

المجلس العالمي للبصمة الكربونية  
GLOBAL CARBON COUNCIL



# Project Submission Form

V3.2 - 2020

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<b>COVER PAGE- Project Submission Form (PSF)</b>	
<b>BASIC INFORMATION</b>	
<b>Title of the Project Activity</b>	<b>Kaskelen 50 MWp Solar Power Plant</b>
<b>PSF version number</b>	1.0
<b>Date of completion of this form</b>	25/05/2022
<b>Project Owner(s)</b> <small>(Shall be consistent with De-registered CDM Type B Projects)</small>	Climate Bridge (Shanghai) Ltd.
<b>Country where the Project Activity is located</b>	The Republic of Kazakhstan
<b>GPS coordinates of the project site(s)</b>	76.96167E~76.98111E, 43.61361N~43.62139N (76°57'42"~76°58'52"E, 43°36'49"~43°37'17"N)
<b>Eligible GCC Project Type as per the Project Standard</b> <small>(Tick applicable project type)</small>	<input checked="" type="checkbox"/> <b>Type A:</b> <input type="checkbox"/> Type A1 <input checked="" type="checkbox"/> Type A2  <input type="checkbox"/> <b>Type B – De-registered CDM Projects:<sup>1</sup></b> <input type="checkbox"/> Type B1 <input type="checkbox"/> Type B2
<b>Minimum compliance requirements</b>	<input checked="" type="checkbox"/> Real and Measurable GHG Reductions <input checked="" type="checkbox"/> National Sustainable Development Criteria (if any) <input checked="" type="checkbox"/> Apply credible baseline and monitoring methodologies <input checked="" type="checkbox"/> Additionality <input checked="" type="checkbox"/> Local Stakeholder Consultation Process

<sup>1</sup> Owners of Type B projects shall fill in the form provided in Appendix 7.

	<input checked="" type="checkbox"/> Global Stakeholder Consultation Process <input checked="" type="checkbox"/> No GHG Double Counting <input checked="" type="checkbox"/> Contributes to United Nations Sustainable Development Goal 13 (Climate Action)																																		
<b>Choose optional and additional requirements</b> <small>(Tick applicable label categories)</small>	<input checked="" type="checkbox"/> Do-no-net-harm Safeguards to address Environmental Impacts <input checked="" type="checkbox"/> Do-no-net-harm Safeguards to address Social Impacts <input checked="" type="checkbox"/> Contributes to United Nations Sustainable Development Goals (in addition to Goal 13)																																		
<b>Applied methodologies</b> <small>(Shall be approved by the GCC or the CDM)</small>	Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers (GCCM001, version 3.0)																																		
<b>GHG Sectoral scope(s) linked to the applied methodology(ies)</b>	GHG-SS #1: energy industries (renewable/non-renewable sources)																																		
<b>Applicable Rules and Requirements for Project Owners</b> <small>(Tick applicable Rules and Requirements)</small>	<table border="1"> <thead> <tr> <th colspan="2">Rules and Requirements</th> <th>Reference</th> <th>Version</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/></td> <td>ISO 14064-2</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Applicable host country legal requirements /rules</td> <td></td> <td></td> </tr> <tr> <td rowspan="6"><input checked="" type="checkbox"/></td> <td rowspan="6">GCC Rules and Requirements<sup>2</sup></td> <td><input checked="" type="checkbox"/> Project Standard</td> <td>V3.1</td> </tr> <tr> <td><input checked="" type="checkbox"/> Approved GCC Methodology</td> <td>GCCM001 V3.0</td> </tr> <tr> <td><input checked="" type="checkbox"/> Program Definitions</td> <td>V3.1</td> </tr> <tr> <td><input checked="" type="checkbox"/> Environment and Social Safeguards Standard</td> <td>V2</td> </tr> <tr> <td><input checked="" type="checkbox"/> Project Sustainability Standard</td> <td>V2.1</td> </tr> <tr> <td><input checked="" type="checkbox"/> Instructions in Project Submission Form (PSF)-template</td> <td>V3.2</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Add rows if required</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td>Approved CDM Methodology (XXXXX)</td> <td></td> <td></td> </tr> </tbody> </table>	Rules and Requirements		Reference	Version	<input checked="" type="checkbox"/>	ISO 14064-2			<input checked="" type="checkbox"/>	Applicable host country legal requirements /rules			<input checked="" type="checkbox"/>	GCC Rules and Requirements <sup>2</sup>	<input checked="" type="checkbox"/> Project Standard	V3.1	<input checked="" type="checkbox"/> Approved GCC Methodology	GCCM001 V3.0	<input checked="" type="checkbox"/> Program Definitions	V3.1	<input checked="" type="checkbox"/> Environment and Social Safeguards Standard	V2	<input checked="" type="checkbox"/> Project Sustainability Standard	V2.1	<input checked="" type="checkbox"/> Instructions in Project Submission Form (PSF)-template	V3.2	<input type="checkbox"/>	Add rows if required			<input type="checkbox"/>	Approved CDM Methodology (XXXXX)		
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<sup>2</sup> GCC Program rules and requirements: <https://www.globalcarboncouncil.com/resource-centre.html>

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	<input checked="" type="checkbox"/> CDM Rules <sup>3</sup>	<input checked="" type="checkbox"/> Tool for the demonstration and assessment of additionality	TOOL 01	V7.0.0
		<input type="checkbox"/> Combined tool to identify the baseline scenario and demonstrate additionality	TOOL 02	
		<input type="checkbox"/> Tool to calculate the emission factor for an electricity system	TOOL 07	
		<input type="checkbox"/> Demonstration of additionality of microscale project activities	TOOL 19	
		<input type="checkbox"/> Demonstration of additionality of small-scale project activities	TOOL 21	
		<input type="checkbox"/> Additionality of first-of-its-kind project activities	TOOL 23	
		<input checked="" type="checkbox"/> Common practice	TOOL 24	V03.1
		<input checked="" type="checkbox"/> Investment analysis	TOOL 27	V11.0
		<input type="checkbox"/> Positive lists of technologies	TOOL 32	
		<input type="checkbox"/> Guidelines for objective demonstration and assessment of barriers		
		<input type="checkbox"/> Add rows if required		
<p><b>Choose Third Party External Project Verification by approved GCC Verifiers<sup>4</sup></b></p> <p>(Tick applicable verification categories)</p>	<input checked="" type="checkbox"/> GHG emission reductions (i.e., Approved Carbon Credits <b>(ACCs)</b> ) <input checked="" type="checkbox"/> Environmental No-net-harm Label <b>(E<sup>+</sup>)</b> <input checked="" type="checkbox"/> Social No-net-harm Label <b>(S<sup>+</sup>)</b>  <input checked="" type="checkbox"/> United Nations Sustainable Development Goals <b>(SDG<sup>+</sup>)</b> <input type="checkbox"/> Bronze SDG Label <input checked="" type="checkbox"/> Silver SDG Label <input type="checkbox"/> Gold SDG Label			

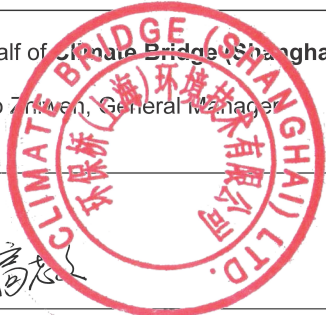
<sup>3</sup> CDM Program rules: <https://cdm.unfccc.int/Reference/index.html>

<sup>4</sup> **Note:** GCC Verifiers under the Individual Track are not eligible to conduct verifications for GCC Project Activities whose owners intend to supply carbon credits (ACCs) for use within CORSIA.

