المجلس العالمي للبصمة الكربونية GLOBAL CARBON COUNCIL



Project Submission Form

V4.0- 2022

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COVER PAGE- Project Submission Form (PSF)						
Complete this form in a	Complete this form in accordance with the instructions attached at the end of this form.					
		BASIC INFO	RMATION			
Title of the Project Activity as per LON/LOA	SEI Adhavan 175MW bundled solar power project in Tamil Nadu and Karnataka, INDIA					
PSF version number	1.2					
Date of completion / Updating of this form	29/11/2022					
Project Owner(s) as per LON/LOA	M/s SEI Adhavan Power Pvt Ltd					
(Shall be consistent with Deregistered CDM Type B Projects)						
Country where the Project Activity is located	INDIA					
GPS coordinates of						
the project site(s)	S.No	Project	Capacity(MW)	Latitude	Longitude	
	1.	M/s RT Renewable Energy India Pvt Ltd	15	9°20'17.52" N (9.3382° N)	78°15'27.72" E (78.2577° E)	
	2.	M/s SEI Phoebus Pvt Ltd	50	9°31'11.28" N (9.5198° N)	78°13'36.12" E (78.2267° E)	
	3.	M/s SEI Adhavan Power Pvt Ltd	50	9°34'39.72" N (9.5777° N)	78°18'34.2" E (78.3095° E)	
	4.	M/s SEI Venus Pvt Ltd	30	14°22'10.92" N (14.3697° N)	76°35'47.4" E (76.5965° E)	
	5.	M/s SEI Diamond Pvt Ltd	30	14°22'10.92" N (14.3697° N)	76°35'47" E (76.5965° E)	

Eligible GCC Project Type as per the Project Standard (Tick applicable project type)	<pre> Type A: </pre>
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)	GCCM001-Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers V3.0.
GHG Sectoral scope(s) linked to	GHG-SS # 1 Energy (renewable/non-renewable sources)

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 $^{^{\}rm 1}$ Owners of Type B projects shall fill in the form provided in Appendix 7.

the applied methodology(ies)			
Applicable Rules and Requirements	Rules and Requirements		Version
for Project Owners	⊠ ISO 14064-2		
(Tick applicable Rules and Requirements)	Applicable host country legal requirements /rules		
	GCC Rules and	Project Standard	3.1
	Requirements ²	Approved GCC Methodology (GCCM001)	3.0
		Program Definitions	3.1
		Environment and Social Safeguards Standard	3.0
		Project Sustainability Standard	3.0
		Instructions in Project Submission Form (PSF)- template	4.0
		Clarification No. 01	1.3
		Clarification No. 02	
		Clarification No. 03	
		Clarification No. 04	
		Clarification No. 05	
		Standard on avoidance of double counting	1.0
		Add rows if required	
	CDM Rules ³	Approved CDM Methodology (XXXXX)	
		TOOL 1- Tool for the demonstration and assessment of additionality	7.0.0
		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	7.0	
		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	3.1	
		TOOL 27- Investment analysis	11.0	
		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			rbon Credits (ACCs))	
(Tick applicable verification categories)	 ✓ United Nations Sustainable Development Goals (SDG⁺) ☐ Bronze SDG Label ☐ Silver SDG Label 			
	Gold SDG Label			
	☐ Platinum SDG Label			
	□ Diamond SDG Label			

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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.
	For Project Type A1:

If at any point of 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.

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:

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

⁸ The environment 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:

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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 Authorisation - 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 its 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 of the information provided in this document, including any supporting documents submitted to the GCC or its registry operator IHS Markit at any time, is true and correct; 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 wilful 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)	For Greenko Energies Private Limited, Name: M. Murali Krishnam Raju, Designation: AGM – Commercial (Authorized Signatory) Date: 29/11/2022

1. PROJECT SUBMISSION FORM

Section A. Description of the Project Activity

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

>> The project activity is the installation of new grid connected 175 MW Solar power plant bundle in the states of Tamil Nadu and Karnataka, India. The purpose of the project activity is to generate electricity using solar radiation energy to produce eco-friendly power; achieve sustainable development of the industry by reducing CO₂ emission and other GHG (Green House Gas) emissions, otherwise likely to be generated due to Coal based power plants. The bundled project is also installed to meet the increasing demand of Electricity from Renewable source of Energy. The bundle consists of Plants with different capacities Viz 15MW, 50MW, 50MW, 30MW and 30MW. The electricity generated from this Project is exported to Indian grid and thus reduce emissions of greenhouse gases (GHGs) into the atmosphere associated with the equivalent amount of electricity generation from the existing grid connected power plants (mostly fossil fuel) and by addition of new generation sources into the grid.

The baseline of the project activity is continued generation of electricity in the national grid of India, wherein, the electricity generation is highly carbon intensive. According to the latest data from Central Electricity Authority on carbon intensity of grid electricity, the combined margin emission factor of the grid electricity is 0.9475tCO₂e/MWh and therefore electricity generation from solar power project as in the project activity results into emission reductions. It is estimated that the project activity will effect a cumulative GHG emission reduction of 2,639,703 tCO₂e over 10 year period of project activity with an average of 263,970 tCO₂e GHG emission reduction per year.

The project activity is expected to contribute to sustainable development of the host country in a number of ways which is explained as below:

Socio-economic development:

There are direct gains from the project activity in terms of generation of direct employment and indirect livelihood opportunities in and around the project site during and after the construction phase and for the operation and the upkeep of the project. The project additionally lead to expenditure in other social development purposes like education health, skill development and other such activities in the areas of project influence.

Environmental development:

Since solar power generation is a clean source of energy, there are numerous environmental benefits from their operations such as no GHG emissions, no air pollutants, no water pollution, lower waste generation compared to conventional thermal power plants.

Technological development:

The project activity is step forward in harnessing the untapped solar energy potential and further diffusion of the solar power technology in the region.

A.2. Location of the Project Activity

1. >> M/s RT Renewable Energy India Pvt Ltd

Address and geodetic coordinates of the physical site of the Project Activity					
Physical address Latitude Longitude					
Paralachi,					
Virudhunagar,	9°20'17.52" N	78°15'27.72" E			
Tamilnadu.	(9.3382° N)	(78.2577° E)			

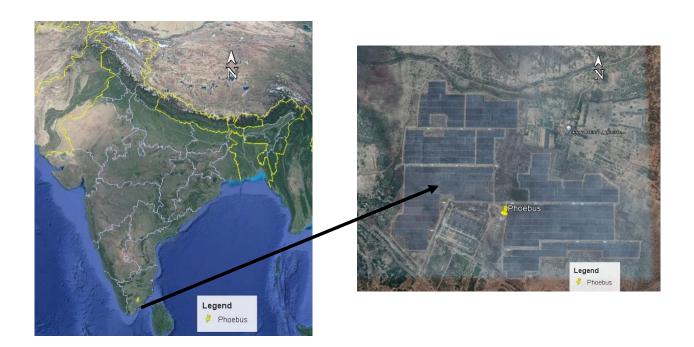




2. M/s SEI Phoebus Pvt Ltd

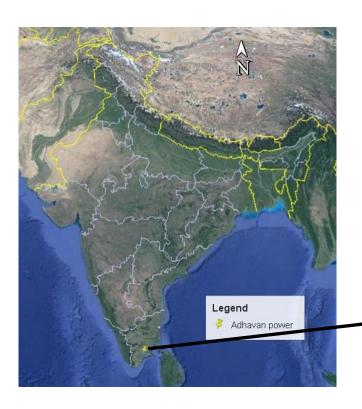
Address and geodetic coordinates of the physical site of the Project Activity					
Physical address Latitude Longitude					
Paniur,					
Virudhunagar,	9°31'11.28" N	78°13'36.12" E			
Tamil Nadu.	(9.5198° N)	(78.2267° E)			

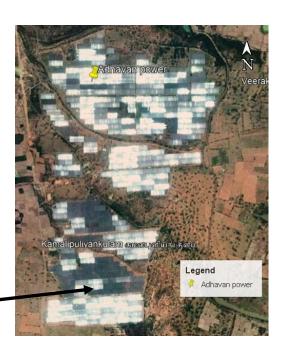
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3. M/s SEI Adhavan Power Pvt Ltd

