of dismantling electronic waste for unified treatment. 3. The project utilizes renewable solar energy to generate electricity, which will replace the electricity generated by fossil fuel plants of KEGOC. It is a positive impact and here it is reasonable to get the score of +1.	
Documentation provided by Project Owner	
Updated Project Submission Form	
GCC Project Verifier assessment	Date:16/03/2023
The corrected description in PSF section E.1 has been checked and found appropriate. The scores (+1) considered for PRMA01 (Solid waste Pollution from Hazardous wastes), PRMA02 (Solid waste Pollution from E-wastes), PRMA03 (Solid waste pollution from end-of-life equipment) and Replacing fossil fuels with renewable sources of energy, can be confirmed to be appropriate. Hence the CAR is closed.	

CAR ID	04	Section no.	GCC completeness check Observations	Date:04/12/2023
Description of CAR				

The project owner is requested to respond to below observations as received during the GCC Completeness check:

1. Observations related to LOA:

I. Please attach the LOA cover page as per the template.

II. LoA needs to be prepared on any of the legal owners official/business letterhead paper (that includes its name, address, contact details and registration number.

III. All the project representatives of legal owner, project owner and focal point must sign every page of the LOA

2. Observation 01: First Page PSF is altered and not inline with the PSF template version 3.2.

3. Observation 02: Sub-Type of project activity under Type A2 category is missing in “Type as per the Project Standard” Tab of basic information table of PSF, Page no. 04.

4. Observation 03: Section A.3 of PSF is not inline with guidelines to complete GCC PSF template as details related below mentioned information is missing.

- The monitoring equipment and their location in the systems
- Provide a short summary of facilities, systems and equipment in the baseline scenario as established in section B.4 below

5. Observation 04: In Section B

I. Under B.1, please determine whether a local expert was included in the team. Kindly specify in the table

II. Under section B.3 of PSF, please clarify the project boundary of project activity in detail. Did the verifier use Google Earth or any other tool to verify geo-coordinates?

6. Observation 05: Under section B.6.1 of PSF, please mention the calculation of emission reduction and baseline emission for the project activity.

7. Observation 06: Under section B7.1 of PSF, please indicate the start and end date of validity of calibration for all meters used for monitoring of the parameters.

8. Observation 07:

I. Under section B7.1 of PSF, for the monitored parameter EGPJ,y the description is Net Electricity generation supplied by the project plant/unit to the grid in year y. However, under Value(s) of monitored parameter, it is mentioned as Annual electricity generation. This anomaly may be rectified.

II. Under section B.7.1

Please align the headers of the parameters as per E.1.

For eg. E.1 includes Long-term jobs (> 1 year) created/ lost, for which in B.1 “Number of people/women employed by the project is mentioned”. Please align the headers.

9. Observation 08:

In Section E.1 and E.2

I. All those parameters which are scored either positive or negative in Section E.1 & E.2 of PSF are required to monitored and details of the same need to be included in section B.7.1 (positively scored) & B.7.2 (negatively scored) of PSF. Also ensure that the requirements of the latest version of the Environment and Social safeguard standard are followed. Kindly review and revise the same.

II. For all the parameters scored, please determine how the project activity meets the legal requirements stated. Please provide details.

III. Please re-assess the parameters that are scored “0”, as some are noted to have a positive impact and can be monitored. Please revise the scoring accordingly

IV. For “Long-term jobs” please determine the number of jobs to be generated due to project activity.

V. For “reducing/increasing accidents”, please define leading and lagging indicators to measure the impact of the actions taken to reduce incidents/accidents such as monitoring of no of incidents/accidents, number of near miss reported etc. Please revise

10. Observation 09:

In section G of the PSF,

I. the stakeholders identified is not available in the PSF. The section G may be filled based on the instruction provided from 71 to 77 of the PSF template

11. Observation 10: In PSF, under G3. Please include the avenues available for the stakeholder to comment in future and the grievance mechanism in place to address the same.

Project Owner’s response	Date:05/12/2023

1. The LOA has been re-prepared as per the requirements.

2. The first page PSF is inline with the PSF template version 3.2.

3. The Sub-type 1 has been included in “Type as per the Project Standard” Tab of basic information table of PSF.

4. It has been included the missing information about the monitoring equipment and their location in the systems and a short summary of facilities, systems and equipment in the baseline scenario.

5.

I. Please refer to the updated PVR.

II. The boundary of the project has been revised in detail. And the coordinates of 14 PV power generation arrays for the project has been implemented in the updated PSF. The KML document has been provided to VVB for verification.