	<input type="checkbox"/> Platinum SDG Label <input type="checkbox"/> Diamond SDG Label  <input checked="" type="checkbox"/> CORSIA requirements (C+) <input type="checkbox"/> Host Country Attestation on Double counting
<p><b>Declaration to be made by the Project Owner(s)<sup>5</sup></b>  (Tick all applicable statements)</p>	<p>The Project Owner(s) declares that:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> The Project Activity complies with the eligibility of the applicable project type (A1, A2, B1 or B2) as stipulated by the Project Standard.</li> <li><input checked="" type="checkbox"/> The Project Activity shall start operations, and start generating emission reductions, on or after 1 January 2016.</li> <li><input checked="" type="checkbox"/> The Project Activity is eligible to be registered under the GCC program.</li> <li><input checked="" type="checkbox"/> No carbon credits generated by the proposed Project Activity will be claimed as carbon credits in any other GHG program anywhere in the world, either for compliance or voluntary purposes, for the entire 10-year GCC crediting period.</li> <li><input checked="" type="checkbox"/> The proposed Project Activity, if Type A, is NOT registered as a GHG Project Activity in any other GHG program or any other voluntary program anywhere in the world.</li> <li><input checked="" type="checkbox"/> The proposed Project Activity is NOT included as a component Project Activity (CPA) in a registered GHG Programme of Activities (PoA) under any GHG program (such as the CDM or any other voluntary program) anywhere in the world.</li> <li><input checked="" type="checkbox"/> The proposed Project Activity is NOT a CPA that has been excluded from a registered PoA under any GHG program (such as the CDM or any other voluntary program) anywhere in the world.</li> </ul> <p>Provide details (if any) below for the boxes ticked above.</p> <hr/> <input checked="" type="checkbox"/> If a GCC project chooses to apply to use ACCs under CORSIA, the Project Owner(s) is required to declare that they are aware that they must obtain and provide to the GCC and its Registry (operated by IHS Markit) a written attestation from the host country's national focal point (e.g., Ministry of Environment or Civil Aviation Authority) or focal point's designee, as required by CORSIA Emissions Unit Eligibility Criteria, which: <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Confirms the avoidance of double counting as required by CORSIA;</li> </ul>

<sup>5</sup> The "Project Owner" means the legal entity or organization that has overall control and responsibility for the Project Activity.

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	<p><input checked="" type="checkbox"/> Shall be made publicly available prior to the use of units from the host country under CORSIA; and</p> <p><input checked="" type="checkbox"/> Places all responsibility on the Project Owner(s) to replace any and all doubly claimed or counted ACCs by the host country, in the GCC registry operated by IHS Markit.</p> <p>Provide details below for the boxes ticked above</p>
	<p>The Project Owner(s) declares that:</p> <p><input checked="" type="checkbox"/> All of the information provided in this document, including any supporting documents submitted to the GCC or its registry operator IHS Markit at any time, is true and correct;</p> <p><input checked="" type="checkbox"/> They understand that a failure by them to provide accurate information or data, or concealing facts and information, can be considered as negligence, fraud or willful misconduct. Therefore, they are aware that they are fully responsible for any liability that arises as a result of such actions.</p> <p>Provide details below for the boxes ticked above</p>
<p><b>Appendixes 1-7</b></p>	<p>Details about the Project Activity are provided in Appendixes 1 through 7 to this document.</p>
<p><b>Name, designation, date and signature of the Project Owner(s)</b></p>	<p>On behalf of Climate Bridge (Shanghai) Ltd. Mr. Gao Zhilun, General Manager</p>  <p>25/05/2022</p>



## 1. PROJECT SUBMISSION FORM

### Section A. Description of the Project Activity

#### A.1. Purpose and general description of the Project Activity

Kaskelen 50 MWp Solar Power Plant Project (hereafter referred to as the Project) is a solar PV power project with total installed capacity of 50.83884MWp, locates in about 6 kilometers southwest of the village of Zhanaarna, Almaty State, the Republic of Kazakhstan. The project is invested and operated by Mistral Energy LLP, which is the subsidiaries of Kaskelen Solar LLP.

The purpose of the project is to utilize the solar energy at the project site to generate and supply electricity to Kazakhstan Electricity Grid Operating Company (KEGOC).

The spatial extent of the project boundary includes the project power plant and all power plants connected physically to KEGOC that the project is connected to.

Prior to the implementation of the project, the electricity delivered to the grid by the project activity would be generated by the operation of grid-connected power plants and by the addition of new generation sources into the KEGOC.

The project is a renewable energy project and is expected to supply an annual average of 67,289 MWh of zero-emission electricity to KEGOC during the fixed 10-year crediting period<sup>6</sup>, which will replace power generation of those fossil fuel-fired power plants delivered to the KEGOC under the baseline scenario. The project is expected to achieve a green-house gas emission reduction of 46,954 tCO<sub>2</sub>e annually. The total emission reductions during the fixed 10-year crediting period will be 469,541 tCO<sub>2</sub>e.

The project will create multiple sustainable benefits, including:

- SDG 7.2 Increase substantially the share of renewable energy in the global energy mix. Adopt a clean and environmentally sound technology for energy supply.
- SDG 8.5 Creates direct and indirect employment opportunities during construction and operation phases.
- SDG 13.3 Reduce GHG emission, which helps to mitigate the global climate change impacts.

#### A.2. Location of the Project Activity

Address and geodetic coordinates of the physical site of the Project Activity		
Physical address	Latitude	Longitude
about 6 kilometers southwest of the village of Zhanaarna, Almaty State, the Republic of Kazakhstan	43.61361N~43.62139N (43°36' 49" ~43° 37' 17" N)	76.96167E~76.98111E (76° 57' 42" ~76° 58' 52" E)

<sup>6</sup> According to the Feasibility Study Report completed by qualified third party KAZAKH Institute Of Oil And Gas, the expected annual average electricity supplied is 63,464 MWh in the 25 years of lifetime.

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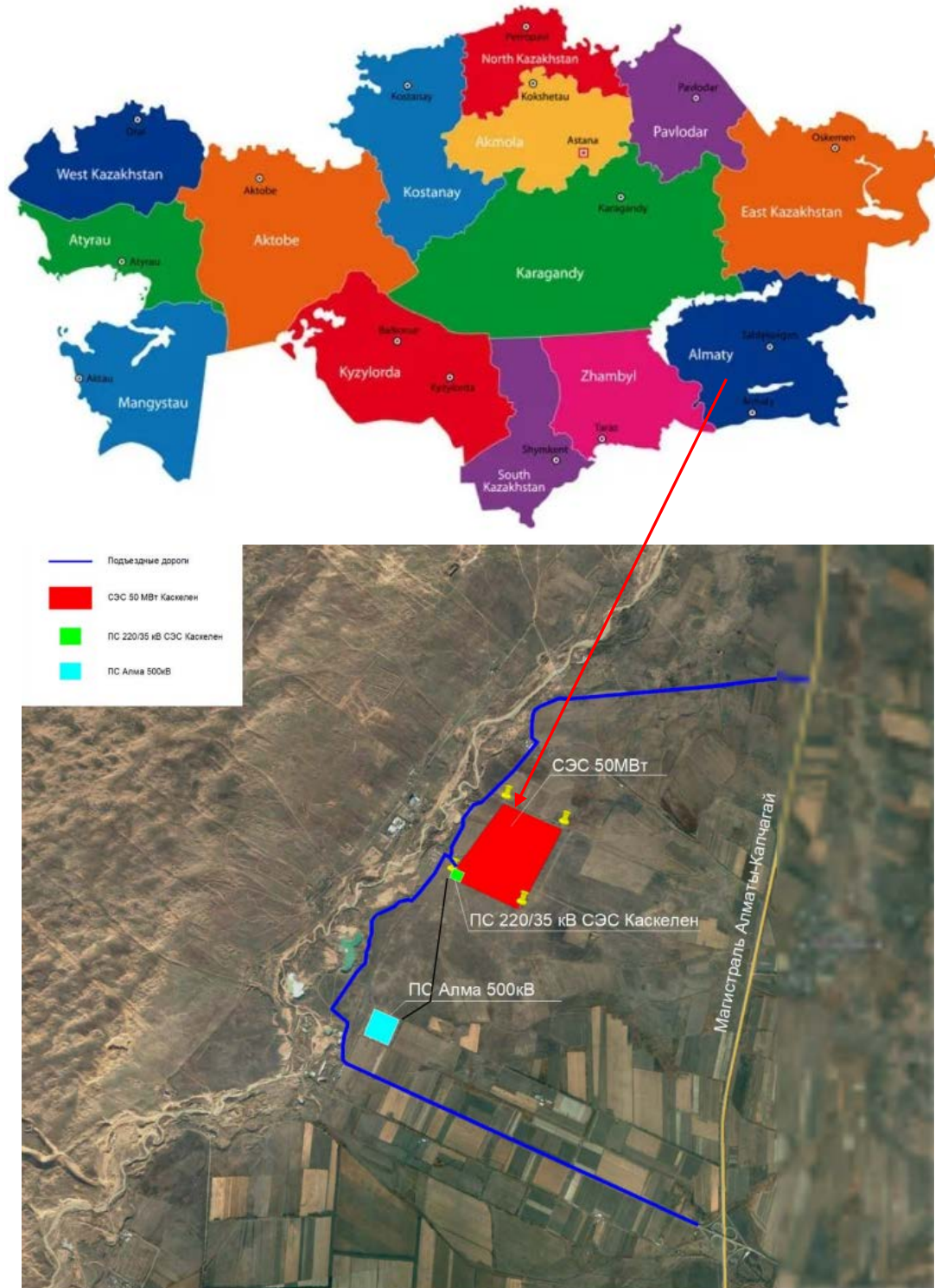


Figure 1 Location of the project

## A.3. Technologies/measures

Grid connected solar PV power generation system mainly consists of Solar PV arrays, DC-to-AC converter (inverter) and substation.

