المجلس العالمي للبصمة الكربونية
GLOBAL CARBON COUNCIL

Project Submission Form

V4.0- 2022

CONTENTS

COVER PAGE- Project Submission Form (PSF)

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

Title of the Project Activity as per LON/LOA	**Bundled Solar Power Projects by TAQA**
PSF version number	V4.0
Date of completion / Updating of this form	22/03/2023
Project Owner(s) as per LON/LOA (Shall be consistent with De-registered CDM Type B Projects)	TAQA PV for Solar Energy
Country where the Project Activity is located	Egypt
GPS coordinates of the project site(s)	

Project Owner	Location	Latitude Degree	Latitude Decimal	Longitude Degree	Longitude Decimal
TAQA PV for Solar Energy	Dina Farms	30° 13’ 4.2400” N	30.517844° N	30° 30’ 13.5200” E	30.503756° E
		30° 15’ 46.3700” N	30.262881° N	30° 35’ 17.2000” E	30.588111° E
	Soma Bay-1	26° 53’ 01.2444” N	26.883679° N	33° 58’ 39.8964” E	33.977749° E
	Soma Bay-2	26° 53’ 01.2444” N	26.883679° N	33° 58’ 39.8964” E	33.977749° E

Eligible GCC Project Type as per the Project Standard (Tick applicable project type)	☒ **Type A:** ☐ Type A1 ☒ Type A2 ☒ Sub-Type 1 ☐ Sub-Type 2 ☐ Sub-Type 3 ☐ Sub-Type 4 ☐ Type A3 ☐ **Type B – De-registered CDM Projects:**[1] ☐ Type B1 ☐ Type B2
Minimum compliance requirements	☒ Real and Measurable GHG Reductions ☒ National Sustainable Development Criteria (if any) ☒ Apply credible baseline and monitoring methodologies ☒ Additionality ☒ Local Stakeholder Consultation Process ☒ Global Stakeholder Consultation Process ☒ No GHG Double Counting ☒ Contributes to United Nations Sustainable Development Goal 13 (Climate Action)
Choose optional and additional requirements (Tick applicable label categories)	☒ Do-no-net-harm Safeguards to address Environmental Impacts ☒ Do-no-net-harm Safeguards to address Social Impacts ☒ Contributes to United Nations Sustainable Development Goals (in addition to Goal 13)
Applied methodologies including version No. (Shall be approved by the GCC or the CDM)	AMS-I.D.: Grid connected renewable electricity generation- Version 18.0
GHG Sectoral scope(s) linked to	GHG-SS # 1 (Energy (renewable/non-renewable sources)

[1] Owners of Type B projects shall fill in the form provided in Appendix 7.

the applied methodology(ies)	
Applicable Rules and Requirements for Project Owners (Tick applicable Rules and Requirements)	

Rules and Requirements		Version
☒ ISO 14064-2		
☒ Applicable host country legal requirements /rules		
☒ GCC Rules and Requirements[2]	☒ Project Standard	V3.1
	☐ Approved GCC Methodology (XXXXX)	
	☒ Program Definitions	V3.1
	☒ Environment and Social Safeguards Standard	V3.0
	☒ Project Sustainability Standard	V3.1
	☒ Instructions in Project Submission Form (PSF)-template	V4
	☒ Clarification No. 01	V1.3
	☐ Clarification No. 02	
	☐ Clarification No. 03	
	☐ Clarification No. 04	
	☐ Clarification No. 05	
	☒ Standard on avoidance of double counting	V1
	☐ Add rows if required	
☒ CDM Rules[3]	☒ Approved CDM Methodology (AMS-I.D)	V18.0
	☒ TOOL 1- Tool for the demonstration and assessment of additionality	V7.0.0
	☐ TOOL 02- Combined tool to identify the baseline	

[2] GCC Program rules and requirements: http://www.globalcarboncouncil.com/resource-centre/
[3] CDM Program rules: https://cdm.unfccc.int/Reference/index.html

		scenario and demonstrate additionality	
		☒ TOOL 07- Tool to calculate the emission factor for an electricity system	V7.0
		☐ TOOL 19- Demonstration of additionality of microscale project activities	
		☐ TOOL 21- Demonstration of additionality of small-scale project activities	
		☐ TOOL 23- Additionality of first-of-its-kind project activities	
		☒ TOOL 24- Common practice	V3.1
		☒ TOOL 27- Investment analysis	V12.0
		☐ TOOL 32- Positive lists of technologies	
		☐ Guidelines for objective demonstration and assessment of barriers	
		☐ Add rows if required	
Choose Third Party Project Verification by approved GCC Verifiers[4] (Tick applicable verification categories)	☒ GHG emission reductions (i.e., Approved Carbon Credits **(ACCs)**) ☒ Environmental No-net-harm Label (**E+**) ☒ Social No-net-harm Label (**S+**) ☒ United Nations Sustainable Development Goals (**SDG+**) ☐ Bronze SDG Label ☒ Silver SDG Label ☐ Gold SDG Label ☐ Platinum SDG Label ☐ Diamond SDG Label		

[4] **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.

	☒ CORSIA requirements (**C⁺**) ☒ Host Country Attestation on Double counting
Declaration by the 'Authorized Project Owner[5] and focal point' (Tick all applicable statements[6])	The Project Owner(s) declares that: **Generic Requirements applicable to all Project Types:** ☒ We confirm that the Project Activity complies with the eligibility of the applicable project type (A1, A2, A3, B1 or B2) as stipulated by the Project Standard and relevant clarifications. ☒ We confirm that the Project Activity shall start or have started operations, and shall start or have started generating emission reductions, on or after 1 January 2016. ☒ We confirm that the Project Activity is eligible to be registered under the GCC program. We shall ensure the following for the Project Activity (tick at least one of the two options): ☒ No outcomes (e.g., emission reductions, environmental attributes) generated by the Project Activity under GCC will be claimed as carbon credits or environmental attributes under any other GHG/non-GHG[7] program, either for compliance or voluntary purposes, during the entire GCC crediting period; or ☒ If the project activity has been issued with carbon credits or environmental attributes of compensating nature[8] by any other GHG/ non-GHG program, either for compliance or voluntary purposes, the ACCs will be claimed only for the remaining crediting period (subject to a maximum of 10 years of crediting period including the periods under other programs and GCC program) for which carbon credits/ environmental attributes of compensating nature have not been issued by any other GHG/ non-GHG program. **Specific requirements applicable to respective Project Types:** ***For Project Type A1:***

[5] The Project Owner means the legal entity or organization that has overall control and responsibility for the Project Activity

[6] **Consequences in case of Non-compliance with declaration statements:**
If at any point in time non-compliance with the declared statements is established as a result of negligence, fraud or wilful misconduct of the GCC Project Owner/s the GCC project activity will be disqualified, and the registration of the proposed Project Activity will be rejected.

[7] Non-GHG programs could be such as I-REC facilitating reliable energy claims with Renewable Energy Certificate (REC) schemes

8 The environmental attributes of compensating nature are those which are used by captive users (e.g., corporates/industries) for offsetting their GHG emissions

	☐ For Project Type A1, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other voluntary program and has not issued or will not issue credits under any other program. ***For Project Type A2 (Sub-Type 1):*** ☒ For Project Type A2 Sub-Type 1, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other voluntary program and has not issued or will not issue credits under any other program. ***For Project Type A2 (Sub-Type 2 or Sub-Type 3):*** For Project Type A2 Sub-Type 2 or Project Type A2 Sub-Type 3, we confirm that for Project Activity, which has been registered with CDM or any GHG/non-GHG Program and we shall (tick at least one of the two options): ☐ Submit a proof for deregistration from CDM; or ☐ Submit a signed & stamped public undertaking, stating that the Project Owner will never submit any request for Issuance of ACCs or request for renewal of crediting period to CDM-EB or under article 6.4 or any authority after submission to GCC Program and shall formally inform CDM-EB or authority under article 6.4 or any authority after submission to GCC Program. ☐ For Project Type A2 Sub-Type 2 or Project Type A2 Sub-Type 3, we confirm that the Project Activity is NOT included as a component Project Activity (CPA) in any registered GHG Programme of Activities (PoA) or any other functionally equivalent grouped/aggregated activities under any GHG program (such as the CDM or any other voluntary program). ***For Project Type A2 (Sub-Type 4):*** For Project Type A2 Sub-Type 4, we confirm that the Project Activity has been included in a registered CDM-POA and we shall (tick at least one of the two options): ☐ Submit the proof for exclusion of CPA(s) from registered CDM-POA prior to the date of initial submission to the GCC Program; or ☐ Submit the proof of exclusion of CPA(s) from the registered CDM-PoA after the request for registration has been submitted to GCC Program but before the final decision is made by the GCC Steering Committee. ***For Project Type A3:*** ☐ For Project Type A3, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other voluntary program and has not issued or will not issue credits under any other program. ***For Project Type B1 or B2:***

	For Project Type B1 or Project Type B2, we confirm that for Project Activity, which has been registered with CDM or any GHG/non-GHG Program and we shall (tick at least one of the two options): ☐ Submit a proof for deregistration from CDM; or ☐ Submit a signed & stamped public undertaking, stating that the Project Owner will never submit any request for Issuance of ACCs or request for renewal of crediting period to CDM-EB or under article 6.4 or any authority after submission to GCC Program and shall formally inform CDM-EB or authority under article 6.4 or any authority after submission to GCC Program. **Requirements to avoid double counting:** We intend to submit or have submitted a written attestation[9] (Host Country Letter of Authorization - HCLOA) from the host country's national focal point or focal point designee for CORSIA eligible units generated beyond 31 December 2020 at the following stages[10] (tick at least one of the three options): ☐ The initial submission for GSC; or ☐ Along with the submission for a request for registration (after Project Verification is completed); or ☒ Along with the submission for a request for the first or subsequent issuance of ACCs. **Project specific requirements:** ***CORSIA specific requirements:*** ☒ We confirm that bundled projects or grouped projects shall have registered crediting period starting on or after 1 Jan 2016 for the grouped/aggregated project as a whole. ☒ We confirm that the Project Activity meets all the requirement of the CORSIA Eligible Emissions Units[11] required for GCC projects and does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes. ☒ We confirm that the Project Activity aims to achieve at least Silver or higher SDG+ label (i.e., positively impact at least 3 or more United Nations Sustainability Development Goals). ☒ We confirm that the Project Activity will be implemented in a country which is UN member state[12].

9 In case of any change of Host Country Letter of Authorisation (HCLOA) the project owner shall inform the GCC operations team immediately

10 If the host country attestation is not submitted at the initial submission of GSC, the project can be tagged with an indicative CORSIA flag if it's confirmed to be submitted later. If the host country attestation is not submitted at the request for registration, the project can be tagged with an indicative CORSIA flag if at least the PSF and Verification Report confirms to submit this letter, at first issuance. If the host country attestation is not submitted at request for first issuance, the ACCs will not be tagged as CORSIA (C+) compliant if this letter is not submitted.

11 CORSIA Eligible Emissions Units containing approval and conditions for GCC Program: https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Emissions-Units.aspx

12 The list of UN member states countries can be found at https://www.un.org/en/about-us/member-states

	Provide details (if any) below for the boxes ticked above:
	The Project Owner(s) declares that: ☒ All 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. ☒ 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. Provide details below for the boxes ticked above
Appendixes 1-9	Details about the Project Activity are provided in Appendixes 1 through 9 to this document.
Name, designation, date and signature of the Focal point (as per LON/LOA)	**Mr. Manish Dabkara** **MD & CEO** **Date: 22/03/2023** 

1. PROJECT SUBMISSION FORM

Section A. Description of the Project Activity

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

The Purpose of this project activity is to generate electricity by harnessing the solar energy by using of solar photovoltaic technology and there by exporting the generated electricity to the national grid of Egypt. Project activity involves installation of a 11.03 MW solar project in Egypt. This is a bundled project and is implemented by TAQA PV for Solar Energy.

The project is commissioned and currently operational. The project details are provided in the table below

Project Owner	Capacity (MW)	Purpose	Commissioning Date (COD)
TAQA PV for Solar Energy	5.98 MW (DC capacity)	Sell to grid	30/09/2021
	1.15 MW (DC capacity)		
	3.9 MW (DC capacity)		

The project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 8,387 tCO_2e/year, thereon displacing estimated average of 19,637 MWh/year amount of electricity from the generation-mix of power plants connected to the Egyptian grid, which is mainly dominated by thermal/fossil fuel-based power plant. Project activity will mitigate the total GHG emission reductions of 83.867 tCO_2e over the entire crediting period.

Baseline Scenario

The scenario existing prior to the implementation of the project activity, is electricity delivered to the grid by the project activity that would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the **"Tool to calculate the emission factor for an electricity system"**. This is a green field project activity. There was no activity at the site of the project participant prior to the implementation of this project activity. Hence pre-project scenario and baseline scenario is the same.

Sustainable Development Indicators

In addition to contribution to the sustainable environment by reducing the GHG emissions and reducing the dependency on fossil fuels, this project activity also contributing to the sustainable development though supporting the local community and local economy.

Social well-being: The project activity provided / provides job opportunity to local people during erection, commissioning and maintenance of the solar project. Frequency of visiting villages and nearby areas by skilled, technical and industrialist increase due to installation /site visit/operation and maintenance work related to solar plant. This directly and indirectly positively effects the economy of villages and nearby area.