6. The calculation of the emission reduction and baseline emission for the project has been included in section B.6.1 of the PSF.

7. The start and end date of validity of calibration for all meters used for monitoring of the parameters has been included in the updated PSF.

8.

I. It has been revised about the description as the net electricity generation under Value(s) of monitored parameter about EGPJ,y.

II. The headers of the parameters in section B.7.1 have been revised as per E.1.

9.

I. It has been revised in section B.7.1 and B.7.2 of the updated PSF.

II. All the parameter scored, it has been included the description of how the project activity meets the legal requirements stated.

III. The parameters that are scored “0”, the project proponent choose to give up the score and the description is revised.

IV. The number of 12 long term jobs are included in section E.2 of the updated PSF.

V. It has been revised accordingly. Project proponent will record number of incident/accidents, number of HSE training conducted and compliance of use of PPE's to avoiding accidents at site.

10. It has been revised in section G of the PSF based on the instruction provided from 71 to 77 of the PSF template.

11. The grievance mechanism in place is included as following.

The project proponent has set up an on-going communication mechanism to regularly hold stakeholder meetings, distribute questionnaires and give the response to various stakeholders. Communications with Local stakeholders are being carried out at periodic intervals. Moreover, local stakeholders can also raise their concerns and opinions directly by making a phone call to the project proponent.

Documentation provided by Project Owner

PSF v2.1 dated 05/12/2023 The updated LOA	
GCC Project Verifier assessment	Date:16/12/2023

1. Observations related to LOA: The cover page as per the template has been attched. The LoA is on the project owner's business letterhead paper, which inclues it's name, address, contact details and registration number. All the project representatives of legal owner, project owner and focal point have signed every page of the LOA. OK

2. Observation 01: The first page of updated PSF has been checked by the verification team and fould in line with the PSF template version 3.2. OK

3. Observation 02: The sub-Type of project activity under Type A2 category has been included in the updated PSF. OK

4. Observation 03: The details regarding the monitoring equipment and their location and a short summary of facilities, systems and equipment in the baseline scenario have been included in the updated PSF, which is inline with guidelines to complete GCC PSF template. OK

5. Observation 04: A local expert, i.e. Ms. Aida Maksut, was included in verification team. The table under B.1 in the PVR has been revised. The boundary of the project has been revised in detail. And the coordinates of 14 PV power generation arrays for the project has been implemented in the updated PSF. The verification team used Google Earth to verify geo-coordinates and found consistent with that in the PSF. OK

6. Observation 05: The calculation of emission reduction and baseline emission for the project activity has been included in section B.6.1 of the PSF, which is inline with guidelines to complete GCC PSF template. OK

7. Observation 06: The start and end date of validity of calibration for all meters used for monitoring of the parameters has been included in the updated PSF, which is inline with guidelines to complete GCC PSF template. OK

8. Observation 07: The description as the net electricity generation under Value(s) of monitored parameter about $EG_{PJ,y}$. has been revised. The verification team checked it and found it consistent with that under section B.7.1 of PSF. The headers of the parameters have been revised as per E.1. OK

9. Observation 08: The description regarding the parameters which are scored in Section E.1 & E.2 of PSF have been updated. The requirements of the latest version of the "Environment and Social safeguard standard are followed. The parameters that are scored "0", the project proponent choose to give up the score and the description is revised.The number of 12 long term jobs have been included and the staff roster have been checked. For "reducing/increasing accidents", leading and lagging indicators have been re-defined and the PSF has been updated accordingly. OK

10. Observation 09: The stakeholder stakeholder consultation detailed has been included in the PSF. The verification assessed it and found it in line with the instruction provided from 71 to 77 of the PSF template. OK

11. Observation 10: The avenues available for the stakeholder to comment in future and the grievance mechanism have been included in the PSF. The verification team assessed it and found it in line with instruction of the PSF template. OK

In summary, PO has addressed all the GCC completeness check observations in the revised PSF. GCC verifier has cross checked revised PSF furnished by PO and found the changes in the PSF are correct.