Physical address	Latitude	Longitude
Veerakudi village, taluk, Virudhnagar – Tamil Nadu.	Tiruchuli 9°34'39.72" N dist., (9.5777° N)	78°18'34.2" E (78.3095° E)





4. M/s SEI Venus Private Ltd

Address and geodetic coordinates of the physical site of the Project Activity			
Physical address	Latitude	Longitude	
Survey no. 343, Varavukaval,			
Chitradurga,	14°22'10.92" N	76°35'47.4" E	
Karnataka.	(14.3697° N)	(76.5965° E)	

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5. M/s SEI Diamond Pvt Ltd

Address and geodetic coordinates of the physical site of the Project Activity		
Physical address	Latitude	Longitude
Survey no. 343, Varavukaval, Chitradurga, Karnataka.	14°22'10.92" N (14.3697° N)	76°35'47.4" E (76.5965° E)



Note: Geo-coordinates to presented in degree minute seconds as well in decimal place format (4 decimal places)

A.3. Technologies/measures

>> The project activity involves the installation of Solar PV based electricity generation with installed capacity of 175 MW as a bundled project located in Tamil Nadu and Karnataka states of India. The Project Activity is a new facility (Greenfield) and the electricity generated by the project will be exported to the Indian electricity grid. The estimated lifetime of the project activity is considered as 25 years.

Technical Specification of Solar PV modules

1. M/s RT Renewable Energy India Pvt Ltd

Technical specifications of the Soalr PV modules	
PV Module Type	Poly-Si
Make	Astronergy
Rated Max. Power (Pmax)	315 W
Open Circuit Voltage (Voc)	45.55 V
Maximum Power Voltage (Vmp)	35.83 V
Shortcircuit current (Isc/A)	9.02 A
Module Efficiency	16.2
Temperatue coefficient of Pmax	0.408%
Module Length in mm	1956
Module Width in mm	994
Module Thickness in mm	45
Module weight in Kg	23
	2500KWp-
	4no's
	2000KWp-
Technical enceifications of the Invetor(a)	2no's
Technical specifications of the Inveter(s)	1000KWp-1no

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2. M/s SEI Phoebus Pvt Ltd

Technical specifications of the Soalr PV modules	
PV Module Type	Polycrystalline
Make	Astronergy
Rated Max. Power (Pmax)	310 Wp
Open Circuit Voltage (Voc)	45.42 V
Maximum Power Voltage (Vmp)	35.8 V
Shortcircuit current (Isc/A)	8.99 A
Module Efficiency	15.9%
Temperatue coefficient of Pmax	0.408%/K
Module Length in mm	1956 mm
Module Width in mm	994 mm
Module Thickness in mm	45 mm
Module weight in Kg	23 Kg
Technical specifications of the Inverter(s)	67, 945kW
Technical specifications of the Transformer(s)	IDT- Schneider(1.65 MVA) 33 no's IDT- Schneider(0.6 MVA) 1 no CGL-55 MVA, 1 no

3. M/s SEI Adhavan Power Pvt Ltd

Technical specifications of the Solar PV modules	
PV Module Type	Multicrystalline

Make	Sunedison	
Rated Max. Power (Pmax)	320	
Open Circuit Voltage (Voc)	45.17	
Maximum Power Voltage (Vmp)	37.36	
Shortcircuit current (Isc/A)	9.34	
Module Efficiency	0.165	
Temperature coefficient of Pmax	0.42% / deg.C	
Module Length in mm	1956	
Module Width in mm	992	
Module Thickness in mm	55	
Module weight in Kg	22.4	
	500KW, 100	
Technical specifications of the Inverter(s)	no's	
Tachnical specifications of the	2.2MVA, 25	
Technical specifications of the	no's	
Transformer(s)	55MVA, 1 no	

4. M/s SEI Venus Private Ltd

Technical specifications of the Solar PV modules	
PV Module Type	Polycrystalline
Make	
Rated Max. Power (Pmax)	320W
Open Circuit Voltage (Voc)	45.70V
Maximum Power Voltage (Vmp)	37.30V
Shortcircuit current (Isc/A)	9.15A
Module Efficiency	
Temperature coefficient of Pmax	
Module Length in mm	1956mm
Module Width in mm	992mm
Module Thickness in mm	40mm
Module weight in Kg	24Kg
Technical specifications of the Inverter(s)	1100KVA, 14 no
Technical specifications of the Transformer(s)	CGL 4500KVA, 9 Danish 4500KVA, 5 30/40 MVA, 2

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5. M/s SEI Diamond Pvt Ltd

Technical specifications of the Solar PV modules	
PV Module Type	Polycrystalline
Make	
Rated Max. Power (Pmax)	320W
Open Circuit Voltage (Voc)	45.70V
Maximum Power Voltage (Vmp)	37.30V
Shortcircuit current (Isc/A)	9.15A
Module Efficiency	
Temperature coefficient of Pmax	
Module Length in mm	1956mm
Module Width in mm	992mm
Module Thickness in mm	40mm
Module weight in Kg	24Kg
Technical specifications of the Inverter(s)	1100KVA, 14 no
Technical specifications of the Transformer(s)	CGL 4500KVA, 9 Danish 4500KVA, 5 30/40 MVA, 2

A.4. Project Owner(s)

Location/ Country	Project Owner(s)	Where applicable ¹³ , indicate if the host country has provided approval (Yes/No)
INDIA	M/s SEI Adhavan Power Pvt Ltd	No

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:

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).

Period		Name of the Entities	Purpose and Quantity of ACCs
From	То		to be supplied
07/02/2017	06/02/2027	To be confirmed during	To offset GHG emissions and
		issuance	2,639,703 ACCs

Project proponent is hereby confirming that the bundled project activity is not registered under any other GHG reduction certification mechanism. Hence the ACCs generated from this project activity is not double counted.

A.6. Additional requirements for CORSIA

>> Refer Sections E and F.

Section B. Application of selected methodology(ies)

B.1. Reference to methodology(ies) and tools applied in the project

>>The referred Methodology here is: GCCM001-Methodology for Renewable Energy Generation Projects Supplying Electricity to Grid or Captive Consumers V3.0

The applied methodology refers to the following tools of CDM:

Tool 01- Tool for the demonstration and assessment of additionality (Version 7.0.0 EB 70, Annex 8). Tool 07- Tool to calculate the emission factor for an electricity system (Version 7.0, EB 100, Annex

4).

Tool 24- Common practice (Version 03.1, EB 84, Annex 7).

Tool 27- Investment analysis (Version 11.0 EB 112, Annex 02).

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

>> The selected methodology GCCM001 is applicable as per the below Criteria and its justification is also stated against the same criterion:

Applicability Criteria	Justification
The renewable energy generation projects shall	This criterion is applicable, as the project
supply electricity to user(s), either grid or a	employs Solar Photovoltaic power generation
specific identified user. The project activity will	technology and supply generated electricity to
displace electricity from an electricity distribution	Indian Grid.
system that is or would have been supplied by	
from a national or a regional grid (grid hereafter);	