Environmental well-being: Solar power is one of the cleanest renewable energy powers and does not involve any fossil fuel. There are no GHG emissions. The impact on land, water, air and soil is negligible. Thus, the project activity contributes to environmental well-being without causing any negative impact on the surrounding environment.

Economic well-being: The project activity generates permanent and temporary employment opportunity within the vicinity of the project. The electricity supply in the nearby area improves which directly and indirectly improves the economy and life style of the area.

Technological well-being: The project activity is step forward in harnessing the untapped solar potential and further diffusion of the solar technology in the region. The project activity leads to the promotion and demonstrates the success of solar projects in the region which further motivate more investors to invest in solar power projects. Hence, the project activity leads to technological well-being.

A.2. Location of the Project Activity

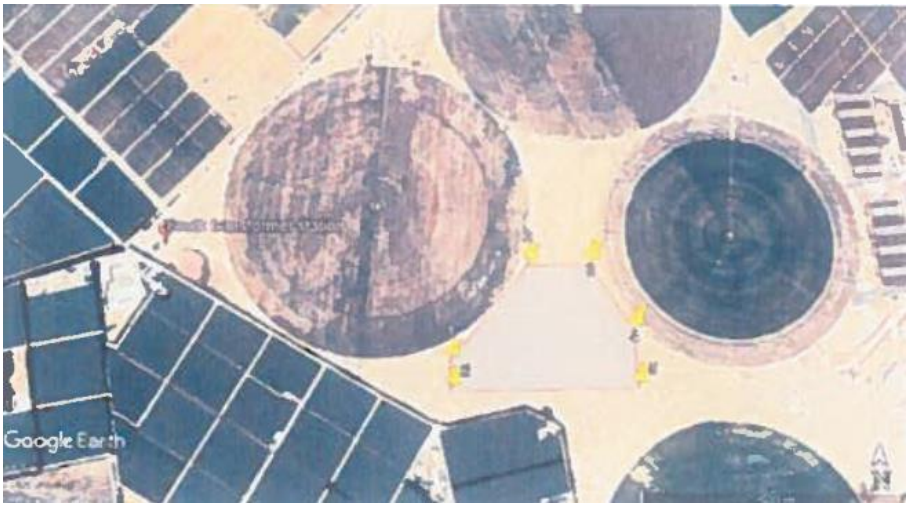
The location details of the project located in Dina Farms is mentioned below:

Location: Dina Farms
City: Giza (Dina Farms, Cairo Alex desert road, KM80)
Country: Egypt

The Geo Coordinates of the project is provided below:

Geo coordinates of South Plant	30° 13’ 4.24” N	30.217844°	30° 30’ 13.52” E	30.503756°
Geo coordinates of East Plant	30° 15’ 46.37” N	30.262881	30° 35’ 17.20” E	30.588111

The project location of the South plant is highlighted in the map below



The project location of the East plant is highlighted in the map below

The location details of the project located in Soma bay-1 is mentioned below:

Location: Hurghada governorate
Country: Egypt

The Geo Coordinates of the project is provided below:

Latitude: 26° 53’ 01.2444” N/26.883679° N
Longitude: 33° 58’ 39.8964” E/33.977749° E

The project location is highlighted in the map below

The location details of the project located in Soma bay-2 is mentioned below:

Location: Hurghada governorate
Country: Egypt

The Geo Coordinates of the project is provided below:

Latitude: 26° 53’ 01.2444” N/26.883679° N
Longitude: 33° 58’ 39.8964” E/33.977749° E

The project location is highlighted in the map below

A.3. Technologies/measures

The Project Activity is a Solar PV project. The total installed capacity of the project is 11.03 MW of Solar PV plant located in Egypt.

The Project Activity is a new facility (Greenfield) and the electricity generated by the project is exported to the Egyptian electricity grid. The Project Activity will therefore displace an equivalent amount of electricity which would have otherwise been generated by fossil fuel dominant electricity grid. The estimated lifetime of the project activity is considered as 25 years for solar technology. This may increase depending on the operation & maintenance of the plant. In the Pre- project scenario the entire electricity, delivered to the grid by the project activity, would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources.

The project shall result in replacing anthropogenic emissions of greenhouse gases (GHG’s) estimated to be approximately 8,387 tCO_2e per year, thereon displacing 19,637 MWh/year amount of electricity from the gird.

It is to be noted that the technical specification of the modules (i.e. module capacity or no. of modules) may change but the project capacity and location would remain same throughout the crediting period.

Technical specifications of Dina Farm project are provided below

Parameter	**Details**
Project Capacity	5.98 MW DC capacity

PV Module Manufacturer	Suntech
Technology	Mono-crystaline
PV Module Model	STP445S-B72/ VnH
Capacity of PV Module	445 Wp
No. of PV Modules	13,440 Modules
Inverter Manufacturer	Sungrow
Technology	String Inverter
Inverter Model	SG250HX
Inverter Capacity (AC)	250 KW
No. of Inverters	22 Inverters

Technical specifications of Soma Bay-1 project are provided below

Parameter	**Details**
Project Capacity	1.15 MW DC capacity
PV Module Manufacturer	Suntech
Technology	Mono-crystaline
PV Module Model	STP445S-B72/ VnH
Capacity of PV Module	445 Wp
No. of PV Modules	2,592 Modules
Inverter Manufacturer	Sungrow
Technology	String Inverter
Inverter Model	SG250HX
Inverter Capacity (AC)	250 KW
No. of Inverters	4 Inverters

Technical specifications of Soma Bay-2 project are provided below

Parameter	**Details**
Project Capacity	3.9 MW DC capacity
PV Module Manufacturer	Suntech
Technology	Mono-crystaline
PV Module Model	STP445S-B72/ VnH
Capacity of PV Module	445 Wp
No. of PV Modules	8,736 Modules
Inverter Manufacturer	Sungrow
Technology	String Inverter
Inverter Model	SG250HX
Inverter Capacity (AC)	250 KW
No. of Inverters	14 Inverters

A.4. Project Owner(s)

Location/ Country	Project Owner(s)	Where applicable[13], indicate if the host country has provided approval (Yes/No)
Egypt	TAQA PV for Solar Energy	Not Applicable

A.5. Declaration of intended use of Approved Carbon Credits (ACCs) generated by the 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		
30/09/2021	29/09/2031	TAQA PV for Solar Energy	8,387tCO_2e/year

The project owner confirms that the ACC's generated from the project will not be double counted in any other mechanism.

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) and tools applied in the project

[13] 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).

Title: AMS-I.D. Grid connected renewable electricity generation--- Version 18.0[14]

Following tools have been have been referred during the estimation of emission reduction calculations as per the methodology AMS-I.D.

‘‘Tool to calculate the emission factor for an electricity system’’, Version 7.0[15] .
“Tool for the demonstration and assessment of additionality”, Version 7.0.0[16]
“Tool for the Investment analysis” Version 12.0[17]
“Common practice”, Version 3.11[18]

B.2. Applicability of methodology(ies) and tools applied in the project

Scope 01- Energy Industries (Renewable/non-renewable sources).
Approved small-scale baseline methodology AMS-I.D, version 18: “Grid connected renewable electricity generation."

The project activity generates power through a renewable source of energy (solar) and supplies it to the Egyptian grid. This electricity would, otherwise, have been generated through fossil fuel sources connected to Egyptian grid. The project activity meets the applicability conditions of the selected methodology.

Choice of selected methodology has been justified by showing that the project activity meets each applicability conditions of the selected methodology in table below:

Applicability conditions of AMS-I.D. (Version 18)	Eligibility of project under consideration
1. This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:[19] (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	The project activity involves the installation of a green-field Photovoltaic project for renewable electricity generation. It would supply electricity to the Egyptian grid that is primarily dominated with fossil fuel fired generating units hence it satisfies this applicability criteria
2. Illustration of respective situations under which each of the methodology (i.e. AMS- I.D., AMS-I.F and AMS- I.A[20]) applies is included in Table 2.	The project activity would supply electricity to the Egyptian grid; hence it satisfies this applicability criteria.

[14] https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTXFQQOFQQH4SBK
[15] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf
[16] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf
[17] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v12.pdf
[18] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-24-v1.pdf

19 Refer to EB 23, annex 18 or the definition of renewable biomass.

20 AMS-I.D “Grid connected renewable electricity generation”, AMS-I.F “Renewable electricity generation for captive use and mini-grid” and AMS-I.A “Electricity generation by the user”

3. This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b)involve a capacity addition;[21] (c)involve a retrofit[22] of (an) existing plant(s); or (d)involve a replacement[23] of (an) existing plant(s).	The project activity involves installation of a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant). Hence, this applicability criterion is satisfied.
4. Hydro power plants with reservoirs[24] that satisfy at least one of the following conditions are eligible to apply this methodology: • The project activity is implemented in an existing reservoir with no change in the volume of reservoir. • The project activity is implemented in an existing reservoir[25] , where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m^2; • The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m^2.	The project activity is a Photovoltaic power project. Hence this criterion is not applicable to the project activity.
5. If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires	The project has a total capacity of 11.03 MW. The unit has no non-renewable components or provision for future addition of a co-fired fossil fuel system. Thus, the project activity meets the applicability condition.

[21] A capacity addition is an increase in the installed power generation capacity of an existing power plant through: (i) The installation of a new power plant besides the existing power plant/units; or (ii) The installation of new power units , additional to the existing power plant/units. The existing power plant/units continue to operate after the implementation of the project activity

[22] Retrofit (or rehabilitation or refurbishment). It involves an investment to repair or modify an existing power plant/unit, with the purpose to increase the efficiency, performance or power generation capacity of the plant, without adding new power plants or units, or to resume the operation of closed (mothballed) power plants. A retrofit restores the installed power generation capacity to or above its original level. Retrofits shall only include measures that involve capital investments and not regular maintenance or housekeeping measures.

[23] Replacement. It involves investment in a new power plant or unit that replaces one or several unit(s) at the existing power plant. The installed capacity of the new plant or unit is equal to or higher than the plant or unit that was replaced.

[24] A reservoir is a water body created in valleys to store water generally made by the construction of a dam.

25 A reservoir is to be considered as an “existing reservoir” if it has been in operation for at least three years before the implementation of the project activity.

fossil fuel,[26] the capacity of the entire unit shall not exceed the limit of 15 MW.	
6. Combined heat and power (co-generation) systems are not eligible under this category.	The project activity does not involve cogeneration and hence it satisfies the applicability criteria.
7. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct[27] from the existing units.	This condition is not applicable to the project activity as it is a greenfield project activity and does involve the addition of renewable energy generation units at an existing renewable power generation facility.
8. In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the modified or retrofitted unit shall not exceed the limit of 15 MW	This condition is not applicable to the project activity as it is not a modification/ retrofit measure in an existing power plant.

Applicability conditions of "Tool to calculate the emission factor for an electricity system"

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).	This condition is applicable. OM, BM and CM are estimated using the tool under section B.6.1 for calculating baseline emissions.
Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, the conditions specified in "Appendix 2: Procedures related to off-grid power generation" should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	Since the project activity is grid connected, this condition is applicable and the emission factor has been calculated accordingly.

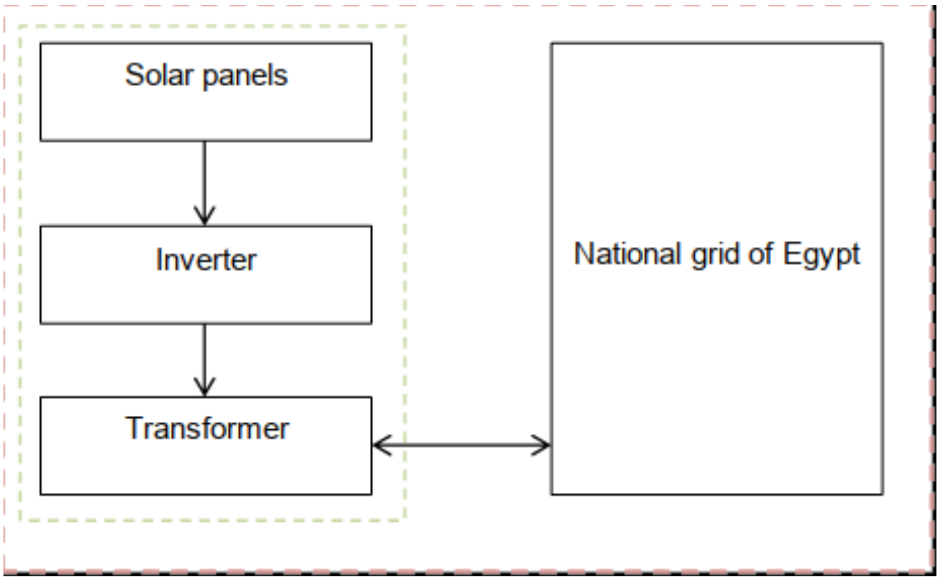
26 A co-fired system uses both fossil and renewable fuels, for example the simultaneous combustion of both biomass residues and fossil fuels in a single boiler. Fossil fuel may be used during a period of time when the biomass is not available and due justifications are provided.