Closed

Table 3. FARs from this Project Verification

FAR ID	01	Section no.	D14	Date: 19/12/2023
Description of FAR				
"Project Owners shall demonstrate the compliance to CORSIA requirements for the credits claimed beyond 31 December 2020 with respect to double counting and HCLOA requirements and also future CORSIA requirements applicable time to time for the project activity"				
Project Owner's response				Date: DD/MM/YYYY
Documentation provided by Project Owner				
GCC Project Verifier assessment				Date: DD/MM/YYYY

Appendix 5. Photo documentation of the on-site visit

The overview of all PV arrays

The substation of the project

Appendix 6. Appointment Certificates

verico SCE

Ernennungsurkunde

Certificate of Appointment

Werner Betzenbichler

erfüllt die Voraussetzungen der Prüfstelle der **verico** SCE und wird ernannt zum
fulfills the requirements according to the guidelines of the verification body of **verico** SCE and is appointed as

Auditor / Lead Auditor / Technischer Rezensent

für Verifizierungen nach ISO 14064-3

für die folgenden Scopes/Sektoren
for the following scopes/sectors

ISO14064-1: 1, 2, 4, 6, 7, 8 (AVR Scopes), 14, 17, 20

ISO14064-2: 1-13 (CDM Sektoren)

Die Anforderungen des QM-Handbuches der Prüfstelle von verico SCE sind bindend.
The requirements of the QM-Manual of the verification body of verico SCE are binding.

Diese Ernennung gilt 5 Jahre.
This appointment is valid for 5 years.

Zertifikat Nr. 14064 A9 ISO14064-3

Langenbach, 6.7.2018 Dr. Kolmetz

ZERTIFIKAT CERTIFICATE

ver-A10e-2013-06-24

Annex B4 - Ernennungsurkunde Betzenbichler ISO14064_3 2018 Seite 1/1

verico SCE

Ernennungsurkunde

Certificate of Appointment

Robin Wang

erfüllt die Voraussetzungen der Prüfstelle der **verico** SCE und wird ernannt zum
fulfills the requirements according to the guidelines of the verification body of **verico** SCE and is appointed as

Auditor / Lead Auditor

für Verifizierungen nach ISO 14064-3

für die folgenden Scopes/Sektoren
for the following scopes/sectors

ISO14064-1: 1, 2, 16

ISO14064-2: 1, 3, 8, 10 (CDM Sektoren)

Die Anforderungen des QM-Handbuches der Prüfstelle von verico SCE sind bindend.
The requirements of the QM-Manual of the verification body of verico SCE are binding.
Diese Ernennung gilt 5 Jahre.
This appointment is valid for 5 years.

Zertifikat Nr. 14064 A29 ISO14064-3

Langenbach, 28.11.2020 Javier Vallejo Drehs

ZERTIFIKAT CERTIFICATE

ver-v4.10s-2013-06-24

Annex B4 - Ernennungsurkunde RobinWang ISO14064_3.docx Seite 1/1

verico SCE

Ernennungsurkunde

Certificate of Appointment

Aida Maksut

erfüllt die Voraussetzungen der Prüfstelle der **verico** SCE und wird ernannt zum
fulfills the requirements according to the guidelines of the verification body of **verico** SCE and is appointed as

Lead Auditor Trainee

für Verifizierungen nach ISO 14064-3

für die folgenden Scopes
for the following scopes

ISO 14064-1: 1

ISO14064-2: 1

Die Anforderungen des QM-Handbuches der Prüfstelle von verico SCE sind bindend.
The requirements of the QM-Manual of the verification body of verico SCE are binding.

This appointment is valid for project Ref: GCC007: „ Kaskelen 50 MWp Solar Power Plant" Submission Ref n: S00259 in September 2022. Verico, SCE certifies that all the requirements for: background education, training courses, appointment certificates from other Certification bodies and working experience was already met at that time.

Zertifikat Nr. 14064 A33

(zur Berufung als Lead Auditor ist ein Monitoring Audit durchzuführen)
(for the appointment as Lead Auditor a monitoring audit has to take place)

Langenbach, 22.05.2023 UNTERSCHRIFT

ZERTIFIKAT CERTIFICATE

ver-A10e-2013-06-24

Annex B4 - Ernennungsurkunde AVR Trainee AM_GCC007.docx Seite 1/1

verico SCE

Ernennungsurkunde

Certificate of Appointment

Luis Robles Olmos

erfüllt die Voraussetzungen der Prüfstelle der **verico** SCE und wird ernannt zum
fulfills the requirements according to the guidelines of the verification body of **verico** SCE and is appointed as

Lead Auditor / Technical Reviewer

für die folgenden Scopes/Sektoren
for the following scopes/sectors

ISO14064-1: 1, 6, 14, 15, 21

ISO14064-2: 1, 3, 7, 10, 13, 14, 15

CLIMA: 1, 3, 4, 7, 13, 15, 17

Die Anforderungen des QM-Handbuches der Prüfstelle von verico SCE sind bindend.
The requirements of the QM-Manual of the verification body of verico SCE are binding.
Diese Ernennung gilt 5 Jahre.
This appointment is valid for 5 years.