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the following renewable energy generation technologies qualify under this methodology: (i) Solar Photovoltaic; (ii) On-shore or Off-shore	
Wind; (iii) Tidal; (iv) Wave.	
The project activities can also involve setting up	Not applicable as the project activity doesn't
and implementation of a BESS along with the	involve setting up and implementation of a
renewable energy generation plant.	BESS.
The project activity wherein a BESS has been	Not applicable as the project activity didn't
deployed can either be a Greenfield installation	deploy a BESS.
wherein the BESS had been conceptualized	
along with the renewable energy generation unit	
or may be retrofitted into an existing setup of	
renewable energy project, whether or not	
registered with GCC.	
In case the Project Owners want to claim carbon	Not applicable as the project activity didn't
credits due to retrofit of BESS into existing	deploy a BESS.
renewable energy generation unit, they would	
need to demonstrate that historically the	
renewable energy unit was subject to curtailed	
output due to low grid stability or capacity	
limitation3 in the grid infrastructure for handling	
the increased generation. This must be through	
evidence of existence of technical and	
regulatory/commercial constraints	
The project activities shall not involve combined	This criteries is applicable as project activity
The project activities shall not involve combined heat and power (co-generation) systems	This criterion is applicable as project activity
The project activities shall not involve combined heat and power (co-generation) systems	generates electricity only and does not involve
	generates electricity only and does not involve combined heat and power (co-generation)
heat and power (co-generation) systems	generates electricity only and does not involve combined heat and power (co-generation) system.
heat and power (co-generation) systems The project activities shall not involve co-firing	generates electricity only and does not involve combined heat and power (co-generation) system. This criterion is applicable as the project does
heat and power (co-generation) systems The project activities shall not involve co-firing of fossil fuel of any kind.	generates electricity only and does not involve combined heat and power (co-generation) system. This criterion is applicable as the project does not involve co-firing of fossil fuel of any kind.
heat and power (co-generation) systems The project activities shall not involve co-firing of fossil fuel of any kind. The project activities may have consumption of	generates electricity only and does not involve combined heat and power (co-generation) system. This criterion is applicable as the project does not involve co-firing of fossil fuel of any kind. This criterion is applicable as project may have
heat and power (co-generation) systems The project activities shall not involve co-firing of fossil fuel of any kind.	generates electricity only and does not involve combined heat and power (co-generation) system. This criterion is applicable as the project does not involve co-firing of fossil fuel of any kind. This criterion is applicable as project may have consumption of electricity (grid on onsite
heat and power (co-generation) systems The project activities shall not involve co-firing of fossil fuel of any kind. The project activities may have consumption of electricity (grid on on-site generation) for site	generates electricity only and does not involve combined heat and power (co-generation) system. This criterion is applicable as the project does not involve co-firing of fossil fuel of any kind. This criterion is applicable as project may have consumption of electricity (grid on onsite generation) for site offices during maintenance and night time.
heat and power (co-generation) systems The project activities shall not involve co-firing of fossil fuel of any kind. The project activities may have consumption of electricity (grid on on-site generation) for site	generates electricity only and does not involve combined heat and power (co-generation) system. This criterion is applicable as the project does not involve co-firing of fossil fuel of any kind. This criterion is applicable as project may have consumption of electricity (grid on onsite generation) for site offices during maintenance
heat and power (co-generation) systems The project activities shall not involve co-firing of fossil fuel of any kind. The project activities may have consumption of electricity (grid on on-site generation) for site offices.	generates electricity only and does not involve combined heat and power (co-generation) system. This criterion is applicable as the project does not involve co-firing of fossil fuel of any kind. This criterion is applicable as project may have consumption of electricity (grid on onsite generation) for site offices during maintenance and night time.
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heat and power (co-generation) systems The project activities shall not involve co-firing of fossil fuel of any kind. The project activities may have consumption of electricity (grid on on-site generation) for site offices. DPPs that supply electricity also for domestic purposes in addition to supply to grid, shall demonstrate that grid connection was available on the site before the installation of project	generates electricity only and does not involve combined heat and power (co-generation) system. This criterion is applicable as the project does not involve co-firing of fossil fuel of any kind. This criterion is applicable as project may have consumption of electricity (grid on onsite generation) for site offices during maintenance and night time. Not applicable as project is a Utility scale power
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BESS setup and employ cooling and/or fire suppression systems based on refrigerants or clean agents with the global warming potential (e.g. Hydrofluorocarbon (HFC) or Chlorofluorocarbon (CFC)) are not included under this methodology.

Applicability of tools used from CDM:

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

The use of the "Tool for the demonstration and assessment of additionality" is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.

Since the applied methodology is not a new methodology, the project proponent has applied this tool for the demonstration of additionality in compliance with the tool. Refer to section B.5 of the PSF for the detailed applicability of this tool and additionality assessment. Hence this tool is applicable

Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.

In line with the methodology requirement, Project developer has applied this tool for the demonstration of additionality assessment. Hence this tool is applicable

Tool 24: Common Practice version 3.1

This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality.

Project activity applies "Tool for the demonstration and assessment of additionality". Hence this tool is applicable.

Tool 27: Investment analysis version 11.0

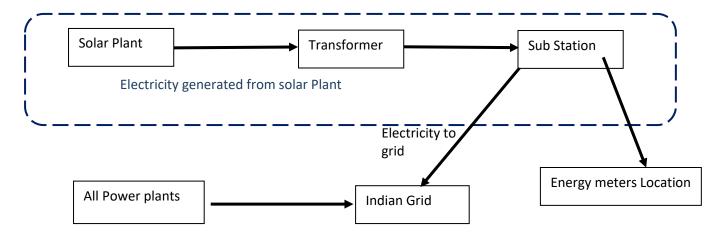
This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", methodological the "Combined tool to identify the baseline scenario and demonstrate additionality", the guidelines "Non-binding best practice examples to demonstrate additionality for SSC project activities", or baseline and monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.

Project activity applies "Tool for the demonstration and assessment of additionality". Hence this tool is applicable.

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

>> Boundary:



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
	CO2 emissions from electricity generation in fossil fuel fired power	CO ₂	YES	The major source of emissions in the baseline
	plants that are displaced due to the project activity	CH ₄	NO	These emissions are very small and ignored for simplification
ine		N ₂ O	NO	These emissions are very small and ignored for simplification
Baseline		SO _x	NO	These emissions are very small and ignored for simplification
	Co2 emission from incremental	CO_2	No	Not Applicable
	electricity delivery to the grid by BESS installation in case of retrofit	CH₄	NO	Not Applicable
		N ₂ O	NO	Not Applicable
		SO _x	NO	Not Applicable
,	Emissions from on-site electricity use in the project activity Or emergency charging of BESS (e.g. in case of	CO ₂	NO	Minor emission source. On-site electricity consumption is very small.
Project Activity	deep discharge or exceptional operational situations due to requirements from regulatory authorities)	CH ₄	NO	Excluded for simplification. This emission source is assumed to be very small
Project	ddillonios)	N ₂ O	NO	Excluded for simplification. This emission source is assumed to be very small
		SO _x	NO	Excluded for simplification. This emission source is assumed to be very small

B.4. Establishment and description of the baseline scenario

>> The baseline scenario is electricity delivered to the grid by the project activity that would have otherwise been generated by the operation of fossil fuel based grid connected power plants and by the addition of new generation sources.

The project activity involves setting up of solar projects to harness the power of sun to produce electricity and supply to the grid. In the absence of the project activity, the equivalent amount of power would have been supplied by the Indian grid, which is fed mainly by fossil fuel fired plants. The project activity will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 263,970 tCO₂e per annum on an average, thereby displacing average amount of 278,593 MWh/year electricity from the generation-mix of power plants connected to the Indian electricity grid, which is mainly dominated by thermal/fossil fuel based power plant.

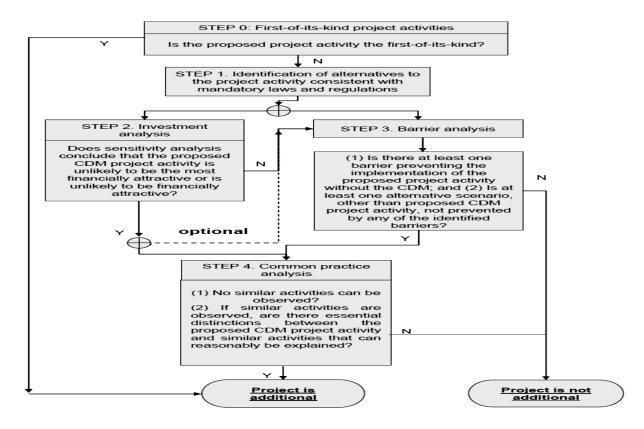
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B.5. Demonstration of additionality

- >> As per GCC methodology the following approach for demonstrating additionality is consisting of two components:
- (a) A Legal Requirement Test; and
- (b) An Additionality Test either based on a Positive List test or a projects-specific additionality test.
 - **Legal Requirement Test**: Project activity is not based on any legal requirement in line with the nation or the region.
 - Additionality Test: For project-specific additionality approach for which the additionality of GCC projects shall be determined by Project Owner using the CDM Tool: "Tool for Demonstration and Assessment of Additionality".