27 Physically distinct units are those that are capable of generating electricity without the operation of existing units, and that do not directly affect the mechanical, thermal, or electrical characteristics of the existing facility. For example, the addition of a steam turbine to an existing combustion turbine to create a combined cycle unit would not be considered "physically distinct".

In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	The project activity is located in Egypt, a non-Annex I country. Therefore, this criterion is not applicable for the project activity.
Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	The project activity is a grid connected Photovoltaic power project and not a hydro power plant. Therefore, this criterion is not applicable for the project activity.

B.3. Project boundary, sources and greenhouse gases (GHGs)

The project boundary includes the solar project, sub-stations, grid and all power plants connected to grid. The proposed project activity will evacuate power to the Egyptian grid. Therefore, the entire Egyptian grid and all connected power plants have been considered in the project boundary for this project activity.



The project does not involve any other emissions sources not foreseen by the methodologies. The greenhouse gases and emission sources included in or excluded from the project boundary are shown in table below.

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	Included?	Justification/Explanation
Baseline	CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity	CO_2	Yes	Main Emission Source
		CH_4	No	Minor Emission source
		N_2O	No	Minor Emission source
Project Activity	Solar energy projects under the Project activity	CO_2	No	As a zero emission grid connected solar power project, no CO_2 emissions will result.
		CH_4	No	As a zero emission grid connected solar power project, no CH_4 emissions will result.
		N_2O	No	As a zero emission grid connected solar power project, no N_2O emissions will result.

B.4. Establishment and description of the baseline scenario

As per the approved consolidated Methodology AMS I.D (Version 18.0) “If the project activity is the installation of a Greenfield power plant, the baseline scenario is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system Version 7.0”.

Currently (based on year 2019/2020), prior to project implementation, the total national grid installed capacity was equivalent to 59,530 MW, of which 5% are hydropower plants and 5% are other renewable energy plants (mostly wind, with a small amount of solar). Fossil fuel thermal generation represents the dominant source of power generation with a total of 90% of total installed generation capacity.

Based on Egypt’s Integrated Sustainable Energy Strategy (ISES) to 2035, the power generation mix shall evolve to a situation where the share of fossil fuel based thermal power generation (coal, natural gas and oil plants) is reduced and renewable technologies (including solar, wind, nuclear and hydro capacities) increase their share. The government’s latest targets call for 20% of Egypt’s power generation to be based on renewables by 2022, and 42% by 2035 (IRENA, 2018).

B.5. Demonstration of additionality

The additionality of the Project shall be demonstrated by applying the following approach, consisting of two components:

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

The project is not enforced by law. Since voluntary commitments/agreements within a sector or by

an entity do not constitute the legal requirement, the project is additional as per paragraph 46.

Specify the methodology, activity requirement or product requirement that establishes deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	This project follows the CDM approved methodology AMS-I.D. "Grid connected renewable electricity generation" (Version 18)[28] Selected methodology has been applied together with the "tool to calculate the emission factor for an electricity system, version 7" and "tool for assessment and demonstration of additionality, version 7". These are the latest version of the methodology and related additionality & calculation tool.
Describe how the proposed project meets the criteria for deemed additionality.	1. Project without carbon revenue is not financially attractive as discussed in investment analysis section below (benchmark and sensitivity analysis). 2. Continuation of the current situation supply of equal amount of electricity by the newly built grid connected power plants. Continuation of the current situation is not considered as a realistic alternative due to increasing electricity demand therefore new power plants should be constructed which includes mainly thermal power plants. Implementation of the project is additional to the baseline scenario which is an alternative 2 above and therefore reduces the emissions.

The present project generates power using Photovoltaic energy which is a renewable, zero emission source of energy. Baseline considerations for the project are based on approved consolidated baseline.

As per Guidelines on the Demonstration of Additionality of Small-scale Project Activities (Ver. 13.1 EB 105 Annex 4)[29], to establish the project additionality, it has to be shown that the project activity would not have occurred anyway due to at least one of the following barriers:

- **Investment barrier**: a financially more viable alternative to the project activity would have led to higher emissions;
- **Technological barrier**: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;
- **Barrier due to prevailing practice**: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;
- **Other barriers**: without the project activity, for another specific reason identified by the project Owner, such as institutional barriers or limited information, managerial resources, organizational

[28] https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTXFQQOFQQH4SBK
[29] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-21-v13.1.pdf

capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.

The project investor has selected Investment barrier to demonstrate in a conservative and transparent manner that the proposed CDM project activity is financially unattractive.

The additionality of the project is demonstrated using investment barriers.

Investment Analysis

Investment analysis is carried out to determine on whether the proposed project activity is economically or financially less attractive than at least one of the baseline alternatives, without the revenue from the sale of emission reductions credits. This is demonstrated in line with the Tools for sections as per “Investment Analysis” (Ver 12.0)

Sub-step: Determine appropriate analysis method

The project activity envisages export of power to National Grid of Egypt and the revenues from the sale would be generated in accordance with the terms and tariffs established in the Power Purchase Agreement (PPA). Thus, simple cost analysis (Option I) cannot be used as the analysis method, as the sale of the units of generated electricity shall result in a revenue stream during the operations of the Project activity.

In the absence of the project activity continued use of grid electricity would have been the best plausible options and it does not require an investment. Hence investment comparison analysis (Option II) is also not appropriate for the project activity.

After eliminating Option, I and Option II, the use of Benchmark analysis (Option III) is the method of analysis that has been selected as the most suitable method. This method determines the attractiveness of the project activity for the investors, as well as provides a measure of the viability of the investment to generate revenues during its operation, as compared with other avenues and investment options. Hence, the Benchmark analysis method is to be employed for analysis of the said project.

Sub-step (Option III): Apply benchmark analysis

The investment analysis using Benchmark analysis approach (Option III) has been chosen. Further, this method illustrates that the evaluation of the project by the project owner was carried out before the decision to undertake the project was taken and management approval had been granted.

Choice of Financial Indicator:

For the benchmark, Version 12 of methodological tool "Investment Analysis" (EB 112, Annex 2) was the latest available tool to Project owner. for group 1 project in Egypt.

The benchmark is calculated in nominal EGP, after tax, equity terms as

(1+0.1439) x (1+.069) -1=22.28% as per investment tool v12

Sensitivity Analysis

As per Guidance 27 and 28 of Investment Analysis Annex 2 of EB 112, only 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 and the results of this variation should be presented in the PSF and be reproducible in the associated spreadsheets. Guidance also states, "All parameters varied need not necessarily be subjected to both negative and positive variations of the same magnitude". The Annex also states, as a general point of departure, variations in the sensitivity analysis should at least cover a range of ±5% and ±10%, unless this is not deemed appropriate in the context of the specific project circumstances.

Since the project cost is already firmed up, the cost is not variable. The tariff is determined by PPA which is fixed for years mentioned as per the respective Egyptian Electricity Company tariff order and hence it need not be subjected to variation. All other expenses are much less than 20% of the total cost. Hence, only PLF needs to be subjected to reasonable variation. Nevertheless, following factors have been subjected to sensitivity analysis:

1. Electricity Price
2. O&M Cost
3. Investment
4. Electricity Production

Result of Sensitivity Analysis

The outcomes from the investment analysis for all the project activities is demonstrated below

	OM change ----->	**-10.0%**	**-5.0%**	**0.0%**	**5.0%**	**10.0%**
Output IRR---->	11.86%	13.11 %	12.48 %	11.86 %	11.24 %	10.61 %
	Electricity production change ----->	**-10.0%**	**-5.0%**	**0.0%**	**5.0%**	**10.0%**
Output IRR---->	11.86%	7.62%	9.68%	11.86 %	14.21 %	16.83 %
	Electricity price change ----->	**-10.0%**	**-5.0%**	**0.0%**	**5.0%**	**10.0%**
Output IRR---->	11.86%	7.62%	9.68%	11.86 %	14.21 %	16.83 %
	Investment change ----->	**-10.0%**	**-5.0%**	**0.0%**	**5.0%**	**10.0%**
Output IRR---->	11.86%	20.37 %	14.62 %	11.86 %	10.03 %	8.66%

Benchmark IRR:	**22.28%**
Difference check between benchmark and IRR:	10.42%

Step 3: Barrier analysis

Barrier analysis has not been used.

Step 4: Common practice analysis

Not applicable as it is a small-scale project.

Conclusion: As described above, the project fulfils all necessary requirements of additionality specified in the 'Tool for the demonstration and assessment of additionality' v7.0.0. Hence, the project is additional.

B.6. Estimation of emission reductions

As per approved consolidated methodology ACM0002, version 21.0, emission reduction is estimated as difference between the baseline emission and project emission after factoring into leakage.
$ER_y = BE_y – PE_y$

As the project activity is a solar project, there won't be any leakage emissions from the project activity. Hence, $LE_y = 0$

Where:

ER_y	=	Emission reductions in year y (t CO2e/yr)
BE_y	=	Baseline emissions in year y (t CO2/yr)
PE_y	=	Project Emission in year y (t CO2e/yr)
LE_y	=	Leakage Emission in year y (t CO2e/yr)

B.6.1. Explanation of methodological choices

According to the TOOL07, the baseline methodology procedure to calculate $EF_{grid,CM,y}$ is the following:

Step 1: Identify the relevant electricity systems.

For determining the electricity emission factors, the project participant is identifying the relevant project electricity system or any connected electricity systems. No connected electricity system is located partially or totally in Annex I countries, thus the project electricity system is defined by using the three options stated in TOOL07.

Since the Egyptian DNA has not published a delineation of the project electricity boundary to be used, Option 1 (the priority option) is not feasible. Therefore, the Project Developer will use option 2 (the next option in the priority order).

> Option 2. A delineation of the project electricity system defined by the dispatch area of the dispatch center responsible for scheduling and dispatching electricity generated by the project activity. Where the dispatch area is controlled by more than one dispatch center, i.e. layered

dispatch area, the higher-level area shall be used as a delineation of the project electricity system (e.g. where regional dispatch centers are required to comply with dispatch orders of the national dispatch center then area controlled by the national dispatch center shall be used).

In Egypt, the Egyptian Electricity Holding Company (EEHC) is the main electricity operator and regulator in Egypt. Among its objectives are producing, transmitting and distributing electrical energy for all uses on the various voltages, and also managing, operating and maintaining electricity transmission and distribution networks at the various voltage levels, selling electrical energy on the various voltages throughout the country and making the optimal utilization of these networks.

Therefore, this company is the responsible for defining all characteristics of the electricity grid in the country.

In its Annual Report for 2017[30], the EEHC mentions the Unified National Grid as being the national grid for electricity transmission in Egypt.

In Egypt, all the power plants are connected to the unified Egyptian National Grid in which the Egyptian Electricity Transmission Company (EETC), a subsidiary from EEHC, acts as a single buyer of bulk power, purchasing electricity from the generating companies through Power Purchase Agreements (PPAs) and selling it to the distribution companies and UHV and HV customers.

All power stations connected to the unified electric grid, are managed as a pool. The priority of dispatch is defined on the basis of least marginal cost optimisation where priority is given to renewable sources, then to thermal units with low specific fuel consumption (Ton Oil equivalent/MWh) and cost as base load and with those that have high operational costs as peak load. The great majority of the annual electricity generation is concentrated within a 250 Km radius around Cairo, which is the country`s load center. Hydro plants are concentrated at Aswan, about 900 Km south of Cairo, and provide another substantial portion. The Unified national grid, comprising all those power plants that are physically connected through transmission and distribution lines to the project activity, constitutes a clear grid boundary. Egypt is a net exporter of electricity so no emission calculations for imported electricity are to be included.

Step 2: Choose whether to include off-grid power plants in the project electricity system

The Project Developer chooses Option I: Only grid power plants are included in the calculation. Power plants, which are isolated and not connected to the power grid, are not considered part of this grid boundary.

Step 3: Select a method to determine the operating margin (OM)

The calculation of the operating margin emission factor ($EF_{grid,OM,y}$) is based on one of the following methods:

(a) Simple OM, or (b) Simple adjusted OM, or (c) Dispatch data analysis OM, or (d) Average OM.

Any of the four methods can be used, however, the simple OM method (option a) can be used if low

[30] http://www.eehc.gov.eg/eehcportal/Eng/YearlyReports.aspx

cost/must-run resources constitute less than 50% of total grid generation in: 1) average of the five most recent years, or 2) based on long-term averages for hydro electricity production. Approach 1 has been used to verify that the low-cost/must-run resources constitute less than 50% of total grid generation on average of the five most recent years.

$$Share_{LCMR} = \text{average}\left[\frac{EG_{LCMR\,(y-4)}}{total_{(y-4)}}, \ldots, \frac{EG_{LCMRy}}{total_y}\right]$$

Where:

- $Share_{LCMR}$ = Share of the low cost/must run resources (per cent)
- EG_{LCMRy} = Electricity generation supplied to the project electricity system by the low cost/must run resources in year y (MWh)
- $Total_y$ = Total electricity generation supplied to the project electricity system in year y (MWh)
- y = The most recent year for which data is available

The following values are provided by the Egyptian Electricity Holding Company annual reports for years[31] 2016/2017; 2017/2018; 2018/2019; 2019/2020; and 2020/2021[32].