Zertifikat Nr. 14064 A16 ISO14064-3

Langenbach, 03.05.2023 Javier Vallejo Drehs

ZERTIFIKAT CERTIFICATE

ver-A10e-2013-06-24

Annex B4 - Ernennungsurkunde LRO ISO14064_3_2023.docx Seite 1/1

Appendix 7. Environmental safeguards assessment

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards									Project Owner's Conclusion		GCC Verifiers Conclusion	
		Description of Impact *(both positive and negative)*	**Legal requirement / Limit**	**Do-No-Harm Risk Assessment**			**Risk Mitigation Action Plans**		**Do-No-Harm Residual Risk Assessment**		**Self-Declaration**		**3rd Party Audit**	
				Not Applicable *(No actions required)*	**Harmless** *(No actions required)*	**Harmful** *(Actions required)*	**Operational Controls**	**Program of Risk Management Actions**	**Re-evaluate Risks**	**Monitoring**	**Explanation of Conclusion**	**The Project Activity will not cause any harm**	**Verification Process**	**Will the project activity causes any harm?**
Environmental impacts on the identified categories[6] indicated below.	*Indicators for environmental impacts*	*Describe anticipated environmental impacts, both positive and negative from all sources (stationary and mobile), that may result from the Project Activity, within and outside the project boundary, over which the Project Owner(s) has control, and beyond what would reasonably be expected to occur in the absence of the Project Activity.*	*Describe the applicable national regulatory requirements /legal 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*** *(No actions required)*	*If environmental impacts are anticipated, but are expected to be in compliance with applicable national regulatory requirements/ below the legal limits, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Harmless*** *(No actions required)*	*If environmental impacts are anticipated that will not be in compliance with the applicable national regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-safe) and shall be indicated as* ***Harmful*** *(Actions required).*	*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****.*	*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 the risk of impacts that have been identified as* ***Harmful****.*	*Re-evaluate risks after Risk Mitigation Action Plans have been developed (refer to previous two columns) for impacts that have been identified as Harmful. Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as* ***Harmless*** *(No actions required)*	*Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as Harmful and described in the PSF (refer to Table 3).*	*Describe how the Project Owner has concluded that the Project Activity is likely to achieve the identified Risk Mitigation Action Plan targets for managing risks to levels that are unlikely to cause any harm.*	*Confirm that the Project Activity risks of negative environmental impacts are expected to be managed to levels that are unlikely to cause any harm (Mark +1 for* ***Yes*** *or and -1 for* ***No****)*	*Describe how the GCC Verifier has assessed that the Project Activity has adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm.*	*Confirm whether the Project Activity is expected to manage risks of negative environ mental impacts to levels that are unlikely to cause any harm (Mark +1 for Yes or and -1 for No)*
Environmental Safeguards														
Environment - *Air*	*SO_x emissions*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	NO_x emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--

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

	CO_2 emissions	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 be generated from fossil fuels and cause air pollution.	N.A.	The project reduces CO_2 emissions in the baseline; hence the project will not cause any harm in this regard	-	-	No harmful action has been identified as per the activity type	N.A.	N.A.	The electricity generated will be monitored and CO_2 emission reductions will be calculated accordingly Please refer to section B.7.1.	The project is expected to result in lower CO_2 emission than the baseline throughout the crediting period	+1	The project has a positive impact by reducing the measurable amounts of CO_2 emissions which can be monitored as per the MP.	+1
	CO emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	-
	Suspended particulate matter (SPM) emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	Only a short dust during the construction phase. No risks identified	N/A	Only a short dust during the construction phase and no dust during operation. No risks identified	--
	Fly ash emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	Only a short dust during the construction phase. No risks identified	N/A	Only a short dust during the construction phase and no fly ash during operation. No risks identified	--
	Non-Methane Volatile Organic Compounds (NMVOCs)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Odor emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Noise Pollution	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Solid waste Pollution from Plastics	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identifie	--