The Additionality tool provides a step-wise approach to demonstrate and assess the additionality of a project. These steps are:

- (a) Step 0 Demonstration whether the proposed project activity is the first-of-its-kind;
- (b) Step 1 Identification of alternatives to the project activity;
- (c) Step 2 Investment analysis;
- (d) Step 3 Barriers analysis; and
- (e) Step 4 Common practice analysis.



Step 0: Demonstration whether the proposed project activity is the first-of-its-kind

The proposed Project activity is installation of grid connected solar power plant, which is not first of its kind. So proceed to the next step.

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

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

The most realistic and reliable alternatives to the project activity are:

- Proposed project activity undertaken without being registered as a GCC project activity: The
 project Owner could proceed with the implementation of the project without Carbon credit
 benefits. The electricity produced from the renewable energy project would have been sold
 to the grid. The project is not financially attractive without carbon revenue.
- 2. Continuation of the current situation: It is the baseline scenario and if continued without investment in proposed Project activity with usual business activities, then the grid would continue with the fossil fuel-based power projects and this would result in GHG emissions. Hence, the new capacity add-on from a fossil fuel-based power plant is appropriate, realistic & credible baseline alternative for the project activity.

Outcome of Step 1a:

Alternative 1 is not possible as project activity is not viable without carbon credit benefits and Alternative 2 is continuation of the current situation and 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. Thus implementation of the project activity is additional to the baseline scenario which is alternative to above and therefore reduce the emissions.

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

The alternatives stated above shall be in compliance with the mandatory laws and regulations existing within the sector.

If the proposed project activity is the only alternative amongst the ones considered by the project participants that is in compliance with mandatory regulations with which there is general compliance, then the proposed CDM project activity is not additional.

Outcome of Step 1b: Proposed Activity is additional as other alternatives also are in compliance with the mandatory regulations.

Step 2: Investment analysis

Sub-step 2a - Determine appropriate analysis method

There are three methods for investment analysis:

Option I: Simple Cost Analysis

Option II: Investment Comparison Analysis

Option III: Benchmark Analysis

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The project activity generates revenue from the sale of generated electricity units during the operations of the Project activity. So, Simple cost analysis (Option I) cannot be used. In the absence of the project activity grid electricity would have been the obvious choice for the project which requires no investment. Hence investment comparison analysis (Option II) is also not appropriate for the project activity.

The most appropriate financial analysis method is therefore option III: the benchmark analysis, where the returns on investment in the project activity are compared to benchmark returns that are available to any investors in the country.

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

The investment analysis using Benchmark analysis approach (Option III) has been chosen. Further, this method illustrates the evaluation of the Project by the Project Owner before the decision to go ahead with the project and granting management approval.

Choice of Financial Indicator:

According to the TOOL01 version 7.0.0, the financial indicator can be based either on (1) project IRR or (2) equity IRR. There is no general preference between the approaches (1) or (2). The benchmark chosen for analysis shall be fully consistent with the choice of approach. Therefore, in accordance with the guidance, the relevant financial indicator for project activity has been chosen as post tax equity IRR.

Default Value Benchmark:

As per para 19 of TOOL27 Methodological tool for Investment analysis, version 11.0, and the cost of equity is determined by selecting the values provided in the Appendix of the tool. The start date of the project activity is prior to the adoption of the tool that is 29 October 2021 and so the default values are applicable to the project activity

A per this, default value of expected return on equity in real terms for Energy Industries (Group 1) in India = 10.55%*

The Required return on equity (benchmark) was computed in the following manner: Nominal Benchmark = {(1+Real Benchmark)*(1+Inflation rate)}-1

Where:

- Default value for Real Benchmark = 10.55%, as per TOOL27, version11.0, which is the latest version available at the time of preparation of PSF
- Inflation Rate forecast for by Reserve Bank of India (RBI) i.e. Central Bank of India.

Benchmark estimation:

TOOL27, version 11.0 specifies default value of expected return on equity in real terms for Energy Industries (Group 1) in India = **10.55**%

- Inflation Rate forecast for by Reserve Bank of India (RBI) (i.e. Central Bank of India) for India and it differs with the each project in the bundle and is calculated under step 2c

^{*}https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v11.0.pdf

Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III):

The Post tax Equity IRR is evaluated for the entire lifetime of the project activity, i.e. 25 years. It is calculated based on the cash outflows from and cash inflows into the project activity.

Key Assumptions supporting financial projections are provided in excel spreadsheet. Based on the result of IRR calculations, equity IRR is less than Benchmark. The input assumption and the IRR outcome can be referred in table below:

1) For M/s RT Renewable Energy India Pvt Ltd

As per RBI report "Survey of Professional forecasters" dated 5 August 2015, the latest report available at the time of decision making, the 10 year WPI inflation forecast projected was 5.3%.

Therefore Benchmark is calculated as $\{(1+10.55\%) \times (1+5.3\%)\}$ -1 = **16.41%**

Assumption and financial of the project		
Details of the project		Source
State where the project is situated	Tamil Nadu	As per commissioning reports
Total Capacity (MW)	15.0	As per commissioning reports
Expected Date of Commissioning	28-Mar-16	As per commissioning reports
Life of the plant (Yrs.)	25	CERC RE tariff order 2014
Generation and sale of electricity		
PLF	19.00%	CERC RE tariff order 2014
Auxiliary consumption	0.00%	CERC RE tariff order 2014
Annual generation (MWh)	24,966	Calculated Value
Annual degradation during 1st year (%)	2.50%	Considered
Annual degradation from 2nd year till 10 th year (%)	0.83%	Considered
Annual degradation from 11th year till 25 th year (%)	0.67%	Considered
Tariff rate at the decision making (INR/kWh)	7.01	PPA
Operation and maintenance cost		
O & M Expenses (INR Mn.)	21.22	CERC RE tariff order 2014
Escalation in the operational expenses (%)	5.72%	CERC RE tariff order 2014
O & M free for (Yr.)		

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Financial parameters		1
TOTAL COST (INR Mn.)	1,460.00	Sanction letter
Equity Investment (INR Mn.)	590.00	Calculated Value
Loan Amount (INR Mn.)	870.00	Sanction letter
Term loan		
Loan (%)	60%	Sanction letter
Loan Amount (INR Mn.)	870.00	Sanction letter
Interest rate (%)	11.50%	Sanction letter
Loan Tenure (Qtr.)	65.00	Sanction letter
Moratorium Period (Qtr.)	4	Sanction letter
Repayment Period (Qtr.)	61.00	Calculated Value
Repayment instalments value (INR Mn.)	14.262	Calculated Value
1st instalment from (Qtr. end)	31-Mar-17	
Working Capital		
No. of Days Receivables (Days)	60	CERC RE tariff order 2014
O&M Expenses (Days)	30	CERC RE tariff order 2014
Maintenance spares, % of O&M expenses	15%	CERC RE tariff order 2014
Interest on Working Capital Debt	13.20%	CERC RE tariff order 2014
Book Depreciation (SLM Method)		
Land Cost etc. (INR Mn.)	-	
Gross Depreciable Value (INR Mn.)	1,460.00	
Salvage Value (%)	10.00%	CERC RE tariff order 2014
Salvage value (INR Mn.)	146.00	Calculated Value
Net Depreciable Value (INR Mn.)	1,314.00	Calculated Value
Residual Value (INR Mn.)	146.00	Calculated Value
IT Depreciation (SLM Method)		
IT Depreciation Rate (%)	7.69%	As Per Income Tax , Depreciation rates for power generating units
Income Tax		
Financial Year	FY 2014-15	_

Income tax rate (%)	30.00%	Tax rates applicable to a domestic company
MAT (%)	18.50%	Tax rates applicable to a domestic company
Service Tax (%)	15.00%	Tax rates applicable to a domestic company
Surcharge (%)	10.00%	Tax rates applicable to a domestic
Education cess (%)	3.00%	company
Final Tax rates		
Income tax rate (%)	33.99%	Calculated Value
MAT (%)	20.96%	Calculated Value
Service Tax (%)	15.00%	Calculated Value

Equity IRR without Carbon revenue	Benchmark (Equity IRR)
2.43%	16.41%

This substantiates that the investment is not financially attractive (Equity IRR for the project activity is less than the Benchmark). Thus, it can be easily concluded that project activity is additional and is not business as usual scenario.