Table: Electricity Generation per type of source for the past 5 years

Electricity Generated (GWh)					
Type	**2016/2017**	**2017/2018**	**2018/2019**	**2019/2020**	**2020/2021**
Hydro Power Plants	12,726	12,610.8	13,003.5	14908	14,641
Wind Parks	2,173	2,315	2,999	4,224	5,257
Solar	580	518	1,494	4296.8	4673.4
Total - low-cost/must run	**15,479**	**15,444**	**17,497**	**23,429**	**24,571**
Private sector (BOOT plants)	11,383	10,892	10,802	10660	10,441
Electricity purchased from IPP	35	42	43	19.5	24
Thermal	156,574	164,193	164,883.5	156,542	177,520.3
Total Net - all plants[33]	**183,471**	**190,571**	**193,225**	**190,650**	**212,557**
Low-cost/must-run portion	8.44%	8.10%	9.05%	12.29%	11.56%
Five-year average for low cost/must-run plants:	**9.89%**				

Since low cost/must run electricity generation sources resources represent 9.89% of the total grid electricity generation and constitute less than 50% of total grid generation on average of the five most recent years, therefore, Simple OM can be applied.

For the simple OM, the emission factor is calculated using the following data vintage:

(a) Ex ante option: the emission factor is determined once at the validation stage, thus no

[31] The administrative year for Egypt's power sector and statistic starts and ends on 30 June and initiates on 01 July of each year.
[32] http://www.moee.gov.eg/english_new/report.aspx
[33] Excluding Isolated Plants

monitoring and recalculation of the emissions factor during the crediting period is required. Since only grid power plants are being considered, a period of 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation is being used.

Step 4: Calculate the operating margin emission factor according to the selected method

The ex-ante option will be used for the calculation of the simple OM. The simple OM may be calculated by one of the following two options:

Option A: Based on the net electricity generation and a CO_2 emission factor of each power unit; or

Option B: Based on the total net electricity generation of all power plants serving the system and the fuel types and total fuel consumption of the project electricity system.

Option B can only be used if:

i. The necessary data for Option A is not available; and
ii. Only nuclear and renewable power generation are considered as low-cost/must-run power sources and the quantity of electricity supplied to the grid by these sources is known; and
iii. Off-grid power plants are not included in the calculation (i.e. if Option I have been chosen in Step 2).

Since data on each power unit is not available for the project's case, only renewable is being considered for low-cost/must-run (with quantity of electricity known) and Option I has been chosen in Step 2, Option B will be used for the calculation of simple OM emission factor.

Information regarding Net Electricity Production and fossil fuels amounts consumed in the project electricity system in the most recent 3 years (2018/2019; 2019/2020; 2020/2021) is summarized in the tables below.

Net Electricity Production for the most recent 3 years including low-cost/must-run power plants

Net Electricity Production GWh			
	2018/2019	**2019/2020**	**2020/2021**
Hydro	13003.5	14908	14641
Generated Energy from Wind (Zafarana)	2999	4224	5257
Solar (Kurayemat)	1494	4296.8	4673.4
Thermal	164883.5	156542	177520.3
Purchased Energy from IPPs	43	19.5	24
Generated from private sector (BOOT)	10802	10660	10441
Total Net electricity generated (excluding isolated units), Egy (GWh)	**1,93,225**	**1,90,650**	**2,12,557**

Net Electricity Production for the most recent 3 years excluding low-cost/must-run power plants

Net Electricity Production GWh			
	2018/2019	**2019/2020**	**2020/2021**
Thermal	1,64,884	1,56,542	1,77,520
Purchased Energy from IPPs	43	20	24
Generated from private sector (BOOT)	10,802	10,660	10,441
Total Net electricity generated (excluding isolated and low cost must run units), Egy (GWh)	**1,75,729**	**1,67,222**	**1,87,985**

Fossil fuels amounts consumed in the project electricity system in the most recent 3 years

Fuel Consumption by Type				
Fuel type	**Units**	**2018/2019**	**2019/2020**	**2020/2021**
HFO	**Tonnes**	2,458,000	1,858,000	584,700
NG	**m^3**	38,32,70,00,000	35,927,000,000	37,787,000,000
NG	**Tonnes**	2,98,26,459	2,79,58,754.86	2,94,06,225.68
LFO & Special LFO	**Tonnes**	54,200	22,700	4,600

Where Option B is used, the simple OM emission factor is calculated as follows:

$$ER_{grid,\,OM\,Simple,\,y} = \frac{\sum_{i,} FC_{i,,y}.NCV_{i,y}.EF_{CO2,i,y}}{EG_y}$$

Where:

$EF_{grid,OMsimple,y}$ = Simple operating margin CO2 emission factor in year y (tCO_2/MWh)
$FC_{i,,y}$ = Amount of fuel type i consumed in the project electricity system in year y (mass or volume unit)
$NCV_{i,y}$ = Net calorific value (energy content) of fossil fuel type i in year y (GJ / mass or volume unit)
$EF_{CO2,i,y}$ = CO_2 emission factor of fossil fuel type i in year y (tCO_2/GJ)
EG,y = Net electricity generated and delivered to the grid by all power sources serving the system, not including low-cost / must-run power plants / units, in year y (MWh)
i = All fuel types combusted in power sources in the project electricity system in year y
Y = The relevant year as per the data vintage chosen in step 3 (Ex-ante option)

Table: Simple Operating Margin for Year 2018/2019

Fuel type	**Consumption[34]**	**Units**	**NCV TJ/Tonne**	**CO_2 emissions factor**	**CO_2 Emissions (tCO_2 / t fuel)**

[34] Source: MOEE Annual Reports for the indicated year, Table: Fuel Consumption by Type. Website: http://www.moee.gov.eg/english_new/report.aspx

			[35]	(tCO_2/TJ)[36]	
HFO	2,458,000	Tonnes	0.0398	75.5	7,386,044
NG	38,327,000,000	m^3	-	-	-
NG(converted to tonnes from data above)	29,826,459	Tonnes	0.0465	54.3	75,310,318
LFO & Special LFO	54,200	Tonnes	0.0414	72.6	162,906
CO_2 emissions (tCO_2)					**82,859,268**
Simple operating margin CO_2 emission factor 2018/2019 (tCO_2/MWh)					**0.4715**

Table: Simple Operating Margin for Year 2019/2020

Fuel type	Consumption[37]	Units	NCV TJ/Tonne	CO_2 emissions factor (tCO_2/TJ)	CO_2 Emissions (tCO_2 / t fuel)
HFO	1,858,000	Tonnes	0.0398	75.5	5,583,104
NG	35,927,000,000	m^3	-	-	-
NG(converted to tonnes from data above)	27,958,755	Tonnes	0.0465	54.3	70,594,458
LFO & Special LFO	22,700	Tonnes	0.0414	72.6	68,228
CO_2 emissions (tCO_2)					**76,245,790**
Simple operating margin CO_2 emission factor 2019/2020 (tCO_2/MWh)					**0.4560**

Table: Simple Operating Margin for Year 2020/2021

Fuel type	Consumption[38]	Units	NCV TJ/Tonne	CO_2 emissions factor (tCO_2/TJ)	CO_2 Emissions (tCO_2 / t fuel)
HFO	584,700	Tonnes	0.0398	75.5	1,756,965
NG	37,787,000,000	m^3	-	-	-
NG(converted to tonnes from data above)	29,406,226	Tonnes	0.0465	54.3	74,249,250
LFO & Special LFO	4,600	Tonnes	0.0414	72.6	13,826
CO_2 emissions (tCO_2)					**76,020,041**
Simple operating margin CO_2 emission factor 2020/2021 (tCO_2/MWh)					**0.4044**

The Simple OM is then calculated as the average Net CO_2 emissions from electricity generation / Net

[35] IPCC default values at the lower limit of the uncertainty at a 95 per cent confidence interval as provided in table 1.2 of Chapter 1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories
[36] IPCC default values at the lower limit of the uncertainty at a 95 per cent confidence interval as provided in table 1.4 of Chapter1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories
[37] Source: MOEE Annual Reports for the indicated year, Table: Fuel Consumption by Type. Website: http://www.moee.gov.eg/english_new/report.aspx
[38] Source: MOEE Annual Reports for the indicated year, Table: Fuel Consumption by Type. Website: http://www.moee.gov.eg/english_new/report.aspx

electricity supplied to the grid in the most recent 3 years.

Simple Operating Margin (OM) Grid Emissions factor = 0.4429 tCO2/MWh

Step 5: Calculate the build margin (BM) emission factor

In terms of vintage of data, project participants choose

Option 1 - for the first crediting period, calculate the build margin emission factor ex ante based on the most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation. For the second crediting period, the build margin emission factor should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used. This option does not require monitoring the emission factor during the crediting period;

Capacity additions from retrofits of power plants are not included in the calculation of the build margin emission factor.

The sample group of power units (m) used to calculate the build margin is determined as follows:

a. Identify the set of five power units, other than the power units registered as CDM project activities[39], that started to supply electricity to the grid most recently ($SET_{5\ units}$) and determine their annual electricity generation ($AE_{GSET\text{-}5\text{-}units}$, in MWh). In fact, the annual electricity generation from the set of five power units, other than the power units registered as CDM project activities, that started to supply electricity to the grid most recently (year 2017) is 4.1%.

The set of five power units, other than the power units registered as CDM project activities that started to supply electricity to the grid most recently ($SET_{5\ units}$)

Power Plant	No. of Units	Installed capacity (MW)	Fuel	Net Electricity generated (GWh)	Commissioning Date	% of system Net Total
October Ext	4x150+1x318.7	918.7	N.G- L.F.O	3231.1	2015-2019	1.5%
Assiut West	8 x 125 +2 x 250	1500	N.G-L.F.O	5614.9	2015-2019-2020	2.6%
South Helwan	3x650	1950	N.G-H.F.O	6660.6	2019	3.1%
Cairo West 9	1	650	N.G- H.F.O	520.6	2021	0.2%
Assiut-Walideya 3	1	650	N.G- H.F.O	104.7	2021	0.0%
Total				**16131.9**		**7.6%**

b. Determine the annual electricity generation of the project electricity system, not including power units registered as CDM project activities (AE_{Gtotal}, in MWh). Identify the set of power units, excluding power units registered as CDM project activities, that started to provide electricity to the grid most

[39] The list of Registered Egyptian CDM Projects (as of January 2018) can be found on: http://www.eeaa.gov.eg/portals/0/eeaaReports/NCC/Update%20of%20registered%20CDM%20Projects%20January%202018.pdf

recently and that include 20 per cent of AE_{Gtotal} (if 20 per cent falls on part of the generation of a unit, the generation of that unit is fully included in the calculation) ($SET_{>20\ per\ cent}$) and control their annual electricity generation (AEG_{SET}-≥20 per cent, in MWh).

The set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently

Power Plant	No. of Units	Installed capacity (MW)	Fuel	Net Electricity generated (GWh)	Commissioning Date	% of system Net Total
October Ext	4x150+1x318.7	918.7	N.G- L.F.O	3231.1	2015-2019	1.5%
West Damietta Ext	4x125 + 1x250	750	N.G-L.F.O	1275.2	2016-2018	0.6%
West Damietta	4x125 + 1x250	750	N.G-L.F.O	2253.8	2012-2013-2018	1.1%
Assiut West	8 x 125 +2 x 250	1500	N.G-L.F.O	5614.9	2015-2019-2020	2.6%
South Helwan	3x650	1950	N.G-H.F.O	6660.6	2019	3.1%
Burullus	8 x 400 + 4 x 400	4800	N.G	20786.5	2017-2018	9.8%
Beni Suef	8 x 400 + 4 x 400	4800	N.G	16749.5	2017-2018	7.9%
New Capital	8 x 400 + 4 x 400	4800	N.G	12477.2	2017-2018	5.9%
Cairo West 9	1	650	N.G- H.F.O	520.6	2021	0.2%
Assiut-Walideya 3	1	650	N.G- H.F.O	104.7	2021	0.0%
Total				**69674.1**		**32.8%**

c. From $SET_{5\text{-}units}$ and $SET_{>20\ per\ cent}$ identify the set of power units that includes the larger annual electricity generation (SET_{sample}). The set of power units that includes the larger annual electricity generation is option b (the set of power units excluding power units registered as CDM project activities, that started to provide electricity to the grid most recently and that include 20 per cent of AEG_{total}).

Set the date when the power units in SET_{sample} began to supply electricity to the grid. If none of the power units in SET_{sample} started to provide electricity to the grid more than 10 years ago, then use SET_{sample} to calculate the build margin. In this case, the date is year 2012. Thus, none of the power units in SET_{sample} started to provide electricity to the grid more than 10 years ago, and $SET_{>20\ per\ cent}$ is used to calculate the build margin. Therefore, steps (d), (e) and (f) are ignored.

The set of power units that have been built most recently are provided below.