Environment - *Land*	*Solid waste Pollution from Hazardous wastes*	The solid waste pollution from hazardous wastes comes from waste transformer oil, and it is temporarily stored in the hazardous waste temporary storage room after being collected by special facilities and treated by qualified company.	Environmental code of the republic of Kazakhstan[7] The collection and temporary storage of waste hazard is carried out at special sites (places). And ss waste accumulates, it is collected separately for each waste group.	-	Hazardous wastes will be properly collected, temporarily stored in the specific storage facility at the project site and then transferred to qualified entity for treatment at periodic interval. therefore Harmless	-	Hazardous wastes will be properly collected and stored at the project site, and delivered for disposal by qualified entity at periodic interval.	N.A.	Hazardous waste will be disposed by qualified entity as per national laws and regulations, therefore harmless	The hazardous waste transfer sheet will be monitored. Please refer to PRMA01 in section B.7.2	A properly implemented and executed solid waste management plan removed this negative potential.	+1	The hazardous wastes have been identified as being from waste transformer oil which has been disposed as per the applicable standard in the host country. /V26/ Thus, no impact is considered based on the MP in section B.7.2 implemented by the project operator.	+1
	Solid waste Pollution from Bio-medical wastes	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Solid waste Pollution from E-wastes	Waste defunct/damaged PVR modules, inverter, transformer, cable and other waste may be generated during the operation of PV power plants, which are collected and stored at specific locations, and are regularly collected by the special facility and treated by qualified company.	Environmental code of the republic of Kazakhstan The collection and temporary storage of E-waste are collected at specific locations and collected by special facilities	-.	Solid waste pollution from E- wastes is properly disposed as per regulations, the impact is within legal limit, and this parameter will be monitored, hence the project is deemed Harmless	-	N/A	N/A	N/A	Quantity of e waste produced and disposed / treated will be recorded by the operation department, and the waste will be collected regularly by special facility and treated by qualified company. Please refer to PRMA 02 in section B.7.2	These waste defunct/damaged PVR modules, inverter, transformer, cable and other waste will be collected regularly by special facility and treated by qualified company. This parameter will be scored.	+1	The disposal procedures for E-wastes in the MP have been assessed in compliance with the applicable regulations in the host country and thus can be assessed to be harmless as per para.22 (d) of E&SSS and given a score of “+1”.	+1

[7] https://adilet.zan.kz/rus/docs/K2100000400

	Solid waste Pollution from Batteries	No batteries are used by the project	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No significant waste batteries will be generated from the project activity. No risks identified.	--
	Solid waste Pollution from end of life products/ equipment	Solid waste pollution from end-of-life equipment may be generated by the project.	Environmental code of the republic of kazakhstan : Solid waste from end-of-life equipment will be collected and stored at specific locations, and collected by special facilities and treated by qualified company,	-	Solid waste from end-of-life equipment will be recycled by waste recycling company. Non-recyclable parts will be collected and sent to Sanitation department for treatment. Therefore harmless	-	Solid waste from end-of-life equipment will be properly collected and stored at the project site, and delivered for recycling or disposal at periodic interval.	N.A.	Solid waste will be recycled or disposed as per national laws and regulations, therefore harmless	Monitor the treatment of Solid waste pollution from end-of-life equipment throughout the entire crediting period, if any. Please refer to PRMA03 in section B.7.2.	This impact is expected to be harmless since Solid waste from end of life products/ equipment is properly disposed as per regulations.	+1	The disposal procedures for the wastes have been assessed in compliance with the applicable regulations in the host country, however the impacts cannot be described, quantified, measured and monitored during the entire monitoring period as per para.22 (f) of E&SSS, and thus can be rated as N/A.	+1
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No significant waste will be generated from the project activity. No risks identified.	--
	Soil erosion	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	No risks identified.	--
Environment - *Water*	*Reliability/ accessibility of water supply*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified. The water supplied by the Municipal water utility company./V27/	--
	Water Consumption from ground and other sources	The project is located near the river and does not require access to ground water	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--

	Generation of wastewater	The solar panels cleaning wastewater and domestic sewage will be generated during the operation period.	Environmental code of the republic of kazakhstan : Organization of measures and construction of treatment facilities to ensure improvement of the quality composition of discharged water.	-	The solar panels cleaning wastewater mainly includes dust, which does not require treatment. Domestic sewage is properly treated as per regulations, hence the project is deemed Harmless	-	N.A.	Wastewater treatment facility ensures the proper treatment of domestic sewage.	Wastewater treatment facility ensures the proper treatment of domestic sewage.	The wastewater treatment volume will be recorded by the operating department Please refer to PRMA04 in section B.7.2	This impact is expected to be harmless since wastewater is properly treated as per regulations.	+1	The amounts of waste water is not significant and its impact can be monitored during the monitoring period, Hence it can be scored "+1"	+1
	Wastewater discharge without/with insufficient treatment	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	The daily sewage from project operators is not significant and is treated before discharge. No risks identified	N/A	No risks identified.	--
	Pollution of Surface, Ground and/or Bodies of water	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--
Environment – *Natural Resources*	*Conserving mineral resources*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--
	Protecting/ enhancing plant life	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--
	Protecting/ enhancing species diversity	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--