Sub-step 2d (1): Sensitivity Analysis

As per the Methodological Tool for Investment Analysis version 11.0, following factors has been subjected to sensitivity analysis:

- 1. PLF
- 2. O&M Cost
- 3. Project Cost
- 4. Tariff

Variation %	-10%	Normal	10%
PLF	0.33%	2.43%	4.19%
O&M	2.97%	2.43%	1.85%
Project Cost	3.68%	2.43%	1.52%
Tariff Rate	0.33%	2.43%	4.19%

The rationale of sensitivity is, "The ultimate objective of the sensitivity analysis is to determine the likelihood of the occurrence of a scenario other than the scenario presented, in order to provide a cross-check on the suitability of the assumptions used in the development of the investment analysis."

The results of sensitivity analysis show that even with a variation of +10% & -10% in project cost and O&M cost, PLF, and Tariff Rate, the Equity IRR of 2.43% is lower than the benchmark of 16.41%. It

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is evident from the results given above that the project remains additional even under the most favourable conditions.

Probability to breach the benchmark:

Sensitivity Parameter 1: PLF

PLF considered in financials is as per latest CERC Regulations available at the time of decision making, which is in line with "Guidelines for the reporting and validation of Plant load factors" stated in EB 48 Annex11 option 3(b).

The variation in PLF +/- 10% also shows that equity IRR is not likely to achieve.

Sensitivity Parameter 2: O&M

O&M Cost considered in financials is as per latest CERC Regulations available at the time of decision making.

The sensitivity analysis shows that even in case of variation in O&M by +/- 10%, IRR will not breach the benchmark.

Sensitivity Parameter 3: Project Cost

Project Cost for financial analysis is considered from Loan sanction letter.

The Sensitivity is carried out for threshold level below which benchmark is not achieved.

Sensitivity Parameter 4: Tariff Rate

The tariff is determined by PPA which is fixed for entire lifetime of the project activity. The Sensitivity is carried out for +/-10% of Tariff. However, the possibility of 10% increase in these parameters is unlikely.

2) M/s SEI Phoebus Pvt Ltd

As per RBI report "Survey of Professional forecasters" dated 3 February 2015, the latest report available at the time of decision making, the 10 year WPI inflation forecast projected was 4.1%.

Therefore Benchmark is calculated as $\{(1+10.55\%) \times (1+4.1\%)\}$ -1 = **15.08%**

Assumption and financial of the project

Details of the project		Source
State where the project is situated	Tamilnadu	Commisioning Report
Total Capacity (MW)	50.0	Commisioning Report
Expected Date of Commissioning	8-Feb-16	Commisioning Report
Life of the plant (Yrs.)	25	CERC RE tariff order 2015-16
Generation and sale of electricity		
PLF	19.00%	CERC RE tariff order 2015-16
Auxiliary consumption	0.00%	CERC RE tariff order 2015-16
Annual generation (MWh)	83,220	CERC RE tariff order 2015-16

Annual degradation during 1st year (%)	2.50%	Considered
Annual degradation from 2nd year till 10 th year (%)	0.83%	Considered
Annual degradation from 11th year till 25 th year (%)	0.67%	Considered
Tariff rate at the decision making (INR/kWh)	7.01	As per PPA
Operation and maintenance cost		
O & M Expenses (INR Mn.)	74.75	CERC RE tariff order 2015-16
Escalation in the operational expenses (%)	5.72%	CERC RE tariff order 2015-16
O & M free for (Yr.)	-	
Financial parameters		
TOTAL COST (INR Mn.)	4,876.40	As per loan sanction latter
Equity Investment (INR Mn.)	1,706.40	As per loan sanction latter
Loan Amount (INR Mn.)	3,170.00	As per loan sanction latter
Term loan		
Loan (%)	65%	As per loan sanction latter
Loan Amount (INR Mn.)	3,170.00	As per loan sanction latter
Interest rate (%)	12.25%	As per loan sanction latter
Loan Tenure (Qtr.)	72	As per loan sanction latter
Moratorium Period (Qtr.)	2.33	As per loan sanction latter
Repayment Period (Qtr.)	70	As per loan sanction latter
Repayment instalments value (INR Mn.)	45.502	Calculated Value
1st instalment from (Qtr. end)	31-Jul-17	
Working Capital		
No. of Days Receivables	60	CERC RE tariff order 2015-16
O&M Expenses (Days)	30	CERC RE tariff order 2015-16
Maintenance spares, % of O&M expenses	15%	CERC RE tariff order 2015-16
Interest on Working Capital Debt	13.20%	CERC RE tariff order 2015-16
Book Depreciation (SLM Method)		
Land Cost etc. (INR Mn.)	-	

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Gross Depreciable Value (INR Mn.)	4,876.40	
Salvage Value (%)	10.00%	CERC RE tariff order 2015-16
Salvage value (INR Mn.)	487.64	Calculated Value
Net Depreciable Value (INR Mn.)	4,388.76	Calculated Value
Residual Value (INR Mn.)	487.64	Calculated Value
IT Depreciation (SLM Method)		
IT Depreciation Rate (%)	7.69%	As Per Income Tax , Depreciation rates for power generating units
Income Tax		
Financial Year	FY 2015-16	
Income tax rate (%)	30.00%	Tax rates applicable to a domestic company
MAT (%)	18.50%	Tax rates applicable to a domestic company
Service Tax (%)	15.00%	Tax rates applicable to a domestic company
Surcharge (%)	12.00%	Tax rates applicable to a domestic
Education cess (%)	3.00%	company
Final Tax rates		
Income tax rate (%)	34.61%	Calculated Value
MAT (%)	21.34%	Calculated Value
Service Tax (%)	15.00%	Calculated Value

Equity IRR without Carbon revenue	Benchmark (Equity IRR)
1.41%	15.08%

This substantiates that the investment is not financially attractive (Equity IRR for the project activity is less than the Benchmark). Thus, it can be easily concluded that project activity is additional and is not business as usual scenario.

Sub-step 2d (2): Sensitivity Analysis

As per the Methodological Tool for Investment Analysis version 11.0, following factors has been subjected to sensitivity analysis:

- 1. PLF
- 2. O&M Cost
- 3. Project Cost
- 4. Tariff

Variation %	-10%	Normal	10%
PLF	-1.04%	1.41%	3.67%
O&M	2.11%	1.41%	0.66%
Project Cost	3.60%	1.41%	-1.78%
Tariff Rate	-1.04%	1.41%	3.67%

The rationale of sensitivity is, "The ultimate objective of the sensitivity analysis is to determine the likelihood of the occurrence of a scenario other than the scenario presented, in order to provide a cross-check on the suitability of the assumptions used in the development of the investment analysis."

The results of sensitivity analysis show that even with a variation of +10% & -10% in project cost and O&M cost, PLF, and Tariff Rate, the Equity IRR of 1.41% is significantly lower than the benchmark of 15.08%. It is evident from the results given above that the project remains additional even under the most favourable conditions.

Probability to breach the benchmark:

Sensitivity Parameter 1: PLF

PLF considered in financials is as per latest CERC Regulations available at the time of decision making, which is in line with "Guidelines for the reporting and validation of Plant load factors" stated in EB 48 Annex11 option 3(b).

The variation in PLF +/- 10% also shows that equity IRR is not likely to achieve.

Sensitivity Parameter 2: O&M

O&M Cost considered in financials is as per latest CERC Regulations available at the time of decision making.

The sensitivity analysis shows that even in case of variation in O&M by +/- 10%, IRR will not breach the benchmark.

Sensitivity Parameter 3: Project Cost

Project Cost for financial analysis is considered from Loan sanction letter.

The Sensitivity is carried out for threshold level below which benchmark is not achieved.