Power Plant	No. of Units	Installed capacity (MW)	Fuel	Net Electricity generated (GWh)	Commissioning Date
October Ext	4x150+1x318.7	918.7	N.G- L.F.O	3231.1	2015-2019
Assiut West	8 x 125 +2 x 250	1500	N.G-L.F.O	5614.9	2015-2019-2020
South Helwan	3x650	1950	N.G-H.F.O	6660.6	2019
Cairo West 9	1	650	N.G- H.F.O	520.6	2021
Assiut-Walideya 3	1	650	N.G- H.F.O	104.7	2021
Total				**16131.9**	

The build margin emissions factor is the generation-weighted average emission factor (tCO_2/MWh) of all power units m during the most recent year y for which power generation data is available, calculated as follows:

$$EF_{grid,BM,y} = \frac{\sum_m EG_{m,y} . EF_{EL,m,y}}{\sum_m EG_{m,y}}$$

Where:

$EF_{grid,BM,y}$ = Build margin CO_2 emission factor in year y (tCO_2/MWh)
$EG_{m,y}$ = Net quantity of electricity generated and delivered to the grid by power unit m in year y (MWh)
$EF_{EL,m,y}$ = CO_2 emission factor of power unit m in year y (tCO_2/MWh)
M = Power units included in the build margin
Y = Most recent historical year for which power generation data is available

The list of each power unit and its specific CO_2 emissions per MWh are specified in the table below.

Table: Calculation of the build margin emission factor

Power Plant	Net Electricity Generated (MWh)	tCO_2/MWh	tCO_2
October Ext	3231100	0.419	1353219
Cairo West 9	520600	0.600	312543.2
West Damietta Ext	1275200	0.419	534523.8
West Damietta	2253800	0.420	946481.6
Burullus	20786500	0.287	5971005
Beni Suef	16749500	0.436	7309244
New Capital	12477200	0.357	4456634
Assiut-Walideya 3	104700	0.830	86931.04
Assiut West	5614900	0.422	2368701
South Helwan	6660600	0.469	3126113
Total	**69674100**		**26465395**

The CO_2 emission factor of each power unit m ($EF_{EL,m,y}$) is determined as per the guidance in Step 4 above for the simple OM using Options A1, using for y the most recent historical year for which electricity generation data is available, and using for "m" the power units included in the build margin.

Build Margin Grid Emissions Factor = 0.3798 tCO_2/MWh

Step 6: Calculate the combined margin emissions factor

The calculation of the combined margin (CM) emission factor ($EF_{grid,CM,y}$) is based on the Weighted average CM, as follows:

$EF_{grid,CM,y} = EF_{grid,OM,y} \times W_{OM} + EF_{grid,BM,y} \times W_{BM}$

Where:

$EF_{grid,BM,y}$ = Build margin CO_2 emission factor in year y (tCO_2/MWh)
$EF_{grid,OM,y}$ = Operating margin CO_2 emission factor in year y (tCO_2/MWh)
W_{OM} = Weighting of operating margin emissions factor (%)
W_{BM} = Weighting of build margin emissions factor (%)

The following default values are used for this wind power generation project activity (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods: W_{OM} = 0.75 and W_{BM} = 0.25

Combined Margin (CM) Grid Emissions factor = 0.4271 tCO_2/MWh

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

Data / Parameter Table 1.

Data / Parameter:	**$EF_{grid, OM, y}$**
Methodology reference	ACM0002 (Version 21.0)
Data unit	tCO_2/MWh
Description	Operating Margin CO_2 emission factor in the year y
Measured/calculated/default	Calculated
Data source	Calculated using data from Egyptian Electricity Holding Company annual reports
Value(s) of monitored parameter	0.4429
Measurement/ Monitoring equipment (if applicable)	Not Applicable
Measuring/reading/ recording frequency (if applicable)	Not applicable
Calculation method (if applicable)	Calculated as per TOOL07 using the ex-ante option. The 03 most recent years being used are 2018/2019; 2019/2020; 2020/2021.
QA/QC procedures	Not applicable
Purpose of data	To calculate baseline emissions
Additional comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter:	**$EF_{grid, BM, y}$**
Methodology reference	ACM0002 (Version 21.0)
Data unit	tCO_2/MWh
Description	Build Margin CO_2 emission factor in the year y
Measured/calculated/default	Calculated
Data source	Calculated using data from Egyptian Electricity Holding Company annual reports

Value(s) of monitored parameter	0.3798
Measurement/ Monitoring equipment (if applicable)	Not Applicable
Measuring/reading/ recording frequency (if applicable)	Not Applicable
Calculation method (if applicable)	Calculated as per TOOL07 using the ex-ante option. The 03 most recent years being used are 2018/2019; 2019/2020; 2020/2021.
QA/QC procedures	Not applicable
Purpose of data	To calculate baseline emissions
Additional comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter:	**$EF_{grid, CM, y}$**
Methodology reference	ACM0002 (Version 21.0)
Data unit	tCO_2/MWh
Description	Combined Margin CO_2 emission factor in the year y
Measured/calculated/default	Calculated.
Data source	Calculated from $EF_{grid,OM,y}$ and $EF_{grid,BM,y}$ above.
Value(s) of monitored parameter	0.4271
Measurement/ Monitoring equipment (if applicable)	Not applicable
Measuring/reading/ recording frequency (if applicable)	Not applicable
Calculation method (if applicable)	The combined margin emissions factor is calculated as follows: $\mathbf{EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}}$ Where: $EF_{grid,BM,y}$= Build margin CO_2 emission factor in year *y* (tCO_2/MWh) $EF_{grid,OM,y}$= Operating margin CO_2 emission factor in year *y* (tCO_2/MWh) W_{OM} = Weighting of operating margin emissions factor (%) = 75% W_{BM}= Weighting of build margin emissions factor (%) = 25%
QA/QC procedures	Not applicable
Purpose of data	To calculate baseline emissions
Additional comments	This parameter is fixed ex-ante for the entire crediting period.

B.6.3. Ex-ante calculation of emission reductions

Project emissions

The proposed project activity will calculate project emissions according to ACM0002. Thus, for all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected. Since this proposed project activity is not geothermal, solar or hydro:

$PE_y = 0$

Baseline emissions

The proposed project activity will calculate baseline emissions according to ACM0002. Baseline emissions include only CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

$$\mathbf{BE_y = EG_{PJ,y} \times EF_{grid,CM,y}}$$ ACM0002 Equation 11

Where:

BE_y = Baseline emissions in year y (t CO_2/yr)
$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)
$EF_{grid,CM,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of "TOOL07: Tool to calculate the emission factor for an electricity system" (t CO2/MWh)

Since the project activity is the installation of a Greenfield power plant, then:

$$\mathbf{EG_{PJ,y} = EG_{facility,y}}$$ ACM0002 Equation 12

Where:

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)
$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

Leakage

No leakage emissions are considered according to ACM0002. The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport etc.) are neglected.

Emission reductions are calculated as follows:

$$\mathbf{ER_y = BE_y - PE_y}$$ ACM0002 Equation 17

Where:

ER_y = Emission reductions in year y (t CO_2e/yr)
BE_y = Baseline emissions in year y (t CO_2e/yr)
PE_y = Project emissions in year y (t CO_2/yr)

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

Year	Baseline emissions (t CO_2e)	Project emissions (t CO_2e)	Leakage (t CO_2e)	Emission reductions (t CO_2e)
Year 1	8,757	0	0	8,757
Year 2	8,582	0	0	8,582
Year 3	8,522	0	0	8,522
Year 4	8,462	0	0	8,462
Year 5	8,403	0	0	8,403
Year 6	8,344	0	0	8,344
Year 7	8,286	0	0	8,286
Year 8	8,228	0	0	8,228
Year 9	8,170	0	0	8,170
Year 10	8,113	0	0	8,113
Total	83,867	0	0	83,867
Total number of crediting years	**10**			
Annual average over the crediting period	**8,387**	**0**	**0**	**8,387**

B.7. Monitoring plan

Following guidance provided by A.M.S-I.D, all data collected as part of monitoring will be archived electronically and be kept at least for two years after the end of the last crediting period. 100% of the data will be monitored, unless calculated as indicated in the table above. All measurements will be conducted with calibrated measurement equipment according to relevant industry standards.

In addition, A.M.S-I.D states that the monitoring provisions in the tools referred to in this methodology apply. Accordingly, $EG_{facility,y}$ data should be determined as per TOOL05, and $EF_{grid,CM,y}$ data should be determined as per TOOL07. When applying the tools, requirement for the $EG_{PJ,grid,y}$ should apply to parameter $EG_{facility,y}$.

The effective Monitoring Plan to be put in place will have the following objectives:

• Allocate roles and responsibilities to project staff
• Gather data on the net electricity supplied to the grid by the project;
• Establish Quality Assurance & Quality Control procedures, as well as data archiving procedures;
• Generate periodical reports for verification purposes indicating the amounts of CO2 reduced by the project.

Electricity generation will be monitored automatically by the Project owner and will be crosschecked using electricity dispatch reports (or electricity invoices, or sales receipts. A reliable third-party reference will be preferred, if available. Otherwise, the most reliable reference possible). Electricity data will be aggregated monthly and presented as a summary in periodical monitoring report.

Metering

The project electricity generation will be monitored through the use of metering equipment at the relevant delivery point connecting the power generated to the grid.

There will be sets of two metering system equipment:

1. Main metering system equipment
2. Backup metering system equipment

Regarding the metering system, TAQA PV for Solar Energy is responsible for adjust, operate, check and maintain the Primary Meters and the Back Up Meters. The TAQA PV for Solar Energy and EETC both have the right to read either meter and the two meters will have the provisions to record on memory the accumulated kilowatt hours. The metering results will be supplied by EETC on a monthly basis.

Recording and Archiving:

Electricity generated by the Project and supplied to the national grid will be monitored and recorded by a Data Management System at the on-site control centre. Collected data will be cross-checked against relevant minutes of meetings as well as any other pertinent records concerning the electricity production upon which the invoices to EETC are prepared. The Project owner will ensure that the meter readings be readily available for verification.

Data will be recorded electronically as well as on paper for backup. All the records or copies of these will be kept by the project owner for verification purposes. All data collected as part of monitoring should be archived electronically and kept for at least 2 years after the end of the last crediting period.

O&M Logs

Each shift leader will maintain daily operation and maintenance logs on a real time basis. They will provide detailed on-the-spot information about the operations at the plant and any event of significance will be reported.

Calibration

Project developers will be responsible for the equipment calibration and will do this according to international standards. Project developers will install and maintain all electricity metering equipment and associated transformers conforming to specifications set by EETC. The metering equipment is to be sealed in the presence of both TAQA PV for Solar Energy and EETC representatives. Seals can only be opened in the presence of RGWE and EEHC representatives for inspection, testing or calibration. The measured electricity meter installed is bidirectional type (meter technical details described in section B.7.1 above), and will be calibrated at least every three years. The national entity entrusted by the Ministry of Electricity and Energy, and NREA to do so is the Egyptian Electricity Transmission Company (EETC).

Management structure

Project staff have been identified to carry out the above tasks and ensure that the objectives of the monitoring plan are met. The Project Co-ordinator, will be the person responsible for data monitoring and recording activities. He will report to, the project's General Manager. The daily monitoring activities will be performed by technical Operators on-site, reporting to the Site Manager, who in turn reports to the Project Co-ordinator.

B.7.1. Data and parameters to be monitored *ex-post*

Data / Parameter Table 2.

Data / Parameter:	**$EG_{PJ,y}$ (SDG -7)**
Methodology reference	A.M.S-I.D (Version 18.0)
Data unit	MWh /year
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Measured/calculated /default	Measured
Data source	Direct measurement or calculated based on measurements from more than one electricity meters

<table>
<tr><td>Value(s) of monitored parameter</td><td>19,637 MWh (Average annual generation for 10 years)</td></tr>
<tr><td>Measurement/ Monitoring equipment</td><td>
<table>
<tr><td colspan="2"></td></tr>
<tr><td>Type of meter</td><td>Electronic Tri-vector and Bidirectional Energy Meters</td></tr>
<tr><td>Location of meter</td><td>Substation</td></tr>
<tr><td>Accuracy of meter</td><td>0.2s or 0.5s</td></tr>
<tr><td>Serial number of meter</td><td>To be confirmed during issuance time as per records</td></tr>
<tr><td>Calibration frequency</td><td>Once in five years</td></tr>
<tr><td>Date of Calibration/ validity</td><td>To be confirmed during verification</td></tr>
<tr><td>Reference No. of Calibration Certificate</td><td>To be confirmed during verification</td></tr>
<tr><td>Calibration Status</td><td>To be confirmed during verification</td></tr>
</table>
</td></tr>
<tr><td>Measuring/reading/ recording frequency</td><td>Continuous measurement & monthly recording</td></tr>
<tr><td>Calculation method (if applicable)</td><td>The main monitoring data will be provided by electricity meters (main and backup meters) installed for monitoring the electricity export to grid. Meters are located in the delivery point of the electricity generated to the grid.