	Protecting/ enhancing forests	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--
	Protecting/ enhancing other depletable natural resources	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--
	Conserving energy	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--
	Replacing fossil fuels with renewable sources of energy	The project utilizes renewable solar energy to generate electricity, which will replace the electricity generated by fossil fuel plants of KEGOC	There is no such legal limit	The project activity causes positive impact on the environment by replacing the fossil fuels with the renewable energy sources of energy	-	-	N.A.	N.A.	N.A.	The electricity generated will be monitored throughout the crediting period.	The project is expected to supply an average of 67,289 MWh (average during the fixed 10-year crediting period) renewable electricity to KEGOC annually	+1	The positive impact has been assessed to be substantial compared to the baseline power plants. Hence it can be scored "+1"	+1
	Replacing ODS with non-ODS refrigerants	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--
Note: If the score is: (a) zero or greater, the overall impact is neutral or positive and there is no net harm; and (b) less than zero, the overall impact is negative and there is net harm to Environment. Score is obtained after adding the individual scores in each of the rows in the last column of the above table.														
Net Score:		**+6**												
Project Owner's Conclusion in PSF:		The Project Owner confirms that the Project Activity will not cause any net harm to the environment.												
GCC Project Verifier's Opinion:		The GCC Verifier certifies that the Project Activity is not likely to cause any net harm to the environment.												

Appendix 8. Social safeguards assessment

Impact of Project Activity on		**Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards**									**Project Owner's Conclusion**		**GCC Verifiers Conclusion**	
		Description of Impact (*both positive and negative*)	**Legal requirement /Limit**	**Do-No-Harm Risk Assessment**			**Risk Mitigation Action Plans**		**Do-No-Harm Residual Risk Assessment**		**Self-Declaration**		**3rd Party Audit**	
				Not Applicable *(No actions required)*	**Harmless** *(No actions required)*	**Harmful** *(Actions required)*	**Operational Controls**	**Program of Risk Management Actions**	**Re-evaluate Risks**	**Monitoring**	**Explanation of Conclusion**	**The Project Activity will not cause any harm**	**Verification Process**	**Will the project activity causes any harm?**
Social impacts on the identified categories[8] indicated below.	*Indicators for social impacts*	*Describe the impacts on society and stakeholders, both positive and negative, that may result from constructing and operating of the Project Activity.*	*Describe the applicable national regulatory requirements / legal limits 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*** *(No actions required)*	*If social impacts are anticipated, but are expected to be in compliance with applicable national regulatory requirements/ legal limits, then it the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Harmless*** *(No actions required)*	*If social impacts are anticipated that will not be in compliance with the applicable national regulatory requirements/ legal limits, then the Project Activity is likely to cause harm (may be unsafe) and shall be indicated as* ***Harmful*** *(Actions required).*	*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****.*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., construction of crèche for workers) that will be adopted to reduce the risk of impacts that have been identified as* ***Harmful****.*	*Re-evaluate risks after Risk Mitigation Actions plans have been developed (refer to previous two columns) for impacts that have been identified as Harmful. Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as* ***Harmless*** *(No actions required)*	*Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as Harmful and to be described in the PSF (refer to Table 3).*	*Describe how the Project Owner has concluded that the Project Activity is likely to achieve the identified Risk Mitigation Action Plan targets for managing risks to levels that are unlikely to cause any harm.*	*Confirm that the Project Activity risks of negative social impacts are expected to be managed to levels that are unlikely to cause any harm (Mark +1 for* ***Yes*** *or and -1 for* ***No****)*	*Describe how the GCC Verifier has assessed that the Project Activity has adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm.*	*Confirm whether the Project Activity is expected to manage risks of negative environ mental impacts to levels that are unlikely to cause any harm (Mark +1 for Yes or and -1 for No)*
Social Safeguards														
Social - *Jobs*	Long-term jobs (> 1 year) created/ *lost*	The project is expected to create 12 long-term job opportunities including men and women during operation.	All employments are done according to the national employment regulation (eg. Law of Labour of Kazakhstan)	-	The social impact is expected to increase employment. This impact is positive and can be monitored hence it is harmless.	-	N/A	N/A	N/A	Number of people employed by the project will be monitored through checking employment records.	The social impact is expected to increase employment, which can be confirmed by employment records	+1	The positive impact has been assessed to be substantial and number of job creation will be monitored through employment records as provided in the MP. Hence it	+1