The Project involves installation and operation of 14 PV power generation arrays with a total capacity of 50.83884 MW. Each array has a unit capacity of 3.57MW and is equipped with 2 inverters which has a unit capacity of 1500kW. Electricity generated is transmitted to the onsite 220kV substation through 35kV power line, and then connected to KEGOC.

The electricity meter is installed at the outlet of the onsite 220kV substation to monitor electricity.

The project is expected to supply an annual average of 67,289 MWh of electricity to KEGOC. The expected lifetime of the project is 25 years and the plant load factor of the project during the 25 years' lifetime is 14.49%. The total attenuation ratio of the solar PV module will be lower than 20% by the end of lifetime.

The technical parameters of the project equipment installed is shown in table 1 below.

**Table 1 Technical parameters of Project equipment**

Item		Unit	Value
Solar PV module	Mode	-	CS3U-355P
	Rated Capacity	Wp	355
	Lifetime	Year	25
	Quantity	-	143208
Inverter	Mode	-	CPS SCH1500K
	Rated Capacity	kW	1500
	Lifetime	Year	25
	Quantity	-	28

#### A.4. Project Owner(s)

Location/ Country	Project Owner(s)	Where applicable <sup>7</sup> , indicate if the host country has provided approval (Yes/No)
The project: Republic of Kazakhstan; Project owner: P.R. China	Climate Bridge (Shanghai) Ltd.	No

#### A.5. Declaration of intended use of Approved Carbon Credits (ACCs) generated by the

<sup>7</sup> For example, *Project Coordination Form* is to be filled-in by Project Owners for projects located in Qatar. A written attestation from the host country's national focal point or the focal point's designee, as required by CORSIA (Refer section A.5 of the PSF guidelines).

### Project Activity

The Project Activity is expected to generate ACCs for a full 10-year crediting period and supply the credits to offset the following GHG emissions:

Period		Name of the Entities	Purpose and Quantity of ACCs to be supplied
From	To		
06/08/2020	05/08/2030	To be determined	To be determined

ACCs from the project activity will be used to create additional revenue stream for the investment and for reducing the project financial risks and thus enabling the sustainability of the project. No double counting will occur in the scope of this project since GCC is the only program applied.

#### A.6. Additional requirements for CORSIA

Please see Section E and F.

## Section B. Application of selected methodology(ies)

### B.1. Reference to methodology(ies)

Applied approved GCC methodology: GCCM001 Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers (version 3.0).

Applied CDM tools:

am-tool-01-v7.0.0 Tool for the demonstration and assessment of additionality.

am-tool-24-v03.1 Common practice.

am-tool-27-v11.0 Investment analysis.

Please refer to the following link for applied methodology and tools:

<https://www.globalcarboncouncil.com/standards/baseline-monitoring-methodologies/>

<https://cdm.unfccc.int/Reference/tools/index.html>

### B.2. Applicability of methodology(ies)

The applicability of the applied methodology GCCM001 (version 3.0) is justified below:

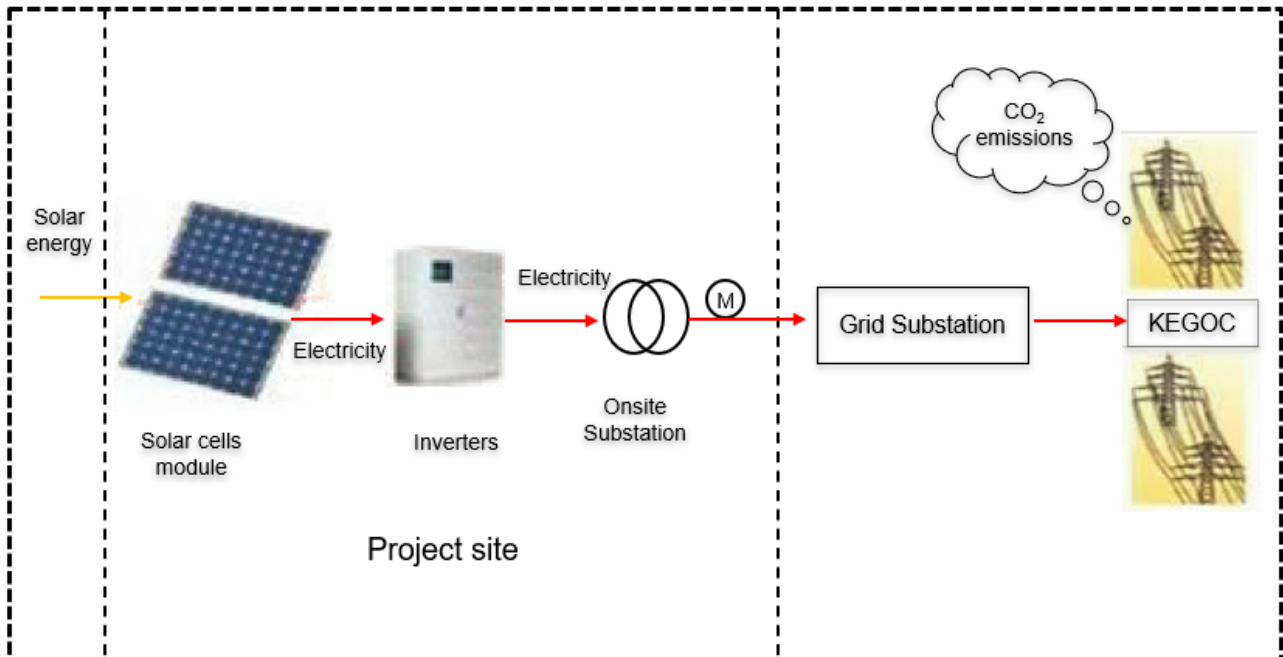
No.	Applicability criteria	Justification
1	The project activities shall employ following renewable energy generation technologies	Applicable. The project employs Solar Photovoltaic power generation technology and supply

	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.	generated electricity to Kazakhstan Electricity Grid Operating Company
2	The project activities can also involve setting up and implementation of a BESS along with the renewable energy generation plant.	Irrelevant. The project does not involve setting up and implementation of a BESS.
3	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.	Irrelevant. The project does not involve setting up and implementation of a BESS.
4	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.	Irrelevant. The project does not involve setting up and implementation of a BESS.
5	The project activities shall not involve combined heat and power (co-generation) systems.	Applicable. The project generates electricity only and does not involve co-generation system.
6	The project activities shall not involve co-firing of fossil fuel of any kind.	Applicable. The project does not involve co-firing of fossil fuel of any kind.
7	The project activities may have consumption of electricity (grid on on-site generation) for site offices.	Applicable. The project may have consumption of electricity (grid on on-site generation) for site offices during maintenance.
8	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.	Irrelevant. The project is a Utility scale power plant (USPP), not DPPs.

<p>9</p>	<p>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.</p>	<p>Irrelevant. The project does not involve setting up and implementation of a BESS.</p>
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**B.3. Project boundary, sources and greenhouse gases (GHGs)**

As per applied methodology GCCM001 (version 3.0), the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the Kazakhstan Electricity Grid Operating Company that the project is connected to.



**Figure 2 Project boundary of the project**

The table below provides an overview of the emissions sources included or excluded from the project boundary for determination of baseline and project emissions.