Total MWh delivered by the project to the grid will be recorded by the export meters of accuracy Class 0.2%, or similar, calibrated at least every three years as certified by the Egyptian Electricity Transmission Company (EETC).</td></tr>
<tr><td>QA/QC procedures</td><td>Meters (main and backup) will be calibrated according to the Grid Procedures.
Data will be recorded using an automatic electronic system and will be crosschecked with a reliable reference (ex.: dispatch reports).</td></tr>
<tr><td>Purpose of data</td><td>To calculate baseline emissions</td></tr>
<tr><td>Additional comments</td><td>Data will be archived in paper & electronically for a period of 2 years beyond the end of crediting period or of the last issuance of credits for this project activity, whichever occurs later.</td></tr>
</table>

For Parameters to be monitored for E+/S+ assessments and SDG labels (positive impacts)

Data / Parameter:	**Local Employment Generation (SDG 8)**
Purpose:	*To justify SDG 8- Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all*

Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	Emission reductions achieved per year
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td></td><td></td></tr><tr><td>Parameter to be monitored</td><td>Emission reductions achieved per year</td></tr><tr><td>Frequency of monitoring</td><td>Yearly</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>NA</td></tr><tr><td>QA/QC</td><td>Reduced quantum of Greenhouse gases emitted to the atmosphere.</td></tr></table>
Remarks	Data will be archived in paper & electronically for a period of 2 years beyond the end of crediting period or of the last issuance of credits for this project activity, whichever occurs later.

Data / Parameter:	**Climate Action (SDG 13)**
Purpose:	*To justify SDG 13- Take urgent action to combat climate change and its impacts.*
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	Number of local employment generation including both direct or indirect employment during project construction and project operation.
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td></td><td></td></tr><tr><td>Parameter to be monitored</td><td>Number of local employments</td></tr><tr><td>Frequency of monitoring</td><td>Yearly</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>NA</td></tr><tr><td>QA/QC</td><td>Monitored data will be stored and archived till the end of the crediting period</td></tr></table>
Remarks	Data will be archived in paper & electronically for a period of 2 years beyond the end of crediting period or of the last issuance of credits for this project activity, whichever occurs later.

Data / Parameter:	**Long-term jobs (> 10 year) created/ lost (SJ01)**
Purpose:	The project activity leads long term to the employment generation
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity leads long term to the employment generation
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Number of people employed by the project will be monitored</td></tr><tr><td>Frequency of monitoring</td><td>Yearly</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>Not Applicable</td></tr><tr><td>QA/QC</td><td>Not Applicable</td></tr></table>
Remarks	Not Applicable

Data / Parameter:	**Short-term jobs (<1 year) created/ lost (SJ02)**
Purpose:	The project activity leads short term to the employment generation
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity leads long term to the employment generation
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Number of people employed by the project will be monitored</td></tr><tr><td>Frequency of monitoring</td><td>Yearly</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>Not Applicable</td></tr><tr><td>QA/QC</td><td>Not Applicable</td></tr></table>
Remarks	Not Applicable

Data / Parameter:	**Reducing / increasing accidents/incidents/fatality (SH03)**
Purpose:	to demonstrate positive impacts of aspects with baseline scenario / BAU / preexisting scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	Cause of Physical hazards in project sites due to human intervention or technical failure or emergency
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Number of trainings & physical hazards/incidents</td></tr><tr><td>Frequency of monitoring</td><td>Yearly</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>Not Applicable</td></tr><tr><td>QA/QC</td><td>Not Applicable</td></tr></table>
Remarks	Not Applicable

Data / Parameter:	**Specialized training / education to local personnel (SE01)**
Purpose:	The project owner has introduced component of training/ skilling of employed resources
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project owner has introduced component of training/ skilling of employed resources
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	<table><tr><td colspan="2"></td></tr><tr><td>Parameter to be monitored</td><td>Number of trainings undertaken</td></tr><tr><td>Frequency of monitoring</td><td>Yearly</td></tr><tr><td>Legal /regulatory / corporate limits (if any)</td><td>Not Applicable</td></tr><tr><td>QA/QC</td><td>Not Applicable</td></tr></table>
Remarks	Not Applicable

<table>
<tr><td>Data / Parameter:</td><td>CO_2 emissions (EA03)</td></tr>
<tr><td>Purpose:</td><td>The project activity will displace fossil fuel-based electricity generation that would have otherwise been provided by the operation and expansion of the fossil fuel-based power plants in Indian grid.</td></tr>
<tr><td>Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.</td><td>This aspect has a positive impact. There is no associated environment /social/ SDG risk.</td></tr>
<tr><td>Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG</td><td>
<table>
<tr><td></td><td></td></tr>
<tr><td>Parameter to be monitored</td><td>Monitoring and calculation of CO2 emission reduction</td></tr>
<tr><td>Frequency of monitoring</td><td>Yearly</td></tr>
<tr><td>Legal /regulatory / corporate limits (if any)</td><td>Not Applicable</td></tr>
<tr><td>QA/QC</td><td>Not Applicable</td></tr>
</table>
</td></tr>
<tr><td>Remarks</td><td>Not Applicable</td></tr>
</table>

<table>
<tr><td>Data / Parameter:</td><td>Replacing fossil fuels with renewable sources of energy (ENR07)</td></tr>
<tr><td>Purpose:</td><td>To measure the total quantum of fossil fuel replaced due to the project activity against the indicator of quantum of fossil fuel-based electricity replaced due to the project activity</td></tr>
<tr><td>Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.</td><td>This aspect has a positive impact. There is no associated environment /social/ SDG risk.</td></tr>
<tr><td>Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG</td><td>
<table>
<tr><td></td><td></td></tr>
<tr><td>Parameter to be monitored</td><td>total quantum of fossil fuel replaced due to the project activity against the indicator of quantum of fossil fuel-based electricity replaced due to the project activity</td></tr>
<tr><td>Frequency of monitoring</td><td>Yearly</td></tr>
<tr><td>Legal /regulatory / corporate limits (if any)</td><td>Not Applicable</td></tr>
<tr><td>QA/QC</td><td>Not Applicable</td></tr>
</table>
</td></tr>
<tr><td>Remarks</td><td>Not Applicable</td></tr>
</table>

<table>
<tr><td>Data / Parameter:</td><td>End of life products/ equipment (EL06)</td></tr>
<tr><td>Purpose:</td><td>To mitigate/reduce an environmental impact identified as harmful in the risk assessment and to develop a Program of Risk Management Actions plan to address the risk of PRMA 03. Improper disposal of generated at the end-of-life products/ equipment may create soil contamination.</td></tr>
<tr><td>Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.</td><td>This aspect has a positive impact. There is no associated environment /social/ SDG risk.</td></tr>
<tr><td>Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG</td><td>
<table>
<tr><td colspan="2"></td></tr>
<tr><td>Parameter to be monitored</td><td>End of life products/ equipment (EL06)</td></tr>
<tr><td>Frequency of monitoring</td><td>Yearly</td></tr>
<tr><td>Legal /regulatory / corporate limits (if any)</td><td>Not Applicable</td></tr>
<tr><td>QA/QC</td><td>Record of end-of-life solar PV module, associated auxiliaries and related structures will be maintained and summited during verification.</td></tr>
</table>
</td></tr>
<tr><td>Program of Risk Management Actions to mitigate risk related to aspect (if any for aspects assessed to be harmful)</td><td>
<table>
<tr><th>S.No.</th><th>Action and targets</th><th>Responsibility</th><th>Resource Requirement</th><th>Target to be Achieved by (insert date)</th><th>Key Performance Indicators (KPI)</th><th>Targets achieved on (insert date)</th></tr>
<tr><td>1</td><td>Expired-waste records</td><td>Organization’s management</td><td>1</td><td>29/09/2031</td><td>Expired - waste records</td><td>29/09/2031</td></tr>
<tr><td>2</td><td>Filing of return</td><td>Organization’s management</td><td>1</td><td>29/09/2031</td><td>Filled Return forms</td><td>29/09/2031</td></tr>
<tr><td colspan="7"></td></tr>
<tr><td colspan="3">Date of Closing the Program:</td><td colspan="2">29/09/2031</td><td colspan="2">29/09/2031</td></tr>
<tr><td colspan="7"></td></tr>
</table>
</td></tr>
</table>

B.7.2. Data and parameters to be monitored for E+/S+ assessments (negative impacts)

No negative Impacts

B.7.3. Sampling plan

Sampling is not required for this project activity.

B.7.4. Other elements of the monitoring plan

Refer monitoring plan details mentioned in section B.7

Section C. Start date, crediting period type and duration

C.1. Start date of the Project Activity

As per the paragraph 38 of the project standard V3.1, start of commercial operations has been considered as the start date. Hence project commissioning date (COD), on which project is connected to grid and started generating power and exporting to the grid there by started generating GHG emission reductions is considered as start date. Start date for all the projects of the bundle is given in the below table.

Project	Start Date
Project - 11.03 MW bundled solar project	30/09/2021

The start date of the project is after 1st January 2016 and complies with the GCC project standard guidelines. The start date for this project is the date of the commercial operation of the project i.e 30/09/2021.

C.2. Expected operational lifetime of the Project Activity

25 Years

C.3. Crediting period of the Project Activity

Crediting period start date: 30/09/2021

Crediting period end date: 29/09/2031 (both days included

C.3.1. Start and end date of the crediting period

Crediting period start date: 30/09/2021

Crediting period end date: 29/09/2031 (both days included)

C.3.2. Duration of crediting period

10 years i.e from 30/09/2021 to 29/09/2031

Section D. Environmental impacts

D.1. Analysis of environmental impacts

The project activity does not involve any major construction activity. It primarily requires the installation of the solar PV panels, inverters, and interface of the generators with the Egyptian Electricity Company by setting up HT transmission lines and installation of other accessories.

D.2. Environmental impact assessment and management action plans

The following environmental impacts were evaluated as part of Environmental & Social Impact Assessment (ESIA):

Potential impacts on Meteorology, Climate & Air Quality; Soils & Geology; Hydrology & Hydrogeology; Noise & Vibration; Landscape and Visual; Terrestrial Biodiversity; Archaeology & Cultural Heritage; Traffic & Transport Infrastructure; Socio -Economic Aspects; Utilities Infrastructure and Usage; Waste Management; Health and Safety Aspects.

There will be no trans boundary effects from this project activity as any potential impacts are confined within the borders of Egypt. The Environmental & Social Impact Assessment (ESIA) process for the proposed establishment of a solar power plants has been done.

In assessing the environmental feasibility of the project activity, the requirements of all relevant legislations have been considered. This relevant legislation has informed the identification and development of appropriate management and mitigation measures that will be implemented to minimize the potential impacts associated with the project activity. No potential impact identified in Air, Water, Noise and Soil monitoring during EIA process.

Section E. Environmental and social safeguards

E.1. Environmental safeguards

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Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards								Project Owner's Conclusion	
		Description of Impact *(positive or negative)*	**Legal/ voluntary corporate requirement / regulatory/ voluntary corporate threshold Limits**	**Do-No-Harm Risk Assessment (choose which ever is applicable)**			**Risk Mitigation Action Plans for aspects marked as Harmful**		**Performance indicator for monitoring of impact**	***Ex-ante* scoring of environmental impact**	***Explanation of the Conclusion***
				Not Applicable	**Harmless**	**Harmful**	**Operational Controls**	**Program of Risk Management Actions**	**Monitoring parameter and frequency of monitoring**	**Ex- Ante scoring of the environmental impact (as per scoring matrix Appendix-02)**	**Ex- Ante description and justification/explanation of the scoring of the environmental impact**
Environmental Aspects on the identified categories[40] indicated below.	*Indicators for environmental impacts*	*Describe and identify anticipated and actual significant environmental impacts, both positive and negative from all sources (stationary and mobile) during normal and abnormal/emergency conditions, that may result from the construction and operations of the Project Activity, within and outside the project boundary, over which the Project Owner(s) has/have control.*	*Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified risks of environmental impacts.*	*If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as* ***Not Applicable***	*If environmental impacts exist but are expected to be in compliance with applicable national regulatory /stricter voluntary corporate requirements and will be within legal/ voluntary corporate limits by way of plant design and operating principles, then the Project Activity is unlikely to cause any harm (is*	*If negative environmental impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-safe) and shall be indicated as* ***Harmful***	*Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as '****Harmful*** *at least to a level that is in compliance with applicable legal/regulatory requirements or industry best practice or stricter voluntary*	*Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been identified as* ***Harmful****.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well including the data source.*	*-1* *0* *+1*	*Confirm the score of environmental impact of the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.*

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

					safe) and shall be indicated as ***Harmless*** */If the project has a positive impact on the environment mark it as "harmless" as well.*		*corporate requirements*				
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 13 (e) (ii)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 22*	
Environment - *Air*	*SO_x emissions (EA01)*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
	NO_x emissions (EA02)	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
	CO_2 emissions (EA03)	In absence of the project activity the stated amount of generated electricity would be generated by the operation of grid - connected power plants. The caused CO2 emissions by the grid - connected power plants is expressed as grid emission factor, i.e. t CO2/MWh generated grid electricity, due to fossil fuel based grid power plants. Therefore the non -fossil fuel, zero emission - generated	Law 4/1994 amended by Law 9/2009 and ER 710/2012	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	The generated electricity the project activity will be continuously measured and the related CO2 emission reduction will be calculated according to the applied methodology AMS.I-D Version (18.0)	+1	However, in the baseline scenario (grid) some of the fossil fuel power plants may have emitted CO_2 emissions, which has been calculated by the combined margin emission factor as mentioned in the PSF. Therefore, emission reductions are expected to be reduced which will be regularly monitored and verified ex-post and therefore is

		electricity by the project activity will substitute the grid electricity and related CO2 emissions, i.e. CO2 emission reduction = generated electricity by the project activity x grid emission factor.									
	CO emissions (EA04)	*N/A*	*Law 4/1994 amended by Law 9/2009 and ER 710/2012*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
	Suspended particulate matter (SPM) emissions (EA05)	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
	Fly ash generation (EA06)	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
	Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
	Odor (EA08)	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*
	Noise Pollution (EA09)	NA	Article 42 of Law 4/1994 amended by Law 9/2009	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	This is a solar power project and hence there is no noise pollution from this	*N/A*	No significant noise emission is expected from project activity during operational phase as there is no major equipments in solar project who generate noise.