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

										Please refer to section B.7.1.			can be scored "+1"	
	New short-term jobs (< 1 year) created/ lost	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	Short-term jobs were only created in the construction phase of the project activity and can not be recorded or monitored, thus can be rated as NA. No risks identified	--
	Sources of income generation increased / reduced	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	The income level is quite increased compared to the nearby villagers and can be checked in the employment records of the project operator. However, it is difficult to monitor due to there are no recognized income indicators under diversification development in the local area, thus can be rated as N/A. No risks identified	--
	Social inequality/safeguards	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Threatened livelihood	Not applicable for this indicator.Lands occupied by the project used to be bare lands and other unutilized lands. Residents did not earn their lives by exploiting these lands.	Land Code of the Republic of Kazakhstan	Not applicable. The project does not involve any activity that would threaten livelihood.	-	-	N/A	N/A	N/A	N/A	Local social livelihood will not be influenced by the project activity. In addition, land utilization is in accordance with the national law.	0	No risks identified	--

Social - *Health & Safety*	*Disease prevention*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified.	--
	Reducing / increasing accidents	There may be a fire/electrocution hazard in the photovoltaic power plant, which may cause accident and injury to employees.	All employments are done according to the national employment regulations (eg. Law of Labour of Kazakhstan)	N.A.	The construction and installation of photovoltaic power plants was standardized, the operation and maintenance of photovoltaic power plants was strengthened, and employee safety training on job HSE was provided and PPE's required was compliedwas provided. Thus, it deemed as harmless.	-	N/A	N/A	N/A	Project proponent will record number of incident/accidents, number of HSE training conducted and compliance of use of PPE's to avoiding accidents at site Please refer to PRMA 05 in section B.7.2.	Project proponent will record number of incident/accidents, number of HSE training conducted and compliance of use of PPE's to avoiding accidents at site..	+1	The training records of the power plant has been checked and found sufficient in terms of QHSE./V24/ No risks identified.	+1
	Reducing / increasing crime	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Reducing / increasing food wastage	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Reducing / increasing indoor air pollution	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Efficiency of health services	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	-
	Sanitation and waste management	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	fN/A	N/A	No risks identified	-
	Occupational Health hazards	N/A	N/A.	N/A.	N/A..	N/A..	N/A.	N/A.	N/A.	N/A.	N/A	N/A	No risks identified	--
	Communal Harmony	The project site is far away from the residential area, which has little impact on	N/A.	N/A.	-	-	N/A.	N/A.	N/A..	N/A.	N/A.	N/A	No risks identified	--

		the communal harmony.												
	Other health and safety issues	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	
Social - *Education*	*Job related training imparted or not*	The project owner provides job related training for employees	There is no legal requirement from local authority to provide training to local people.	-	The project provides job related training for employees; This impact is positive and can be monitored, hence it is harmless.	-	N/A.	N/A.	N/A..	Number of Job-related training provided can be monitored by training records. Please refer to section B.7.1.	Job-related training are expected to be provided once every season	+1	Training on HSE (Health, Safety and Environment) of 2022 have been provided and checked. The positive impact has been assessed to be substantial and the training records will be monitored regularly as provided in the MP. Hence it can be scored "+1"	+1
	Educational services improved or not	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Project-related knowledge dissemination effective or not	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Other educational issues	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
Social - *Welfare*	*Improving/ deteriorating working conditions*	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Community and rural welfare	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Poverty alleviation (more people above poverty level)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Improving / deteriorating wealth distribution/	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--

	generation of income and assets													
	Increased or / deteriorating municipal revenues	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Women's empowerment	N/A	N/A	N/A	-	--	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Reduced / increased traffic congestion	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	No risks identified	--
	Exploitation of Child Labour	The project never hires any children in any case.	Act of 8 August 2002 No. 345 on the rights of the child [9]	Not applicable. Child labour is absolutely prohibited in Kazakhstan. The project proponent obeys the law during the whole life cycle of the project	-	-	N/A	N/A	N/A	N/A	N/A	N/A	The laws and regulations on On the Rights of a Child in the Republic of Kazakhstan has been checked and found applicable /V38/. No risks identified	--
Note: If the score is: (a) zero or greater, the overall impact is neutral or positive and there is no net harm; and (b) less than zero, the overall impact is negative and there is net harm to society. Score is obtained after adding the individual scores in each of the rows in the last column of the above table.														
Net Score:	**+3**													
Project Owner's Conclusion in PSF:	The Project Owner confirms that the Project Activity will not cause any net harm to society.													