Source		GHG	Include d?	Justification/Explanation
Baseline	CO <sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity	CO <sub>2</sub>	Yes	The major source of emissions in the baseline
		CH <sub>4</sub>	No	Excluded for simplification. This emission source is assumed to be very small
		N <sub>2</sub> O	No	Excluded for simplification. This emission source is assumed to be very small
Project Activity	Emissions from on-site electricity use in the project activity	CO <sub>2</sub>	No	The quantity of electricity delivered to the project plant/unit from the grid has been deducted from the quantity of electricity supplied by the project plant/unit to the grid when calculating the baseline emission, hence onsite electricity use in the project does not need to be considered as project emission
		CH <sub>4</sub>	No	Excluded for simplification. This emission source is assumed to be very small
		N <sub>2</sub> O	No	Excluded for simplification. This emission source is assumed to be very small

#### B.4. Establishment and description of the baseline scenario

The relevant national and/or sectoral policies, regulations and circumstances are taken into account for the implementation of the project activity.

Implementation of the solar PV power generation project is not enforced by any laws and regulations in Kazakhstan. There are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions of other legally binding mandates requiring its implementation. The project activity is a voluntary action.

As per the latest IEA database<sup>8</sup>, Kazakhstan is still dominated by fossil fuels fired power plant. The fossil fuels fired power plants generated 89.21% of the total electricity in Kazakhstan. Despite the gradual increase in renewable energy sources in power sector, Kazakhstan including KEGOC is still dominated by fossil fuels fired power plant.

As per applied methodology GCCM001 (version 3.0), the baseline scenario of the project 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.

<sup>8</sup> <https://www.iea.org/countries/kazakhstan#analysis>

In absence of the project, equivalent electricity supplied by the project would be generated by power plants connecting to KEGOC and by the addition of new generation sources into KEGOC.

### **B.5. Demonstration of additionality**

As per GCC Project Standard, the GCC applies the following approach for demonstrating additionality, consisting of two components:

- (a) A Legal Requirement Test; and
- (b) An Additionality Test either based on a Positive List test or a projects-specific additionality test.

The proposed project is not enforced by law. The project passes the legal requirement test since there are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions of other legal-binding mandates requiring its implementation. Furthermore, as per para. 46 of Project Standard, voluntary commitments/agreements within a sector or by an entity do not constitute the legal requirement. An Additionality Test is further applied as follows.

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.

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

Define realistic and credible alternatives to the project activity(s) through the following Sub-steps.

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

Alternatives available to the project participant or similar project developers that provide outputs or services comparable with the project activity are identified below:

Alternative (a) The proposed project activity undertaken without being registered as a GCC project activity.

Alternative (b) Continuation of the current situation (no project activity or other alternatives undertaken).

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

Both alternatives (a) and (b) are realistic and credible alternatives to the project which are consistent with mandatory laws and regulations.

#### ***Step 2: Investment analysis***

Investment analysis is conducted by applying CDM tool am-tool-27-v11.0 Investment analysis.

##### ***Sub-step 2a: Determine appropriate analysis method***

The project activity generates benefits from sales of electricity, therefore the simple cost analysis (Option I) is not applicable. Since the Project is a grid-connected solar power project, and the baseline scenario is the provision of equivalent amount of annual electricity by the KEGOC, benchmark analysis (Option III) is selected for the Project.

##### ***Sub-step 2b: Option III. Apply benchmark analysis***

The benchmark analysis has been chosen to demonstrate the additionality of the project. The proposed project uses project IRR as the financial indicator. As per the para 15 of the investment tool, the local commercial lending rate is chosen as the appropriate benchmark for the project IRR.



According to the National Bank of the Republic of Kazakhstan, the bank lending rate at the time of the investment decision (June 2018) was 13.00%<sup>9</sup>. Based on above benchmark, calculation and comparison of financial indicators are carried out in sub-step 2c.

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

Basic parameters for calculation of financial indicators of the Project are shown in Table 2.

**Table 2 Basic parameters of the project IRR calculation**

Parameter	Unit	Value
Installed capacity	MW	50
Annual electricity supply (lifetime average)	MWh	63,464.33
Construction Period	Year	1
Operation period	Year	25
Static investment	KZT	1,363,560,000
Working Capital	KZT	6,000,000
Tariff (incl VAT)	KZT/MWh	28,896
VAT rate	%	12%
Income tax rate	%	0% (year 2-11) 20% (year 12-26)
Depreciation period	Year	20
Depreciation rate	%	4.75%
Residual value ratio (of fixed asset)	%	5%
Annual O&M cost (lifetime average)	KZT	187,876,680
Maintenance fee rate (of fixed asset)	%	0.25%
Insurance fee rate (of fixed asset)	%	0.28%
Material fee	KZT /kW	600
Other fees	KZT /kW	900
Staff	Person	12
Average annual salary	KZT /P	2,400,000

<sup>9</sup> <https://www.ceicdata.com/en/indicator/kazakhstan/bank-lending-rate>

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Rate of employee welfare (of annual salary)	%	41%
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The input values of all financial analysis are derived from Feasibility Study Report (FSR) for the project. 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.

Based on the data above, without the revenue from carbon credit sales, the project IRR is 9.58%, which is lower than the benchmark (13%). The Project is not financially attractive.

**Sub-step 2d: Sensitivity analysis**

As per CDM tool am-tool-27-v11.0 Investment analysis, variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation. For the Project, the following financial parameters were taken as uncertain factors for sensitive analysis of financial attractiveness:

- Total static investment
- Annual OM cost
- Annual electricity supply
- Tariff

The variation range of -10%~10% which was employed in the approved FSR and prevailing in Kazakhstan was used. The results of sensitivity analysis of the four parameters of the proposed project are shown in the following table and figure:

**Table 3 Sensitivity analysis (without carbon credit revenues)**

Item	The Project				
	-10%	-5%	0	5%	10%
Total static investment	11.10%	10.30%	9.58%	8.91%	8.30%
Annual electricity supply	8.06%	8.83%	9.58%	10.32%	11.05%
Annual OM cost	9.74%	9.66%	9.58%	9.49%	9.41%
Tariff	8.06%	8.83%	9.58%	10.32%	11.05%

In conclusion, the investment analysis and sensitivity analysis show that the project undertaken without carbon credit revenue is not financially attractive and the ACC revenue will improve the financial indicators of the Project.

**Step 3: Barrier analysis**

The proposed project does not employ the barrier analysis.

**Step 4: Common practice analysis**

Common practice analysis is carried out as per CDM tool am-tool-24-v03.1 Common practice.

***Sub-step 4a: The proposed project activity(ies) applies measure(s) that are listed in the definitions section above***

The project is a renewable solar power project, which adopts type (ii) measure listed in the Methodological tool: Tool for the demonstration and assessment of additionality. As per additionality tool, am-tool-24-v03.1 Common practice is applied as below:

***Sub-Step 4a-1: calculate applicable capacity or output range as +/-50% of the total design capacity or output of the proposed project activity.***

The installed capacity of the project is 50MW, therefore the applicable capacity range is 25 MW to 75 MW.

***Sub-Step 4a-2: identify similar projects (both GHG program and non-GHG program) which fulfil all of the following conditions:***

(a) The projects are located in the applicable geographical area;

The project is in Kazakhstan, thus the host country, i.e. Kazakhstan has been considered as the applicable geographical area of this project.

(b) The projects apply the same measure as the proposed project activity;

The project adopts type (ii) measure, therefore only type (ii) measure is included.

(c) The projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity;

The project is a solar PV power project, therefore only solar PV power projects are included.

(d) The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant;

The project is a solar PV power project, which supply electricity to KEGOC, therefore only grid-connected solar PV power projects are included.

(e) The capacity or output of the projects is within the applicable capacity or output range calculated in Sub-Step 4a-1;

Projects with installed capacity within the range of 25 MW to 75 MW are included.

(f) The projects started commercial operation before the project submission form is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity

Projects started commercial operation before the start date of the project are included. As per Clarification No. 1 issued by GCC, the start date in common practice analysis shall be as per CDM definition. The EPM (Engineering, Procurement and Management) contract of the project was signed on 12/06/2019, which is the earliest date on which the project participant's expenditures incurred for the construction of the project. Therefore, the start date of the project applied in the common practice analysis as defined in the am-tool-24-v03.1 is 12/06/2019.