			Article 44 of ER 710/2012						project. Therefore the monitoring of this parameter is not required.		
	Others (EA10)	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Environment - *Land*	*Solid waste Pollution from Plastics (EL-01)*	This is a solar power project and hence this aspect has no impact on the project activity	NA	*NA*	*NA*	*NA*	*NA*	*NA*	This is a solar power project and hence there is no pollution from plastic from this project. Therefore the monitoring of this parameter is not required.	*NA*	*NA*
	Solid waste Pollution from Hazardous wastes (EL02)	NA	Law 4/1994 amended by Law 9/2009 and ER 1095/2011 amended by Decree 710/2012)	Not Applicable as no emissions occur in the project scenario and therefore is not expected to or does not cause any harm.	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
	Solid waste Pollution from Bio-medical wastes (EL03)	NA	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	No significant bio-medical waste will be generated from the project activity. Hence,, this parameter will not be scored.
	Solid waste Pollution from E-	*There is no e-waste generated at the project site.*	Law 4/1994 amended by Law	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	NA

	wastes (EL04)		9/2009 and ER 1095/2011 amended by Decree 710/2012)								
	Solid waste Pollution from Batteries (EL05)	*There is no battery waste generated at the project site.*	Not Applicable	Not Applicable	-	-	NA	Not Applicable	Not Applicable	Not Applicable	NA
	Solid waste Pollution from end-of-life products/ equipment (EL06)	Damaged/ disposed Solar PV modules at site might have negative environmental impacts if not managed well after their end of-life	Law 4/1994 amended by Law 9/2009 and ER 1095/2011 amended by Decree 710/2012)	-	-	-	Sold waste from the project activity must be disposed as applicable law	Project owner management is responsible to maintain records and dispose all products after ending lifecycle as per applicable law	-	+1	Project Owner is responsible to maintain records and dispose all products after ending lifecycle as per applicable law.
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)	*There is no soil pollution caused by chemicals at the project site.*	N/A	-	-	-	N/A	N/A	N/A	N.A.	N/A
	land use change (change from cropland /forest land to project land) (EL08)	There is no land use change the land wasn't cropland or forest land	N/A	-	-	-	N/A	N/A	N/A	0	There is no chance of soil erosion during operation phase of the project activity However, the in the baseline scenario (grid) some of the fossil fuel power plants may have emitted soil erosion emissions, on which data is not available and can't be

											quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.
	Others (EL09)	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Environment - *Water*	*Reliability/ accessibility of water supply (EW01)*	*N/A*	Ministerial Decree 44/2000, Decree of Law 93/1962	N/A	-	-	-	N/A	N/A	*N/A*	Supply water from local body will be used and necessary approval to be obtained. However, the in the baseline scenario (grid) some of the fossil fuel power plants may have emitted accessibility of water emissions, on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.
	Water Consumption from ground and other sources (EW02)	*There is no water consumption from ground for the project use.*	Ministerial Decree 44/2000, Decree of Law 93/1962	N/A	-	-	N/A	N/A	N/A	*There is no water consumption from ground for the project use.*	No ground water will be consumed in all sites of the project activity & necessary permission to be obtained from concerned local authority in case use ground water in future. However, the in the baseline scenario (grid) some of the fossil fuel power plants may have emitted water consumption emissions, on which data is not available and can't be

											quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.
	Generation of wastewater (EW03)	NA	Ministerial Decree 44/2000, Decree of Law 93/1962	N/A	-	-	N/A	N/A	N/A	NA	There is no significant effect as provisions of septic tank and soak pits will be provided onsite for treatment and disposal of sewage, thereby minimizing the impacts of wastewater discharge. Planning of toilets, soak pits and septic tanks, waste collection areas should be away from natural drainage channels However, the in the baseline scenario (grid) some of the fossil fuel power plants may have generation of waste water on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.
	Wastewater discharge without/with insufficient treatment (EW04)	NA	Ministerial Decree 44/2000, Decree of Law 93/1962	N/A	-	-	N/A	N/A	N/A	NA	There is no significant effect as provisions of septic tank and soak pits will be provided onsite for treatment and disposal of sewage, thereby minimizing the impacts of wastewater discharge. Planning of toilets, soak pits

											and septic tanks, waste collection areas should be away from natural drainage channels However, the in the baseline scenario (grid) some of the fossil fuel power plants may have generation of waste water or its treatment on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.
	Pollution of Surface, Ground and/or Bodies of water (EW05)	NA	Ministerial Decree 44/2000, Decree of Law 93/1962	N/A	-	-	N/A	N/A	N/A	NA	There is no significant effect as provisions of septic tank and soak pits will be provided onsite for treatment and disposal of sewage, thereby minimizing the impacts of wastewater discharge. Planning of toilets, soak pits and septic tanks, waste collection areas should be away from natural drainage channels However, the in the baseline scenario (grid) some of the fossil fuel power plants may have from surface water on which data is not available and can't be quantified and therefore the emission reductions cannot be quantified and therefore this parameter will not be scored.

	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Environment – *Natural Resources*	*Conserving mineral resources (ENR01)*	*N/A*	N/A	N/A	-	-	N/A	N/A	N/A	N.A.	N/A
	Protecting/ enhancing plant life (ENR02)	NA	Law 102 of 1983	N/A	-	-	N/A	N/A	N/A	NA	The project activity has been implemented in barrel land and no trees have been removed from the site due to project activity. Therefore this parameter will not be scored.
	Protecting/ enhancing species diversity (ENR03)	NA	Law 102 of 1983	N/A	-	-	N/A	N/A	N/A	NA	The project activity has been implemented in barrel land and no trees have been removed from the site due to project activity. Therefore this parameter will not be scored.
	Protecting/ enhancing forests (ENR04)	NA	Law 102 of 1983	N/A	-	-	N/A	N/A	N/A	NA	No forest land has been used for the project activity. Therefore this parameter will not be scored.
	Protecting/ enhancing other depletable	NA	Law 102 of 1983	N/A	-	-	N/A	N/A	N/A	NA	The project activity has been implemented in barrel land and no trees

	natural resources (ENR05)										have been removed from the site due to project activity or no other natural resource has been used to operate project activity Therefore this parameter will not be scored.
	Conserving energy (ENR06)	*N/A*	(Decree No 203/2014)	N/A	-	-	N/A	N/A	N/A	N.A.	All efficient products & instruments has been used in the project activity, hence no significant impact due to this. Therefore this parameter will not be scored.
	Replacing fossil fuels with renewable sources of energy (ENR07)	Positive	(Decree No 203/2014)	N/A	-	-	N/A	N/A	N/A	+1	*The project replaces fossil fuels with renewable sources of energy since it is a Solar power plant.*
	Replacing ODS with non-ODS refrigerants (ENR08)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Net Score:			**+3**								
Project Owner's Conclusion in PSF:				The Project Owner confirms that the Project Activity will not cause any net harm to 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 (*positive or negative)*	**Legal requirement /Limit, Corporate policies / Industry best practice**	**Do-No-Harm Risk Assessment (Choose which ever is applicable)**			**Risk Mitigation Action Plans (for aspects marked as Harmful)**	**Performance indicator for monitoring of impact.**	**Ex-ante scoring of environmental impact**	**Explanation of the Conclusion**
				Not Applicable	**Harmless**	**Harmful**	**Operational / Management Controls**	**Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)**	**Ex- Ante scoring of social impact of the project**	**Ex- Ante description and justification/explanation of the scoring of social impact of the project**
Social Aspects on the identified categories[41] indicated below.	*Indicators for social impacts*	*Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all sources during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control*	*Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts*	*If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as **Not Applicable***	*If social impacts exist but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as **Harmless**), project having positive impact on society. To the BAU / baseline scenario must also mark their*	*If negative social impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm and shall be indicated as **Harmful***	*Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as **Harmful**.*	*Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source*	*-1* *0* *+1*	*Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/regulatory limits (if any) including basis of conclusion*

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

					*aspect as **"harmless"***					
Reference to paragraphs of Environmental and Social Safeguards Standard		*Paragraph 12 (a)*	*Paragraph 13 (c)*	*Paragraph 13 (d) (i)*	*Paragraph 13 (d) (ii)*	*Paragraph 13 (d) (iii)*	*Paragraph 13 (e) (i)*	*Paragraph 12 (c) and Paragraph 13 (f)*	*Paragraph 23*	
Social - *Jobs*	*Long-term jobs (> 10 year) created/ lost (SJ01)*	The project activity leads to the employment generation	Not Applicable	Not Applicable	Not Applicable	Not Applicable	There are no harmful impacts of the project activity as it leads to the employment generation.	There have been no additional actions that have been identified as harmful.	+1	
	New short-term jobs (< 1 year) created/ lost (SJ02)	The project activity leads to the employment generation	Not Applicable	Not Applicable	Not Applicable	Not Applicable	There are no harmful impacts of the project activity as it leads to the employment generation.	There have been no additional actions that have been identified as harmful.	+1	
	Sources of income generation increased / reduced (SJ03)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	
	Avoiding discrimination when hiring people from different race, gender, ethnics, religion, marginalized groups, people with disabilities (SJ04)	The project owner Avoid discrimination when hiring people.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	0	The project will not make employment decisions based on personal characteristics unrelated to inherent job requirements. The project will base

	(Human rights)									the employment relationship on the principle of equal opportunity and fair treatment and will not discriminate with respect to any aspects of the employment relationship. The project will take measures to prevent and address harassment, intimidation, and/or exploitation, Therefore this parameter will not be scored.
Social - *Health & Safety*	*Disease prevention (SHS01)*	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Occupational health hazards (SHS02)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Reducing / increasing accidents/Incidents/fatality (SHS03)	The project developer will provide safety trainings to ensure security	EHS policy implemented by the project developer	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Training records	+1	Site employees receive complete safety training
	Reducing / increasing crime (SHS04)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Reducing / increasing food wastage (SHS05)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Reducing / increasing indoor air pollution (SHS06)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity

	Efficiency of health services (SHS07)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Sanitation and waste management (SHS08)	Suitable and sufficient portable sanitary conveniences are provided at readily accessible places. Sanitary facilities comply with HSE requirements. Wastewater discharge complies with legal limits.	National law regulates generation, handling, storage, collection, transportation, and disposal of waste.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	0	Sanitary facilities comply with HSE requirements. And it can't be monitored so it will not be scored
	Other health and safety issues (SHS09)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Add more rows if required									
Social - *Education*	*specialized training / education to local personnel (SE01)*	The project owner has introduced component of training/ skilling of employed resources	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Training Records produced/maintained by the project owner will be used to monitor. Refer to Section B.7.1 of the PSF	+1	Project Owner will take Initiative towards provisioning of on-job training to employee
	Educational services improved or not (SE02)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Project-related knowledge dissemination effective or not (SE03)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Other educational issues (SE03)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity

	Add more rows if required (SE04)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
Social - *Welfare*	*Improving/ deteriorating working conditions (SW01)*	To avoid the potential negative impacts association with substandard labour practices a detailed strategy is to be developed setting common standards for labour and working conditions, and code of conduct	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Community and rural welfare (indigenous people and communities) *(SW02)*	It is expected that the project will result in revenue for local business.	National law regulates businesses and taxation	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	0	This aspect is can't be monitored so it will not be scored.
	Poverty alleviation (more people above poverty level) (SW03)	It is not expected that the project will impact poverty	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Improving / deteriorating wealth distribution/ generation of income and assets (SW04)	It is expected that the project will generate income.	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	0	This aspect is can't be monitored so it will not be scored.
	Increased or / deteriorating municipal revenues (SW05)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Women's empowerment (SW06) *(Human rights)*	The project is solar power plan and there is no women's empowerment in this project	Not Applicable	Not Applicable	Harmless	Not Applicable	Not Applicable	Not Applicable	0	The project is solar power plant and there is no women's empowerment in this project , and there is no legal requirement

	Reduced / increased traffic congestion (SW07)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Exploitation of Child labour *(Human rights)* *(SW08)*	Positive impact is created by the project activity throughout project life as no person below the legal working limit will be employed at the site.	Egyptian labor law	Not Applicable	Harmless Child Labor and forced labor are strictly prohibited by law	Not Applicable	Not Applicable	HR records	0	The project is unlikely to cause any harm.
	Minimum wage protection *(Human rights) (SW09)*	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Abuse at workplace. (With specific reference to women and people with special disabilities / challenges) *(Human rights) (SW10)*	There is no abuse at the workplace	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NA	0	This aspect is scored 0 as it can't be monitored
	Other social welfare issues (SW11)	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Avoidance of human trafficking and forced labour *(Human rights)* *(SW12)*	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs *(Human rights)* *(CW13)*	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity

	Provisions of resettlement and human settlement displacement *(Human rights)* *(CW14)*	This aspect is not applicable to this project activity	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	This aspect is not applicable to this project activity
	Add more rows if required									
Net Score:		+4								
Project Owner's Conclusion in PSF:		The Project Owner confirms that the Project Activity will not cause any net harm to society.								