[9] https://adilet.zan.kz/rus/docs/Z020000345_

Appendix 9. United Nations Sustainable Development Goals (SDG) Assessment

UN-level SDGs	UN-level Target	Declared Country-level SDG	Defining Project-level SDGs					Project Owner(s)'s Conclusion		GCC verifier's conclusion	
			Project-level SDGs	Project-level Targets/ Actions	Project-level Indicators	Contribution of Project-level Actions to SDG Targets	Monitoring	Explanation of Conclusion	Are Goal/ Targets Likely to be Achieved?	Verification process	Are Goal targets likely to be achieved?
Describe UN SDG targets and indicators *See: https://unstats.un.org/sdgs/indicators/indicators-list/*	*Describe the UN-level target(s) and correspo-nding indicator no(s)*	*Has the host country declared the SDG to be a national priority? Indicate Yes or No*	*Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope.* ***For guidance see:*** *Integrating the SDGs into Corporate Reporting- A Practical Guide: https://www.unglobalcompact.org/docs/publications/Practical_Guide_SDG_Reporting.pdf* *Case-study from Coca-Cola and other organizations to develop organization-wide SDGs (page 114): https://pub.iges.or.jp/pub/realising-transformative-potential-sdgs*	*Define project-level targets/actions, by suitably modifying and customizing UN/Country-level targets to the project scope. Define the target date by which the Project Activity is expected to achieve the project-level SDG target(s). Refer to the previous column for guidance*	*Define project-level indicators by suitably modifying and customizing UN/Country-level indicators to the project scope or creating a new indicator(s). Refer to the previous column for guidance*	*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 and is additional to what would have occurred in the absence of the Project Activity*	*Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG target and Indicator*	*Describe how the Project Owner has concluded that the project is likely to achieve the identified Project level SDGs target(s).*	*Describe whether the project-level SDG target(s) is likely to be achieved by the target date* *(Yes or No)*		
Goal 1: End poverty in all its forms everywhere	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 3. Ensure healthy lives and promote well-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

being for all at all ages											
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 5. Achieve gender equality and empower all women and girls	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 6. Ensure availability and sustainable management of water and sanitation for all	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
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" by the utilization of solar as a renewable energy source."	Yes	The project generates electricity from the sustainable and renewable solar source and contributes to increase the share of renewables in the total installed power capacity connected to the power grid.	Commission a 50MW solar power plant since 2020	Enhance the share of installed Electricity generation capacity from renewable energy sources	The project increases the renewable energy share in energy production mix. It provides 67,289 MWh/year clean energy to the power grid	Monitor Electricity supplied to the power grid by the project, to be monitored as per section B.7 of the PSF	The project fully commissioned in 2020. Project implementation goes on without any problem	Yes	This project is a grid-connected solar power project that started operation on 06/08/2020 and the same was verified with the grid connection approval provided by the PO. The power supplied to the grid has been continuously monitored as per the MP in the PSF.	Yes

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”.	Yes	Provide long-term job opportunities, equal opportunities for women, equal pay for equal value of work	The project is expected to provide 12 long-term job opportunities, for both men and women	12 people to be recruited including all levels	The project provides long term employment for 12 people who are directly working at the site, including both men and women	Quantity of employment is monitored through employment records	Project proponent employs people according to the regulations.	Yes	The positive contributions in terms of long-term job opportunities, protection of labour right human right, technical training were assessed and found substantial./V24/,/V28/	Yes
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 10. Reduce inequality within and among countries	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Goal 12. Ensure sustainable consumption and production patterns	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 13. Take urgent action to combat climate change and its impacts	SDG Target 13.2 "Integrate climate change measures into national policies, strategies and planning".	Yes	Project activity generates renewable electricity and mitigates the CO_2 emissions which would have been generated from the fossil fuel based power plants.	Project expects to supply 67,289 MWh (average during the fixed 10-year crediting period) clean energy to power grid	Project provides clean energy avoiding 46,954 tCO_2 emission annually	Since the project uses solar energy, there is no GHG emissions related to the project activity. It avoids 46,954 tCO_2 emission annually	O&M team monitors the real time generation from the plant and calculated equivalent CO_2 reductions.	Project proponent operates the plant since 2020 and complies with targeted SDGs so far.	Yes	The positive impact has been confirmed by the government's approval and on-site assessed. The relevant parameters has been specified in the MP and found applicable.	Yes
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SUMMARY	**Targeted**	**Likely to be Achieved**		
Total Number of SDGs	**3**	**3**		**3**
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	**Silver**	**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[10];
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

[10]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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