In conclusion, grid-connected solar PV power projects started operation before 12/06/2019 with installed capacity between 25 MW to 75 MW in Kazakhstan are selected for common practice analysis.

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According to publicly available information, all similar projects which fulfil all of the conditions above are listed below:

No.	Project title	Installed capacity (MW)	Operation time	Seeking for carbon revenue?
1	Burnoye solar power plant	50	2015	No
2	Burnoye Solar Plant Extension	50	2018	No

**Sub-Step 4a-3: within the projects identified in Sub-Step 4a-2, identify those that are neither registered GHG program project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number  $N_{all}$ .**

As per the project list identified above, all grid-connected solar PV power projects started operation before 12/06/2019 with installed capacity between 25MW to 75MW in Kazakhstan are neither carbon registered project activities, nor project activities undergoing validation, therefore  $N_{all}=2$ .

**Sub-Step 4a-4: within similar projects identified in Sub-Step 4a-3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number  $N_{diff}$ .**

As the early large-scale photovoltaic power projects in Kazakhstan, No 1<sup>10</sup> and No 2<sup>11</sup> projects received funding from the European Bank for Reconstruction and Development and the Clean Technology Fund. The loan interest rate of the two projects is only 1.25%, much lower than the project of 14.76%<sup>12</sup>. Therefore,  $N_{diff}=2$ .

**Sub-Step 4a-5: calculate factor  $F=1-N_{diff}/N_{all}$  representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.**

Since  $N_{all} = 2$ ,  $N_{diff}=2$ , therefore,  $N_{all} - N_{diff} = 0$ , which is less than 3.

$F=1-N_{diff}/N_{all}=1-1=0$ , which is less than 0.2.

As per am-tool-24-v03.1 Common practice, the project is not the common practice in Kazakhstan.

In conclusion, the project activity is not financially feasible and not a common practice, therefore the project is additional.

## B.6. Estimation of emission reductions

### B.6.1. Explanation of methodological choices

#### Baseline emissions

<sup>10</sup> <https://www.ebrd.com/work-with-us/projects/psd/burnoye-solar-power-plant.html>

<sup>11</sup> <https://www.ebrd.com/work-with-us/projects/psd/burnoye-solar-plant-extension.html>

<sup>12</sup> <https://www.kdb.kz/en/projects/on-financing/>

As per GCCM001 (version 3.0), Baseline emissions include only CO<sub>2</sub> emissions from electricity generation in power plants that are displaced due to the project activity. The baseline emissions are to be calculated as follows:

$$BE_y = EG_{PJ,y} \times EF_{grid,y} \quad \text{Equation (1)}$$

Where:

- $BE_y$  = Baseline emissions in year  $y$  (t CO<sub>2</sub>)
- $EG_{PJ,y}$  = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the GCC project activity in project year  $y$  (MWh)
- $EF_{grid,y}$  = CO<sub>2</sub> emission factor for grid connected power generation in year  $y$  (tCO<sub>2</sub>/MWh)

According to the GCCM001 (version 3.0),  $EF_{grid,y}$  is determined as per one of the four options below:

(i) Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year  $y$  calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (t CO<sub>2</sub>/MWh) of the CDM; Or

(ii) Latest available emission factor of the Grid in a country as approved by CDM standardized baseline Or

(iii) Latest available emission factor of the Grid in a country as approved by its relevant National Authority or Designated National Authority (DNA) under CDM or UNFCCC focal point, in case DNA doesn't exist. Or

(iv) Latest IFI combined margin emission factors published on UNFCCC website. Or

(v): Latest published Emission factor derived by International Energy Agency (IEA) (This option can be used only if it is objectively demonstrated that options (i), (ii) and (iii) above are not available)

Based on the public data, it is not available to obtain the data that used to calculate the  $EF_{grid,y}$  using the latest version of the “Tool to calculate the emission factor for an electricity system”, otherwise, there is no available emission factor of the Grid in Kazakhstan as approved by CDM standardized baseline and available emission factor of the Grid in Kazakhstan as approved by its relevant National Authority or Designated National Authority (DNA).

The project chooses option (iv) to determine  $EF_{grid,y}$ . According to the IFI database<sup>13</sup>, the latest  $EF_{grid,y}$  of Kazakhstan is 0.6978 tCO<sub>2</sub>/MWh.

## Project emissions

As per GCCM001 (version 3.0), project emission of the project equals to 0.

## Leakage emissions

<sup>13</sup><https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twg-list-of-methodologies>

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As per GCCM001 (version 3.0), no leakage emissions are anticipated under this methodology.

**Emission reductions**

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y \quad \text{Equation (2)}$$

Where:

- $ER_y$  = Emission reductions in project year  $y$  (t CO<sub>2</sub>)
- $BE_y$  = Baseline emissions in project year  $y$  (t CO<sub>2</sub>)
- $PE_y$  = Project emissions in project year  $y$  (t CO<sub>2</sub>)
- $LE_y$  = Leakage emissions in project year  $y$  (t CO<sub>2</sub>)

Since both  $PE_y$  and  $LE_y$  equals to 0,  $ER_y = BE_y$ .

**B.6.2 Data and parameters fixed ex ante**

**Data / Parameter Table 1.**

<b>Data / Parameter:</b>	<b>EF<sub>grid,y</sub></b>
Methodology reference	GCCM001 (version 3.0)
Data unit	tCO <sub>2</sub> /MWh
Description	CO <sub>2</sub> emission factor of Kazakhstan
Measured/calculated /default	Default
Data source	The IFI Dataset of Default Grid Factors (v.3.2)
Value(s) of monitored parameter	0.6978
Measurement/ Monitoring equipment (if applicable)	-
Measuring/reading/ recording frequency (if applicable)	Ex-ante determined and fixed for the crediting period.
Calculation method (if applicable)	-
QA/QC procedures	Default data from IFI Dataset
Purpose of data	Baseline emission calculation
Additional comments	-

### B.6.3. Ex-ante calculation of emission reductions

Based on section B.6.1 above,  $ER_y = BE_y = EG_{P,J,y} \times EF_{grid,y}$ .

As per FSR of the project, the annual electricity supplied to the grid is shown in the table below. The grid emission factor of KEGOC is 0.6978 tCO<sub>2</sub>/MWh, therefore baseline emission of the project is calculated as follows:

Year	$EG_{P,J,y}$ (MWh)	$EF_{grid,y}$ (t CO <sub>2</sub> e/MWh)	Baseline Emissions (t CO <sub>2</sub> e)
06/08/2020-05/08/2021	70,995.54	0.6978	49,540
06/08/2021-05/08/2022	68,865.67	0.6978	48,054
06/08/2022-05/08/2023	68,368.71	0.6978	47,707
06/08/2023-05/08/2024	67,871.74	0.6978	47,360
06/08/2024-05/08/2025	67,374.77	0.6978	47,014
06/08/2025-05/08/2026	66,877.80	0.6978	46,667
06/08/2026-05/08/2027	66,380.83	0.6978	46,320
06/08/2027-05/08/2028	65,883.86	0.6978	45,973
06/08/2028-05/08/2029	65,386.89	0.6978	45,626
06/08/2029-05/08/2030	64,889.92	0.6978	45,280
<b>Total</b>	672,895.73	-	469,541

### B.6.4. Summary of ex ante estimates of emission reductions

Year	Baseline emissions (t CO <sub>2</sub> e)	Project emissions (t CO <sub>2</sub> e)	Leakage (t CO <sub>2</sub> e)	Emission reductions (t CO <sub>2</sub> e)
06/08/2020-05/08/2021	49,540	0	0	49,540
06/08/2021-05/08/2022	48,054	0	0	48,054
06/08/2022-05/08/2023	47,707	0	0	47,707
06/08/2023-05/08/2024	47,360	0	0	47,360
06/08/2024-05/08/2025	47,014	0	0	47,014
06/08/2025-05/08/2026	46,667	0	0	46,667
06/08/2026-05/08/2027	46,320	0	0	46,320
06/08/2027-05/08/2028	45,973	0	0	45,973
06/08/2028-05/08/2029	45,626	0	0	45,626
06/08/2029-05/08/2030	45,280	0	0	45,280
<b>Total</b>	469,541	0	0	469,541
<b>Total number of crediting years</b>	10			
<b>Annual average over the crediting period</b>	46,954	0	0	46,954