Sensitivity Parameter 4: Tariff Rate

The tariff is determined by PPA which is fixed for entire lifetime of the project activity. The Sensitivity is carried out for +/-10% of Tariff. However, the possibility of 10% increase in these parameters is unlikely.

3) M/s SEI Adhavan Power Pvt Ltd

As per RBI report "Survey of Professional forecasters" dated 3 June 2015, the latest report available at the time of decision making, the 10 year WPI inflation forecast projected was 3.8%.

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Therefore Benchmark is calculated as $\{(1+10.55\%) \times (1+3.8\%)\}$ -1 = **14.75%**

Assumption and financial of the project

Details of the project		Source
State where the project is situated	Tamil Nadu	As per commissioning reports
Total Capacity (MW)	50.0	As per commissioning reports
Date of Commissioning	31-Mar-16	As per commissioning reports
Life of the plant (Yrs.)	25	CERC RE tariff order 2015
Generation and sale of electricity		
PLF	19.00%	CERC RE tariff order 2015
Auxiliary consumption	0.00%	CERC RE tariff order 2015
Annual generation (MWh)	83,220	Calculated Value
Annual degradation during 1st year (%)	2.50%	Considered
Annual degradation from 2nd year till 10 th year (%)	0.83%	Considered
Annual degradation from 11th year till 25 th year (%)	0.67%	Considered
Tariff rate at the decision making (INR/kWh)	7.01	As per PPA
Yearly increase in tariff upto10th year		
Operation and maintenance cost		
O & M Expenses (INR Mn.)	70.73	CERC RE tariff order 2015
Escalation in the operational expenses (%)	5.72%	CERC RE tariff order 2015
Financial parameters		
TOTAL COST (INR Mn.)	5,145.00	As per Loan Agreement
Equity Investment (INR Mn.)	1,975.00	Calculated Value
Loan Amount (INR Mn.)	3,170.00	As per Loan Agreement
Term loan		
Loan (%)	62%	As per Loan Agreement
Loan Amount (INR Mn.)	3,170.00	Calculated Value
Interest rate (%)	12.25%	As per Loan Agreement
Loan Tenure (Qtr.)	54.0	As per Loan Agreement

Moratorium Period (Qtr.)	_	
Repayment Period (Qtr.)	54.0	As per Loan Agreement
Repayment instalments value (INR Mn.)	58.704	Calculated Value
1st instalment from (Qtr. end)	30-Jun-16	
Working Capital		
No. of Days Receivables	60	CERC RE tariff order 2015
O&M Expenses (Days)	30	CERC RE tariff order 2015
Maintenance spares, % of O&M expenses	15%	CERC RE tariff order 2015
Interest on Working Capital Debt	13.50%	CERC RE tariff order 2015
Book Depreciation (SLM Method)		
Land Cost etc. (INR Mn.)	245.00	As per Loan Agreement
Gross Depreciable Value (INR Mn.)	4,900.00	As per Loan Agreement
Salvage Value (%)	10.00%	CERC RE tariff order 2015
Salvage value (INR Mn.)	490.00	Calculated Value
Net Depreciable Value (INR Mn.)	4,410.00	Calculated Value
Residual Value (INR Mn.)	735.00	Calculated Value
IT Depreciation (SLM Method)		
IT Depreciation Rate (%)	7.69%	As Per Income Tax , Depreciation rates for power generating units
Income Tax		
Financial Year	FY 2015-16	
Income tax rate (%)	30.00%	Tax rates applicable to a domestic company
MAT (%)	18.50%	Tax rates applicable to a domestic company
Service Tax (%)	15.00%	Tax rates applicable to a domestic company
Surcharge (%)	12.00%	Tax rates applicable to a
Education cess (%)	3.00%	domestic company
Final Tax rates		
Income tax rate (%)	34.61%	Calculated Value

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MAT (%)	21.34%	Calculated Value
Service Tax (%)	15.00%	Calculated Value

Equity IRR without Carbon revenue	Benchmark (Equity IRR)
1.14%	14.75%

This substantiates that the investment is not financially attractive (Equity IRR for the project activity is less than the Benchmark). Thus, it can be easily concluded that project activity is additional and is not business as usual scenario.

Sub-step 2d (3): Sensitivity Analysis

As per the Methodological Tool for Investment Analysis version 11.0, following factors has been subjected to sensitivity analysis:

- 1. PLF
- 2. O&M Cost
- 3. Project Cost
- 4. Tariff

Variation %	-10%	Normal	10%
PLF	-0.90%	1.14%	3.06%
O&M	1.70%	1.14%	0.56%
Project Cost	2.17%	1.14%	0.39%
Tariff Rate	-0.90%	1.14%	3.06%

The rationale of sensitivity is, "The ultimate objective of the sensitivity analysis is to determine the likelihood of the occurrence of a scenario other than the scenario presented, in order to provide a cross-check on the suitability of the assumptions used in the development of the investment analysis."

The results of sensitivity analysis show that even with a variation of +10% & -10% in project cost and O&M cost, PLF, and Tariff Rate, the Equity IRR of 1.14% is significantly lower than the benchmark of 14.75%. It is evident from the results given above that the project remains additional even under the most favourable conditions.

Probability to breach the benchmark:

Sensitivity Parameter 1: PLF

PLF considered in financials is as per latest CERC Regulations available at the time of decision making, which is in line with "Guidelines for the reporting and validation of Plant load factors" stated in EB 48 Annex11 option 3(b).

The variation in PLF +/- 10% also shows that equity IRR is not likely to achieve.

Sensitivity Parameter 2: O&M

O&M Cost considered in financials is as per latest CERC Regulations available at the time of decision making.

The sensitivity analysis shows that even in case of variation in O&M by +/- 10%, IRR will not breach the benchmark.

Sensitivity Parameter 3: Project Cost

Project Cost for financial analysis is considered from Loan sanction letter.

The Sensitivity is carried out for threshold level for which benchmark is not achieved.

Sensitivity Parameter 4: Tariff Rate

The tariff is determined by PPA which is fixed for entire lifetime of the project activity. The Sensitivity is carried out for +/-10% of Tariff. However, the possibility of 10% increase in these parameters is unlikely.

4) M/s SEI Venus Pvt Ltd

As per RBI report "Survey of Professional forecasters" dated 3 February 2015, the latest report available at the time of decision making, the 10 year WPI inflation forecast projected was 4.1%.

Therefore Benchmark is calculated as $\{(1+10.55\%) \times (1+4.1\%)\}$ -1 = **15.08%**

Assumption and financial of the project

Details of the project		Source
State where the project is situated	Karnataka	As per commissioning reports
Total Capacity (MW)	30.0	As per commissioning reports
Date of Commissioning	28-Mar-17	As per commissioning reports
Life of the plant (Yrs.)	25	CERC RE tariff order 2014
Generation and sale of electricity		
PLF	19.00%	CERC RE tariff order 2014
Auxiliary consumption	0.00%	CERC RE tariff order 2014
Annual generation (MWh)	49,932	Calculated Value
Annual degradation during 1st year (%)	2.50%	Considered
Annual degradation from 2nd year till 10 th year (%)	0.83%	Considered
Annual degradation from 11th year till 25 th year (%)	0.67%	Considered
Tariff rate at the decision making (INR/kWh)	6.83	As per PPA
Yearly increase in tariff upto10th year		
Operation and maintenance cost		