Section F. United Nations Sustainable Development Goals (SDG)

UN-level SDGs		**UN-level Target**	**Declared Country-level SDG**	**Defining Project-level SDGs**			
				Project-level SDGs	**Project-level Targets/Actions**	**Contribution of Project-level Actions to SDG Targets**	**Monitoring**
Describe UN SDG targets and indicators *See: https://unstats.un.org/sdgs/indicators/indicators-list/*		*Describe the UN-level target(s) and corresponding indicator no(s)*	*Has the host country declared the SDG to be a national priority? Indicate Yes or No*	*Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column for guidance.*	*Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).*	*Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined*	*Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG*

						project-level SDG targets	*indicator and its corresponding target, frequency of monitoring and data source*
Goal 1: End poverty in all its forms everywhere		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 3. Ensure healthy lives and promote well-being for all at all ages		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 5. Achieve gender equality and empower all women and girls		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 6. Ensure availability and sustainable management of water and sanitation for all		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 7. Ensure access to		SDG target 7.2, "By 2030	Yes	Increase the share of renewables in the total	MWh/y From the start of operation	19,637 MWh/y From the start of	The net electricity

affordable, reliable, sustainable, and modern energy for all		increase substantially the share of renewable energy in the global energy mix" by the utilization of solar power as a renewable energy source" Indicator 7.2.1 Renewable energy share in the total final energy consumption. KPI - Amount of renewable energy supplied to grid for consumption.		installed power capacity connected to the national grid	onwards the project activity will deliver renewable energy to the grid .		operation onwards the project activity will deliver renewable energy to the grid .	which will be supplied to the grid by the project activity will be monitored continuously through energy meter (main and check meter) installed at the sub-station. The meters remain under the custody of state utility. Please refer to Section B.7.1 for monitoring details.		
Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all		SDG Target 8.2 "Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value added	Yes Yes	The number Of permanent created jobs, will be used as project-level indicator The project activity will create at least 2 permanent jobs in the renewable power sector.	The project activity will create at least 2 permanent jobs in the renewable power sector The vacancies of the jobs due to the project will be occupied one year after the operation start of the project activity		power plant contributes directly to achieve the SDG target, because the project activity creates jobs in the renewable energy sector, which diversify and upgrades the commonly used technology in	SDG Target 8.2 "Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value added	Yes	The total number of persons working in the project activity will be at least 2 permanent jobs in the renewable power sector based on the daily log available at site.

		and labour intensive sectors". Indicator 8.2.1: Annual growth rate of real GDP per employee				the energy sector of Egypt. Creating employment from project activity	and labour intensive sectors". Indicator 8.2.1: Annual growth rate of real GDP per employee
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 10. Reduce inequality within and among countries		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 11. Make cities and human settlements inclusive, safe, resilient, and sustainable		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 12. Ensure sustainable consumption and production patterns		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 13. Take urgent action to combat climate change and its impacts		SDG Target 13.A Integrate climate change measure s into national policies,	Yes	Quantum of GHG avoided due to the project activity	The project activity is expected to result in avoidance of 8,387 tCO_2e per annum.	Project activity results in avoidance of GHG emission by generation of electricity using renewable	Avoidance of GHG emission is estimated as product of electricity generated and

		strategies and planning. KPI - Amount of emission reduction achieved by project under UNFCCC/ GORD / Domestic market mechanism. Indicator 13.2.2: Total greenhouse gas emission s per year.				energy resources and its supply to the grid, which will avoid generation of equivalent quantum of electricity from fossil fuel-based power plant resulting in emission of CO_2.	supplied to the grid and grid emission factor. Please refer to Section B.7.1 for monitoring details.
Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 15. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

build effective, accountable, and inclusive institutions at all levels							
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development		Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

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

Section G. Local stakeholder consultation

G.1. MODALITIES FOR LOCAL STAKEHOLDER CONSULTATION

Local stakeholder consultation was carried out as a part of the project activity with the objective of obtaining view of the project stakeholders about the planned project including their feedbacks, and concerns. The Local Stakeholder consultation documents will be provided to GCC Verifier during validation of the project activity.

Project Owner	Location	Capacity	Meeting dates
TAQA PV for Solar Energy	Dina Farms	5.98 MW (DC capacity)	18/05/2022
	Soma bay-1	1.15 MW (DC capacity)	19/05/2022
	Soma Bay-2	3.9 MW (DC capacity)	20/05/2022

Identification of the stakeholder for the stakeholder meeting is provided below.

Stakeholders identified (Group of stakeholders identified)	Mode of invitation (means for inviting stakeholders)	Mode of communication
Stakeholders includes – 1. Local villagers 2. Local Labors 3. O&M contractors/Local vendors	Through notice	Feedback/Suggestion can be provided through the grievance register

Project representatives explained the project benefits and how project would help to fight against climate change and no any negative comments received during the local stakeholder round. The Minutes of meeting with commenting sheet from LSH, invitation letter receipt copy is submitted to the GCC Verifier for further check. Few queries raised during local stakeholder consultation are addressed satisfactorily.

Villagers were totally in support for setting up of these kinds of projects in the region. The Project owner also placed a grievance register onsite in where the stakeholder can put down his/her complain and the same if found genuine will be addressed immediately. Also, regular stakeholder engagement is one the key focus at the site.

The ongoing communication is being done via grievance register. The grievance register is placed on each site for the stakeholders to mention their concerns.

No grievance has been received till date.

G.2. SUMMARY OF COMMENTS RECEIVED

The Meeting started with opening speech by representative of project owner. As a part of the consultation process, the project representatives explained all stakeholders about the type of development through the project and the technology used for power generation towards enhancing stakeholders' awareness about the project. The stakeholders were also made aware about the employment opportunities and other benefits likely to be rendered through this project and the importance of setting up solar PV power plant, not only to tap the cleaner sources for energy generation but most to meet the ever-increasing energy demand of state and its contribution towards fighting against climate change. Project owner representative also elaborated about carbon mechanism & its requirement for the current project. After the detailed discussions, the session was open for questions from stakeholders.

Most of the questions were related to employment opportunities, economic development, benefits from project to villagers and other development activities. The question raised by the villagers are summarized below:

Q: Will there be employment generation due to the project activity for persons from the adjoining areas?

A: Responding about the increased possibilities for employment of local personals due to the project activity, it was pointed out that preference would be given for locals in the employment opportunities.

Q: Can local villagers obtain electricity directly from the project activity?

A: Responding to the queries, representative of the project owner explained that the project is supplying power to the grid through the local substation. It the grid from which the power is supplied to the village households.

G.3. CONSIDERATION OF COMMENTS RECEIVED

The communities and the community representatives in and around study area were aware about and in favor of the proposed solar power project and expressed their assurance for support and cooperation for project activity. They didn't seem to have any objections or problem related to the development of solar power project in their area.

There were no comments raised by the stakeholders and they were totally in support for setting up of these kinds of projects in the region.

Section H. Approval and authorization

Not applicable

APPENDIX 1. CONTACT INFORMATION OF PROJECT OWNERS

Project Owner name (as per LON/LOA)	TAQA PV for Solar Energy
Country	Egypt
Address	2 CE Morshedy st. Laselky, Maadi, Cario, Egypt
Telephone	+(202) 27034274
Fax	+(202) 27034301
E-mail	sherif.mubarak@Taqa.com.eg
Website	www.taqa.com.eg
Contact person	Mr. Sherif Mubarak

APPENDIX 2. AFFIRMATION REGARDING PUBLIC FUNDING

Not Applicable

APPENDIX 3. APPLICABILITY OF METHODOLOGY(IES)

Refer Section B.2

APPENDIX 4. FURTHER BACKGROUND INFORMATION ON EX ANTE CALCULATION OF EMISSION REDUCTIONS

Please refer to section B.6.2

APPENDIX 5. FURTHER BACKGROUND INFORMATION ON MONITORING PLAN

Please refer to section B.7

APPENDIX 6. SUMMARY REPORT OF COMMENTS RECEIVED FROM LOCAL STAKEHOLDERS

Information About the Participant					
Name Surname	**Gender (M/F)**	**How did they hear about the meeting?**	**Was the information given about the project enough? (Y/N)**	**Comments in the Local language**	**Comments on the environmental or social effects of the project**
Sameer Subhi	M	Notice	Y	خلق فرص عمل	created a job opportunity
Nader Mohammad	M	Notice	Y	خلق فرص للمجتمع المحلي	Create opportunity for local community
Sami Ahmad	M	Notice	Y	زيادة الوعي عند المجتمع المحلي	Increase local community awareness
Mahmoud Yahia	M	Notice	Y	خلق فرص عمل طويلة الامد و المحافظة على البيئة	Create long-term job opportunity and preserving the environment
Abdallah faleh	M	Notice	Y	خلق فرص عمل و له تأثير ايجابي على البيئة	Creat job opportunity and positive impact to the environment

APPENDIX 7. SUMMARY OF DE-REGISTERED CDM PROJECT OR PROJECTS FROM OTHER GHG / NON-GHG PROGRAMS (TYPE B)

>>

Complete this form in accordance with the instructions attached at the end of this form.	
Program Name	
Project registration number	
Date of registration in the program	
Title of the Project Activity	
Project de-registration reference number	
Date of de-registration of the Project	
Project Participants (Authorized by the host / annex 1 country letter of approval)	
Country where the project is located	
Applied methodology(ies) (Provide reference and version number(s))	

Pre-registration changes to the Project Activity

(Tick as applicable)

Pre-registration Changes	Reference number	Approved	Provide a summary of pre-registration changes
Deviations from approved baseline and monitoring methodology		☐	
Deviations from applied Tool & Guidance		☐	
Deviations from the rules		☐	
Other…….		☐	

Post-registration changes to the Project Activity

(Tick as applicable)

Post registration Changes	Reference number	Approved	Provide a summary of post-registration changes
Change in project design		☐	
Request for revision of monitoring plan		☐	
Request for change in start date of crediting period		☐	
Renewal of crediting period		☐	
Temporary deviations		☐	
Other…….		☐	

Crediting Period(s)

Crediting period(s)			Period (start & end dates)	ERs as per registered PDD/MR/Project documents	Credits issued
Crediting Period (Shall start on or after 1 Jan 2016)	Fixed 10 year				
	Renewable (7 years, with 2 approved renewals)	1st			
		2nd			
		3rd			
Period for which Credits have been issued					
Period for which Credits have been requested but not issued					-
Period for which Credits have never been requested for issuance (No monitoring reports submitted)					-
Period for which Credits have never been requested for issuance prior to CDM de-registration					-
Remaining Crediting period, after de-registration, for which Credits have not been issued by the program , subject to a ceiling of 10 years as allowed under the GCC Program					-

<table>
<tr><td>Details of Previous Issuance Requests</td><td>
<table>
<tr><th>Issuance Request</th><th>Period (start & end dates)</th><th>ERs as per registered PDD</th><th>Quantity of Credits requested to be issued</th><th>Quantity of Credits issued</th></tr>
<tr><td>1st</td><td></td><td></td><td></td><td></td></tr>
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<tr><td>List any open issues in the Validation and last Verification Report (e.g., FARs, if any) and how they have been addressed</td><td></td></tr>
<tr><td>Any other relevant information that has not been reported in the registered documents and that may have adverse impacts on the environmental integrity of the Project Activity</td><td></td></tr>
<tr><td>Provide the list of all the registered documents related to this project, as available on the program’s website and the corresponding URLs.</td><td></td></tr>
</table>

DOCUMENT HISTORY

Version	Date	Comment
V 4.0	27/09/2022	▪ Revised version released on approval by Steering Committee as per GCC Program Process. ▪ Revised version contains following changes: ○ Introduced A3 type projects A2 project sub-types. ○ Included revised Declaration by the 'Authorized Project Owner and focal point' on GCC requirements. ○ Included modified format for E+/S+/ SDG assessment. ○ Revised instructions for filling in the PSF. ○ Editorial changes to the document.
V 3.2	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 3.1	17/08/2020	▪ Editorial revisions made ○ Revised Table in section B.7.2 on Monitoring-program of risk management actions ○ Revised Table in section E.1 on Environmental Safeguards ○ Revised Table in section E.1 on Social Safeguards ○ Revised Table in section F on United Nations Sustainable Development Goals (SDG)
V 3.0	05/07/2020	▪ Revised version released on approval by Steering Committee as per GCC Program Process. ▪ Revised version contains following changes: ○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC). ○ Considered and addressed comments raised by Steering Committee: ➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and ➢ electronic consultations EC01-Round 01 (15.09.2019 – 25.09.2019), EC01-Round 02 (27.03.2020 – 27.06.2020). ○ Feedback from Technical Advisory Board (TAB) of ICAO on GCC submission for

		approval under CORSIA[42];
V 2.0	25/06/2019	▪ Revised version released for approval by the GCC Steering Committee. ▪ Revised version includes additional details and instructions on the information to be provided, consequent to the latest developments world-wide (e.g., CORSIA EUC).
V 1.0	01/11/2016	Initial version released under the GCC Program Version 1

[42]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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