### B.7. Monitoring plan

**B.7.1. Data and parameters to be monitored****Data / Parameter Table 2.**

<b>Data / Parameter:</b>	<b><math>EG_{P,J,y}</math></b>														
Methodology reference	GCCM001 (version 3.0)														
Data unit	MWh														
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y														
Measured/calculated/default	Measured and calculated														
Data source	Bidirectional Electricity meter(s)														
Value(s) of monitored parameter	Annual average of 67,289 MWh during the fixed 10-year crediting period (ex-ante estimated)														
Measurement/ Monitoring equipment	<table border="1"> <tr> <td colspan="2">Electricity meter</td> </tr> <tr> <td>Type of meter</td> <td>A1802RAL-P4GB-DW-4</td> </tr> <tr> <td>Location of meter</td> <td>onsite 220kV substation</td> </tr> <tr> <td>Accuracy of meter</td> <td>0.2S</td> </tr> <tr> <td>Serial number of meter</td> <td>01334459</td> </tr> <tr> <td>Calibration frequency</td> <td>Every six years</td> </tr> <tr> <td>Calibration Status</td> <td>Calibrated</td> </tr> </table>	Electricity meter		Type of meter	A1802RAL-P4GB-DW-4	Location of meter	onsite 220kV substation	Accuracy of meter	0.2S	Serial number of meter	01334459	Calibration frequency	Every six years	Calibration Status	Calibrated
Electricity meter															
Type of meter	A1802RAL-P4GB-DW-4														
Location of meter	onsite 220kV substation														
Accuracy of meter	0.2S														
Serial number of meter	01334459														
Calibration frequency	Every six years														
Calibration Status	Calibrated														
Measuring/reading/ recording frequency	Continuous monitoring, hourly measurement and at least monthly recording														
Calculation method (if applicable)	This parameter is to be calculated as difference between (a) the quantity of electricity supplied by the project plant to the grid; and (b) the quantity of electricity delivered to the project plant from the grid. Both (a) and (b) are to be measured by bi-directional electricity meters installed at the outlet of the onsite 220kV substation														
QA/QC procedures	The calibration of meters, including the frequency of calibration, should be done in accordance with national standards or requirements set by the meter supplier or requirements set by the grid operators. The accuracy class of the meters should be in accordance with the stipulation of the meter supplier and/or as per the requirements set by the grid operators or national requirements.														
Purpose of data	Baseline emission calculation														
Additional comments	-														

**B.7.2 Monitoring-program of risk management actions**

The monitoring approach and the monitoring parameters corresponding to each impact described in section E and section F of the PSF have been detailed as follows:



<b>Data / Parameter:</b>	<b>CO<sub>2</sub> emissions</b>						
Objective of the Program of Risk Management Actions	<b>Program of Risk Management Actions for CO<sub>2</sub> emissions (PRMA 01)</b>						
Purpose	To monitor an environmental impact identified as Harmless in the risk assessment and to develop a Program of Risk Management Actions plan to address the risk of <b>PRMA 01</b>						
Describe the environment /social impact risk that needs to be mitigated.	The project reduces the CO <sub>2</sub> emission by power generation using renewable solar energy, replacing equivalent electricity generated by the connected power grid						
Describe the actions and targets that will be implemented to ensure that the Project Activity will avoid negative impacts that cause harm.	CO <sub>2</sub> emissions reduction will be monitored and calculated						
Program of Risk Management Actions to achieve the target(s):	S. No.	Action and targets	Responsibility	Resource Requirement	Target to be Achieved by (insert date)	Key Performance Indicators (KPI)	Targets achieved on (insert date)
	1	Monitoring and calculation of CO <sub>2</sub> emission reduction	Mistral Energy LLP	-		CO <sub>2</sub> emission reduction	To be monitored
	Date of Closing the Program:				Through the project lifetime.		
QA/QC procedures:	The details of CO <sub>2</sub> emissions reduction will be maintained in records for future verification.						
Describe whether the Project Activity has achieved the targets set out in this Program of Risk Management Actions. If yes, describe the outcome(s).	To be monitored						

<b>Data / Parameter:</b>	<b>Number of people/women employed by the project</b>						
Objective of the Program of Risk Management Actions	<b>Program of Risk Management Actions for Long-term jobs (&gt; 1 year) created/ lost (PRMA 02)</b>						

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Purpose	To monitor a social impact identified as Harmless in the risk assessment and to develop a Program of Risk Management Actions plan to address the risk of <b>PRMA 02</b>						
Describe the environment /social impact risk that needs to be mitigated.	The project is expected to provide long-term job opportunities. Woman will be given equal job opportunities as man.						
Describe the actions and targets that will be implemented to ensure that the Project Activity will avoid negative impacts that cause harm.	Employment will be generated due to project activity						
Program of Risk Management Actions to achieve the target(s):	S. No.	Action and targets	Responsibility	Resource Requirement	Target to be Achieved by (insert date)	Key Performance Indicators (KPI)	Targets achieved on (insert date)
	1	Long-term Jobs will be provided	Mistral Energy LLP	-		Number of people employed by the project	To be monitored
	2	Woman will be employed by the project	Mistral Energy LLP	-		Number of women employed by the project	To be monitored
	Date of Closing the Program:		Through the project lifetime.				
QA/QC procedures:	The details of employment records or the social insurance payment records of employees will be maintained in records for future verification.						
Describe whether the Project Activity has achieved the targets set out in this Program of Risk Management Actions. If yes, describe the outcome(s).	To be monitored						

<b>Data / Parameter:</b>	<b>Job related Training</b>
Objective of the Program of Risk Management Actions	<b>Program of Risk Management Actions for Job related training imparted or not (PRMA 03)</b>
Purpose	To monitor a social impact identified as Harmless in the risk assessment and to develop a Program of Risk Management Actions plan to address the risk of <b>PRMA 03</b>

Describe the environment /social impact risk that needs to be mitigated.	The project owner provides job related training for all employees						
Describe the actions and targets that will be implemented to ensure that the Project Activity will avoid negative impacts that cause harm.	Job related Training will be monitored						
Program of Risk Management Actions to achieve the target(s):	S. No.	Action and targets	Responsibility	Resource Requirement	Target to be Achieved by (insert date)	Key Performance Indicators (KPI)	Targets achieved on (insert date)
	1	Job related Training to be provided	Mistral Energy LLP	-		Job related Training provided	To be monitored
	Date of Closing the Program:		Through the project lifetime.				
QA/QC procedures:	The Job-related Training records will be maintained in records for future verification.						
Describe whether the Project Activity has achieved the targets set out in this Program of Risk Management Actions. If yes, describe the outcome(s).	To be monitored						

### B.7.3. Sampling plan

Not applicable.

### B.7.4. Other elements of the monitoring plan

The monitoring plan presented in this report assures that real, measurable, long-term GHG emission reductions can be monitored, recorded and reported. It is a crucial procedure to identify the final ACC of the project. This monitoring plan will be implemented by the project owner during the project operation. The details of the monitoring plan are specified as follows:

#### Data and parameters to be monitored

The parameter to be monitored is Quantity of net electricity generation supplied by the project plant/unit to the grid, which is calculated as difference between (a) the quantity of electricity supplied

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by the project plant to the grid and (b) the quantity of electricity delivered to the project plant from the grid.

Both (a) and (b) are to be continuously measured by one bi-directional electricity meter installed at the outlet of onsite 220kV substation. Meter readings will be at least monthly recorded. The accuracy of electricity meter is 0.2S, and the meter will be calculated regularly.

### **Management Structure**

The Project owner organizes a specific monitoring team to be responsible for data collection, supervision and witness the whole process of data measuring and recording. Monitoring manager is appointed to take full responsibility for the overall monitoring of the project. The monitoring, recording of electricity meters is to be carried out by designated monitoring staff. In addition, the Project developer appoints internal verifiers who is responsible for internal check of the measurement, collection of relevant sales receipts, and the calculation of the emission reductions.