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O & M Expenses (INR Mn.)	40.44	CERC RE tariff order 2014
Escalation in the operational expenses	5.72%	CERC RE tariff order 2014
(%)		
O & M cost for (1st Yr.) INR Mn. Financial parameters		
Tillaliciai parameters		
TOTAL COST (INR Mn.)	2,073.00	CERC RE tariff order 2014
Equity Investment (INR Mn.)	621.90	CERC RE tariff order 2014
Loan Amount (INR Mn.)	1,451.10	CERC RE tariff order 2014
Term Ioan		
Loan (%)	70.00%	CERC RE tariff order 2014
Loan Amount (INR Mn.)	1,451.10	Calculated Value
Interest rate (%)	12.70%	CERC RE tariff order 2014
Loan Tenure (Qtr)	48	CERC RE tariff order 2014
Moratorium Period (Qtr)	-	CERC RE tariff order 2014
Repayment Period (Qtr)	48	CERC RE tariff order 2014
Repayment instalments value (INR Mn.)	30.231	
1st instalment from (Qtr. end)	30-Jun-17	
Working Capital		
No. of Days Receivables	60	CERC RE tariff order 2014
O&M Expenses (Days)	30	CERC RE tariff order 2014
Maintenance spares, % of O&M expenses	15%	CERC RE tariff order 2014
Interest on Working Capital Debt	13.20%	CERC RE tariff order 2014
Book Depreciation (SLM Method)		
Land Cost etc. (INR Mn.)	-	
Gross Depreciable Value (INR Mn.)	2,073.00	
Salvage Value (%)	10.00%	CERC RE tariff order 2014

Salvage value (INR Mn.)	207.30	Calculated Value
Net Depreciable Value (INR Mn.)	1,865.70	Calculated Value
Residual Value (INR Mn.)	207.30	Calculated Value
IT Depreciation (SLM Method)		
IT Depreciation Rate (%)	7.69%	As Per Income Tax , Depreciation rates for power generating units
Income Tax		
Financial Year	FY 2014-15	
Income tax rate (%)	30.00%	Tax rates applicable to a domestic company
MAT (%)	18.50%	Tax rates applicable to a domestic company
Service Tax (%)	15.00%	Tax rates applicable to a domestic company
Surcharge (%)	10.00%	Tax rates applicable to a
Education cess (%)	3.00%	domestic company
Final Tax rates		
Income tax rate (%)	33.99%	Calculated Value
MAT (%)	20.96%	Calculated Value
Service Tax (%)	15.00%	Calculated Value

Equity IRR without Carbon revenue	Benchmark (Equity IRR)
6.61%	15.08%

This substantiates that the investment is not financially attractive (Equity IRR for the project activity is less than the Benchmark). Thus, it can be easily concluded that project activity is additional and is not business as usual scenario.

Sub-step 2d (4): Sensitivity Analysis

As per the Methodological Tool for Investment Analysis version 11.0, following factors has been subjected to sensitivity analysis:

- 1. PLF
- 2. O&M Cost
- 3. Project Cost
- 4. Tariff

Variation %	-10%	Normal	10%

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PLF	4.46%	6.61%	8.87%	
O&M	7.19%	6.61%	6.01%	
Project Cost	8.48%	6.61%	5.20%	
Tariff Rate	4.46%	6.61%	8.87%	

The rationale of sensitivity is, "The ultimate objective of the sensitivity analysis is to determine the likelihood of the occurrence of a scenario other than the scenario presented, in order to provide a cross-check on the suitability of the assumptions used in the development of the investment analysis."

The results of sensitivity analysis show that even with a variation of +10% & -10% in project cost and O&M cost, PLF, and Tariff Rate, the Equity IRR of 6.61% is significantly lower than the benchmark of 15.08%. It is evident from the results given above that the project remains additional even under the most favourable conditions.

Probability to breach the benchmark:

Sensitivity Parameter 1: PLF

PLF considered in financials is as per CERC Regulations available at the time of decision making, which is in line with "Guidelines for the reporting and validation of Plant load factors" stated in EB 48 Annex11 option 3(b).

The variation in PLF +/- 10% also shows that equity IRR is not likely to achieve.

Sensitivity Parameter 2: O&M

O&M Cost considered in financials is as per CERC Regulations available at the time of decision making.

The sensitivity analysis shows that even in case of variation in O&M by +/- 10%, IRR will not breach the benchmark.

Sensitivity Parameter 3: Project Cost

Project Cost for financial analysis is considered from CERC Regulations.

The Sensitivity is carried out for threshold level for which benchmark is not achieved.

Sensitivity Parameter 4: Tariff Rate

The tariff is determined by PPA which is fixed for entire lifetime of the project activity. The Sensitivity is carried out for +/-10% of Tariff. However, the possibility of 10% increase in these parameters is unlikely.

5) M/s SEI Diamond Pvt Ltd

As per RBI report "Survey of Professional forecasters" dated 3 February 2015, the latest report available at the time of decision making, the 10 year WPI inflation forecast projected was 4.1%.

Therefore Benchmark is calculated as $\{(1+10.55\%) \times (1+4.1\%)\}$ -1 = **15.08%**

Assumption and financial of the project

Details of the project		Source
State where the project is situated	Karnataka	As per commissioning reports
Total Capacity (MW)	30.0	As per commissioning reports
Expected Date of Commissioning	28-Mar-17	As per commissioning reports
Life of the plant (Yrs.)	25	CERC RE tariff order 2014
Generation and sale of electricity		
PLF	19.00%	CERC RE tariff order 2014
Auxiliary consumption	0.00%	CERC RE tariff order 2014
Annual generation (MWh)	49,932	Calculated Value
Annual degradation during 1st year (%)	2.50%	Considered
Annual degradation from 2nd year till 10 th year (%)	0.83%	Considered
Annual degradation from 11th year till 25 th year (%)	0.67%	Considered
Tariff rate at the decision making (INR/kWh)	6.9200	As per PPA
Yearly increase in tariff upto10th year		
Operation and maintenance cost		
O & M Expenses (INR Mn.)	42.44	CERC RE tariff order 2014
Escalation in the operational expenses (%)	5.72%	CERC RE tariff order 2014
Financial parameters		
TOTAL COST (INR Mn.)	2,073.00	CERC RE tariff order 2014
Equity Investment (INR Mn.)	621.90	CERC RE tariff order 2014
Loan Amount (INR Mn.)	1,451.10	CERC RE tariff order 2014
Term Ioan		
Loan (%)	70.00%	CERC RE tariff order 2014
Loan Amount (INR Mn.)	1,451.10	Calculated Value
Interest rate (%)	12.70%	CERC RE tariff order 2014
Loan Tenure (years)	48	CERC RE tariff order 2014

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Moratorium Period (years)	-	CERC RE tariff order 2014
Repayment Period (years)	48	CERC RE tariff order 2014
Repayment instalments value (INR Mn.)	30.231	Calculated Value
1st instalment from (Qtr. end)	30-Jun-17	
Working Capital		
No. of Days Receivables	60	CERC RE tariff order 2014
O&M Expenses (Days)	30	CERC RE tariff order 2014
Maintenance spares, % of O&M expenses	15%	CERC RE tariff order 2014
Interest on Working Capital Debt	13.20%	CERC RE tariff order 2014
Book Depreciation (SLM Method)		
Land Cost etc. (INR Mn.)	-	
Gross Depreciable Value (INR Mn.)	2,073.00	
Salvage Value (%)	10.00%	CERC RE tariff order 2014
Salvage value (INR Mn.)	207.30	Calculated Value
Net Depreciable Value (INR Mn.)	1,865.70	Calculated Value
Residual Value (INR Mn.)	207.30	Calculated Value
IT Depreciation (SLM Method)		
IT Depreciation Rate (%)	7.69%	As Per Income Tax , Depreciation rates for power generating units
Income Tax		
Financial Year	FY 2014-15	
Income tax rate (%)	30.00%	Tax rates applicable to a domestic company
MAT (%)	18.50%	Tax rates applicable to a domestic company
Service Tax (%)	15.00%	Tax rates applicable to a domestic company
Surcharge (%)	7.00%	Tax rates applicable to a
Education cess (%)	3.00%	domestic company

Final Tax rates		
Income tax rate (%)	33.06%	Calculated Value
MAT (%)	20.39%	Calculated Value
Service Tax (%)	15.00%	Calculated Value

Equity IRR without Carbon revenue	Benchmark (Equity IRR)
6.98%	15.08%

This substantiates that the investment is not financially attractive (Equity IRR for the project activity is less than the Benchmark). Thus, it can be easily concluded that project activity is additional and is not business as usual scenario.