### **Data collection**

Monitoring staffs of the proposed project are responsible for data collection. Designated teams will read and collect the monitored data regularly and recorded in the meter reading records or operation log. The meter readings are also available to the power grid through remote reading system. Monthly settlement for electricity supplied to the grid will be based on the meter readings. Meter reading records will serve as the main data source for emission reductions calculation, after crosschecking with the sales receipts. All data files, relevant sales receipts will be collected by designated monitoring staff, who will prepare backup in time and archive all documents properly.

### **Quality assurance**

The electricity meter installed shall follow the requirements of national industry standard to ensure sufficient accuracy and proper calibration. The electricity meter of the project is installed at the outlet of 220kV onsite substation, the accuracy of electricity meter is 0.2S, and the calibration shall be carried out regularly.

Error check routines will be established on site and at the point of data storage to detect data measuring/transmission failures as well as malfunctions. 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.

### **Data file management**

All monitoring data will be electronically filed by the end of each month and the electronic data files will be archived in both disk copy and printed hard copy. Other documents in paper e.g., operation logbooks, will be preserved as well. All data collected as part of monitoring will be archived electronically and be kept at least for 2 years after the end of the crediting period.

## **Section C. Start date, crediting period type and duration**

### **C.1. Start date of the Project Activity**

06/08/2020 (Operation start date of the project. As per the Act of acceptance of the facility into operation, the project started operation since 06/08/2020)

## **C.2. Expected operational lifetime of the Project Activity**

25 years

## **C.3. Crediting period of the Project Activity**

### **C.3.1. Fixed crediting period**

Fixed crediting period.

### **C.3.2. Start date of the crediting period**

06/08/2020 (Operation start date)

### **C.3.3. Duration of the crediting period**

10 years, from 06/08/2020 to 05/08/2030.

## Section D. Environmental impacts

### D.1. Analysis of environmental impacts

The potential environmental impacts by the project during operation are analyzed below:

#### Air pollution

Solar power generation converts solar energy into electric energy, and there is no exhaust gas emission during the conversion process. During the operation period, the project does not have heat sources such as boilers and uses electric heaters for heating, so no exhaust gas emissions are involved.

#### Water pollution

The wastewater generated during the operation period is solar panels cleaning wastewater. The solar panels cleaning wastewater mainly includes dust, which does not require treatment. It is used for sprinkling on the road in the project site, inhibiting the generation of dust, and partly used for the greening of the project site.

#### Noise

The main noise during the operation period is the noise generated by inverters and boosters. The noise source intensity is generally less than 50dB (A). After distance attenuation, there is basically no noise contribution to the surrounding boundary during the project production, and it has little influence on the boundary acoustic environment.

#### Solid waste

The solid waste during the operation period mainly includes solid waste generated from the operation and decommissioning of the solar power station. The solid waste generated during the operation period of the solar power station is waste capacitors, reactors, transformers and photovoltaic module, which are first piled up in a temporary storage warehouse, and then periodically recycled by the manufacturer for disposal. The solid waste generated after the decommissioning is waste equipment and waste solar panels, which are recycled and processed by the manufacturer.

In conclusion, the environmental impact during the project operation will be minor. The Project owner has taken appropriate measures to minimize adverse environmental impacts.

### D.2. Environmental impact assessment

Environmental impact assessment (EIA) of the project was conducted by KAZAKH Institute Of Oil And Gas in 2019, who has been retained by the project proponent for the support in the environmental permitting for the construction and operation of the project.

The EIA report has identified all possible environmental impacts by the project and recommended proper measures to minimize adverse environmental impacts, which have been fully described in

section D.1 above. The project approval from the government official state that all the environmental protection measures recommended in the EIA reports shall be adopted by the project to ensure that all environmental impacts and pollutants emissions comply with national standards and regulations. Environment supervision team from the local Environment Protection Bureau will conduct spot check on the project's implementation of environmental protection measures periodically.

## **Section E. Environmental and social safeguards**

**E.1. Environmental safeguards**

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards										Project Owner's 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		
				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	
<b>Environmental impacts on the identified categories<sup>14</sup> indicated below.</b>	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 <b>Not Applicable</b> (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 <b>Harmless</b> (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 <b>Harmful</b> (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 <b>Harmful</b> .	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 <b>Harmful</b> .	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 <b>Harmless</b> (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 <b>Yes</b> or and -1 for <b>No</b> )	
<b>Environmental Safeguards</b>													
Environment - Air	SO <sub>x</sub> emissions	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
	NO <sub>x</sub> emissions	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
	CO <sub>2</sub> emissions	The project reduces CO <sub>2</sub> emissions since it	N.A.	The project reduces CO <sub>2</sub> emissions in the baseline;	-	-	N.A.	N.A.	N.A.	The electricity generated will be	The project is expected to result in lower CO <sub>2</sub>	+1	

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



		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.		hence the project will not cause any harm in this regard						monitored and CO <sub>2</sub> emission reductions will be calculated accordingly	emission than the baseline throughout the crediting period	
	<i>CO emissions</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Suspended particulate matter (SPM) emissions</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Fly ash emissions</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Non-Methane Volatile Organic Compounds (NMVOCs)</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Odor emissions</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Noise Pollution</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Environment - Land</b>	<i>Solid waste Pollution from Plastics</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Solid waste Pollution from Hazardous wastes</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Solid waste Pollution from Bio-medical wastes</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Solid waste Pollution from E-wastes</i>	No E-wastes are to be generated by the project	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Solid waste Pollution from Batteries</i>	No batteries are used by the project	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

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	<i>Solid waste Pollution from end of life products/ equipment</i>	Solid waste pollution from end-of-life equipment may be generated by the project.	Law of the Republic of Kazakhstan on the "Sanitary and epidemiological requirements for the collection, use, use, neutralization, transportation, storage and disposal of industrial and consumer waste" requires proper treatment of solid waste	-	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	-	N.A.	N.A.	N.A.	Monitor the treatment of Solid waste pollution from end-of-life equipment throughout the entire crediting period, if any.	This parameter will not be scored.	N.A.
	<i>Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury)</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Soil erosion</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Environment - Water</b>	<i>Reliability/ accessibility of water supply</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Water Consumption from ground and other sources</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Generation of wastewater</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Wastewater discharge without/with insufficient treatment</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

	<i>Pollution of Surface, Ground and/or Bodies of water</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Environment – Natural Resources</b>	<i>Conserving mineral resources</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Protecting/enhancing plant life</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Protecting/enhancing species diversity</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Protecting/enhancing forests</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Protecting/enhancing other depletable natural resources</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Conserving energy</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Replacing fossil fuels with renewable sources of energy</i>	The project utilizes renewable solar energy to generate electricity, which will replace the electricity generated by fossil fuel plants of KEGOC	N.A.	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
	<i>Replacing ODS with non-ODS refrigerants</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

**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.

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<b>Net Score:</b>	<b>+2</b>
<b>Project Owner's Conclusion in PSF:</b>	The Project Owner confirms that the Project Activity will not cause any net harm to the environment.

## E.2. Social Safeguards

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards										Project Owner's 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		
				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	
<b>Social impacts on the identified categories<sup>15</sup> indicated below.</b>	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 <b>Not Applicable</b> (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 <b>Harmless</b> (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 <b>Harmful</b> (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 <b>Harmful</b> .	Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., construction of creche for workers) that will be adopted to reduce the risk of impacts that have been identified as <b>Harmful</b> .	Re-evaluate risks after Risk Mitigation Actions plans have been developed (refer to previous two columns) for impacts that have been identified as <b>Harmful</b> . Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as <b>Harmless</b> (No actions required)	Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as <b>Harmful</b> 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 <b>Yes</b> or and -1 for <b>No</b> )	
<b>Social Safeguards</b>													
<b>Social - Jobs</b>	Long-term jobs (> 1 year) created/ lost	The project is expected to create 12 long-term job opportunities	All employments are done according to the national employment regulation	N.A.	-	-	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	

<sup>15</sup> sourced from the CDM SD Tool and the sample reports are available ( <https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx> )

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	<i>New short-term jobs (&lt; 1 year) created/ lost</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Sources of income generation increased / reduced</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Social - Health &amp; Safety</b>	<i>Disease prevention</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Reducing / increasing accidents</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Reducing / increasing crime</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Reducing / increasing food wastage</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Reducing / increasing indoor air pollution</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Efficiency of health services</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Sanitation and waste management</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Other health and safety issues</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Social - Education</b>	<i>Job related training imparted or not</i>	The project owner provides job related training for employees	No regulation	-	The project provides job related training for employees; hence it is harmless	-	N.A.	N.A.	N.A.	Check training records	Job related training can be confirmed by training records	+1
	<i>Educational services improved or not</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

	<i>Project-related knowledge dissemination effective or not</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Other educational issues</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Social - Welfare</b>	<i>Improving/deteriorating working conditions</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Community and rural welfare</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Poverty alleviation (more people above poverty level)</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Improving / deteriorating wealth distribution/ generation of income and assets</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Increased or / deteriorating municipal revenues</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Women's empowerment</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Reduced / increased traffic congestion</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	<i>Other social welfare issues</i>	N.A.	N.A.	N.A.	-	-	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

**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.

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<b>Net Score:</b>	<b>+2</b>
<b>Project Owner's Conclusion in PSF:</b>	The Project Owner confirms that the Project Activity will not cause any net harm to society.



## Section F. United Nations Sustainable Development Goals (SDG)

UN-level SDGs	UN-level Target	Declared Country-level SDG	Defining Project-level SDGs					Project Owner(s)'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?
<p><b>Describe UN SDG targets and indicators</b></p> <p>See: <a href="https://unstats.un.org/sdgs/indicators/indicators-list/">https://unstats.un.org/sdgs/indicators/indicators-list/</a></p>	Describe the UN-level target(s) and corresponding indicator no(s)	Has the host country declared the SDG to be a national priority? Indicate Yes or No	<p>Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope.</p> <p><b>For guidance see:</b> Integrating the SDGs into Corporate Reporting- A Practical Guide: <a href="https://www.unglobalcompact.org/docs/publications/Practical_Guide_SDG_Reporting.pdf">https://www.unglobalcompact.org/docs/publications/Practical_Guide_SDG_Reporting.pdf</a></p> <p>Case-study from Coca-Cola and other organizations to develop organization-wide SDGs (page 114): <a href="https://pub.iqes.or.jp/pub/realising-transformative-potential-sdgs">https://pub.iqes.or.jp/pub/realising-transformative-potential-sdgs</a></p>	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)
<b>Goal 1: End poverty in all its forms everywhere</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Goal 3. Ensure healthy lives and</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

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<b>promote well-being for all at all ages</b>									
<b>Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Goal 5. Achieve gender equality and empower all women and girls</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Goal 6. Ensure availability and sustainable management of water and sanitation for all</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all</b>	SDG Target 7.2	Yes	The project generates electricity from the sustainable and renewable solar source and contributes to increase the share of renewables in the global energy mix	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
<b>Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b>	SDG Target 8.5	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	Check employment records or payroll of employees. Please refer to PRMA 02 in section B.7.2	Project owner employs people according to the regulations. Social security payments are done regularly	Yes
<b>Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

<b>Goal 10. Reduce inequality within and among countries</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
<b>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
<b>Goal 12. Ensure sustainable consumption and production patterns</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
<b>Goal 13. Take urgent action to combat climate change and its impacts</b>	SDG 13.3	Target	Yes	Project activity generates renewable electricity and mitigates the CO <sub>2</sub> emissions which would have been generated from the fossil fuelbased 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 <sub>2</sub> emission annually	Since the project uses solar energy, there is no GHG emissions related to the project activity. It avoids 46,954 tCO <sub>2</sub> emission annually	Calculate avoided GHG emissions periodically.	Project owner operates the plant since 2020 and complies with targeted SDGs so far.	Yes
<b>Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
<b>Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
<b>Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to</b>	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	

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justice for all and build effective, accountable and inclusive institutions at all levels									
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
<b>SUMMARY</b>						<b>Targeted</b>		<b>Likely to be Achieved</b>	
Total Number of SDGs						3		3	
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF						Silver		Silver	

## Section G. Local stakeholder consultation

### G.1. Modalities for local stakeholder consultation

The local stakeholders were identified as government officials, social organizations and local residents. Invitations to the LSC meeting were sent out ten days before the stakeholder meeting by means of phone calls, SMS, postal mails, etc. Details of the stakeholder consultation, e.g. project information, environmental and social impacts, carbon credit program, contact information of project developer, public stakeholder consultation process, channels to receive stakeholder comments, etc. have been made publicly available on the public notice board outside the government office and local communities.

The local stakeholder consultation meeting was held on 10/09/2019. 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.

The following questions were asked in the questionnaires:

1. Are you aware of the project?
2. Do you support the implementation of the project?
3. What impact do you think the project will cause to the local employment?
4. What's the net impact on the environment during operation?
5. What impact do you think the project will cause to the local social community?
6. What is the most probable environmental impact by the project, in your opinion? (Multiple choice)
7. Any negative impact on your life and work by the project?
8. Any other comments?

Comments from the 25 questionnaires have been summarized in section G.2 below.

### G.2. Summary of comments received

#### Summary of the LSC:

In general, the survey shows that local stakeholders are supportive of the project implementation. Most local stakeholders think the Project will provide more employment opportunities, help local economic development without much adverse environmental impact. Details are shown as follows.

No.	Questions	Attitude or Opinion	Amount	Percentage
1	Are you aware of the project	Very much	19	76%

Project Submission Form

	activity?	Heard of	4	16%
		No	2	8%
2	Do you support the implementation of the project	Yes	22	88%
		No	0	0
		Indifferent	3	12%
3	What impact do you think the project will cause to the local employment?	Positive	21	84%
		Negative	0	0
		Don't know	4	16%
4	What impact do you think the project will cause to the local economic development?	Positive	22	88%
		Negative	0	0
		Don't know	3	12%
5	What impact do you think the project will cause to the local social community?	Positive	20	80%
		Negative	0	0
		Don't know	5	20%
6	What is the most probable environmental impact by the project, in your opinion? (Multiple choice)	None	19	76%
		Air pollution	0	0
		Water pollution	0	0
		Noise pollution	0	0
		Solid Waste pollution	0	0%
		Don't know	6	24%
7	Any negative impact on your life and work by the project?	Yes	0	0
		No	23	92%

		Indifferent	2	8%
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### G.3. Consideration of comments received

According to the stakeholder consultation processes, it is clear that the stakeholders are in favor of the development of the project activity. No additional comment and concerns was raised from any of the stakeholders.

## Section H. Approval and authorization

As per the guideline available in this regard, submission of Host Country Attestation (HCA) on Double Counting as and when required by CORSIA. For carbon credits generated during 01/01/2016 to 31/12/2020, HCA is not required for CORSIA labeled credits.

## Appendix 1. Contact information of project owners

<b>Organization name</b>	Climate Bridge (Shanghai) Ltd.
<b>Country</b>	P.R. China
<b>Address</b>	Block B, Level 24, Jiangong Mansion, 33 Fushan Road, Pudong New Area, Shanghai
<b>Telephone</b>	+86 021 6246 2036
<b>Fax</b>	-
<b>E-mail</b>	projects@climatebridge.com
<b>Website</b>	www.climatebridge.com
<b>Contact person</b>	Gao Zhiwen

## Appendix 2. Affirmation regarding public funding

No public funding for the proposed project.

## Appendix 3. Applicability of methodology(ies)

Applicability of methodology has been discussed in section B.2. No further information is required.

## Appendix 4. Further background information on ex ante calculation of emission reductions

Not applicable. Ex-ante calculation of emission reductions has been detailed in section B.6, no further information is required.

## Appendix 5. Further background information on monitoring plan

Monitoring plan has been detailed in section B.7. No further information is required.

## Appendix 6. Summary report of comments received from local stakeholders

No further information is required.

## Appendix 7. Summary of de-registered CDM project (Type B)

Not applicable.



## **Appendix 8. Avoidance of Double Accounting in regional Emission Trading Schemes**

The proposed project activity has never been registered under any other GHG program and its environmental attributes have never been requested or issued by any other program or standard. Furthermore, there is no ETS in Kazakhstan.

Therefore, the GCC project activity does not lead to double counting of the ACCs. A Declaration for the same by the project owner has been provided for verification.

## **Appendix 9. Specific design requirements for Bundled Project**

Not applicable. The proposed project activity is NOT a bundled project.

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