Sub-step 2d (5): Sensitivity Analysis

As per the Methodological Tool for Investment Analysis version 11.0, following factors has been subjected to sensitivity analysis:

- 1. PLF
- 2. O&M Cost
- 3. Project Cost
- 4. Tariff

Variation %	-10%	Normal	10%
PLF	4.77%	6.98%	9.32%
O&M	7.56%	6.98%	6.38%
Project Cost	8.93%	6.98%	5.51%
Tariff Rate	4.77%	6.98%	9.32%

The rationale of sensitivity is, "The ultimate objective of the sensitivity analysis is to determine the likelihood of the occurrence of a scenario other than the scenario presented, in order to provide a cross-check on the suitability of the assumptions used in the development of the investment analysis."

The results of sensitivity analysis show that even with a variation of +10% & -10% in project cost and O&M cost, PLF, and Tariff Rate, the Equity IRR of 6.98% is significantly lower than the benchmark of 15.08%. It is evident from the results given above that the project remains additional even under the most favourable conditions.

Probability to breach the benchmark:

Sensitivity Parameter 1: PLF

PLF considered in financials is as per CERC Regulations available at the time of decision making, which is in line with "Guidelines for the reporting and validation of Plant load factors" stated in EB 48 Annex11 option 3(b).

The variation in PLF +/- 10% also shows that equity IRR is not likely to achieve.

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Sensitivity Parameter 2: O&M

O&M Cost considered in financials is as per CERC Regulations available at the time of decision making.

The sensitivity analysis shows that even in case of variation in O&M by +/- 10%, IRR will not breach the benchmark.

Sensitivity Parameter 3: Project Cost

Project Cost for financial analysis is considered from CERC Regulations.

The Sensitivity is carried out for threshold level for which benchmark is not achieved.

Sensitivity Parameter 4: Tariff Rate

The tariff is determined by PPA which is fixed for entire lifetime of the project activity. The Sensitivity is carried out for +/-10% of Tariff. However, the possibility of 10% increase in these parameters is unlikely.

Outcome of Step 2:

This substantiates that the investment is not financially attractive (Equity IRR for the project activity is less than the Benchmark Equity IRR) for any of the investor. Thus, it can be easily concluded that project activity is additional & is not business as usual scenario.

Step 3: Barrier analysis

As per "Tool for demonstration and assessment of additionality" (Version 7.0.0), Step 2 or Step 3 or both can be used to demonstrate additionality of the project activity. In this case, Step 3 is not being used for the purpose.

Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity

Not applicable.

Sub-step 3b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity)

Not applicable.

Step 4: Common practice analysis

As per the "Tool for demonstration and assessment of additionality" (Version 7.0.0), step2 analysis shall be complemented with an analysis of extent to which the proposed project type (e.g. technology or practice) has already diffused in the relevant sector and region. This test is a credibility check to complement the investment analysis (Step 2).

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

□ Applicable geographical area: Tamil Nadu State and Karnataka State of INDIA has bee	∍n
considered as the geographical area.	
☐ Measure: Item 10(b) of Tool24 applies to the project activity since it is a renewable energy	ју
generation activity.	
☐ Output: It is the electricity generated by the project activity.	
☐ Technology: Large scale solar power based on PV is the applicable technology.	

The project activity meets the following criteria for TOOL24 Common Practice; Version 03.1.

Now, step wise approach as suggested in the tool is applied to the project activity:

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

The installed capacity of the project is 175 MW hence the applicable output range is from 87.5 MW to 262.5 MW.

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

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

Identification of similar projects which will fulfill the above conditions stated in step2.

The project activity of installation of large scale solar PV power projects in the states of Tamil Nadu and Karnataka are considered for analysis because:

- (a) The proposed project is situated in the states of Tamil Nadu and Karnataka in India. So projects that fall in the applicable geographical location are considered.
- (b) These projects that apply the same measure i.e. utility scale solar PV power generation
- (c) These use the same source of input energy i.e. solar
- (d) These produce the same goods/services i.e. electricity supplied to the connected grid
- (e) The capacity of these projects is in the range as defined in Step 1 i.e. 87.5 MW 262.5 MW
- (f) These projects started commercial operation before the start date of proposed project activity 8th February, 2016.

Numbers of Similar projects** identified, which fulfill above-mentioned conditioned are: Nil

So, $N_{solar} = 0$

Step 3: within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number N_{all} .

So, $N_{all} = 0$

** https://cea.nic.in/wp-content/uploads/2020/04/Plant-wise-details-of-RE-Installed-Capacity-merged.pdf

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Step 4: within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number N_{diff}. There is no project from the identified above that is different with project activity

Hence, $N_{diff} = 0$

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

Hence, F = 1-0 = 1

The proposed project activity is a "common practice" within a sector in the applicable geographical area if the factor F is greater than 0.2 and N_{all} - N_{diff} is greater than 3.

 $F=1 \& N_{all} - N_{diff} = 0$

Outcome of Common Practice analysis:

As,

i. F = 1; which is greater than 0.2

ii. N_{all} - N_{diff} = 0; which is not greater than 3

The project activity does not satisfy second condition. Hence, project activity is not a "common practice" within a sector in the applicable geographical area.

B.6. Estimation of emission reductions

>>

B.6.1. Explanation of methodological choices

> According to the methodology, i.e. GCCM001-v3.0. Emission reductions are calculated as follows:

 $ER_Y = BE_Y - PE_Y - LE_Y$

Where,

 $ER_Y = Emission reductions in project year y (t CO₂)$

 $BE_Y = Baseline Emissions in project year y (t CO₂)$

 $PE_Y = Project emissions in project year y (t CO₂)$

 $LE_Y = Leakage emissions in project year y (t CO₂)$

Baseline emissions include only CO₂ emissions from electricity generation in 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:

 $BE_v = EG_{PJ,v} \times EF_{arid,v}$

Where:

 $BE_v = Baseline emissions in year y (t CO₂)$

 $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the GCC project activity in project year y (MWh)

 $EF_{grid,y} = CO_2$ emission factor for grid connected power generation in year y (t CO_2/MWh) determined as per one of the four options below:

- (i) Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (t CO_2 /MWh) of the CDM; (Or)
- (ii) Latest available emission factor of the Grid in a country as approved by CDM standardized baseline (Or)
- (iii) Latest available emission factor of the Grid in a country as approved by its relevant National Authority or Designated National Authority (DNA) under CDM or UNFCCC focal point, in case DNA doesn't exist. (Or)
- (iv) Latest published Emission factor derived by International Energy Agency (IEA), (This option can be used only if it is objectively demonstrated that options (i), (ii) and (iii) above are not available).

Now the TOOL7 "Tool to calculate the emission factor for an electricity system" is used.

Calculation of the combined margin emissions factor as per the tool:

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

- (a) Weighted average CM; or
- (b) Simplified CM.

By Weighted average calculations the combined margin emissions factor is calculated as follows:

 $EF_{arid.CM.v} = EF_{arid.OM.v}^* WOM + EF_{arid.BM.v}^* WBM$

Where:

 $\mathsf{EF}_{\mathsf{grid},\mathsf{BM},\mathsf{y}} = \mathsf{Build} \; \mathsf{margin} \; \mathsf{CO}_2 \; \mathsf{emission} \; \mathsf{factor} \; \mathsf{in} \; \mathsf{year} \; \mathsf{y} \; (\mathsf{t} \; \mathsf{CO}_2/\mathsf{MWh})$

 $EF_{arid,OM,y} = Operating margin CO₂ emission factor in year y (t CO₂/MWh)$

WOM = Weighting of operating margin emissions factor (per cent)

WBM = Weighting of build margin emissions factor (per cent)

The following default values should be used for WOM and WBM:

For solar project activities: WOM = 0.75 and WBM = 0.25 (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods. Since project activity is of power generation by using solar, the above weightage has been considered for OM and BM.

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

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

The simple OM emission factor is calculated as the generation-weighted average CO_2 emissions per unit net electricity generation (tCO_2/MWh) of all generating power plants serving the system, not including low-cost/must-run power plants/units.

For the simple OM, the simple adjusted OM and the average OM, the emissions factor can be calculated using either of the two following data vintages:

(a) Ex-ante option: if the ex-ante option is chosen, the emission factor is determined once at the validation stage, thus no monitoring and recalculation of the emissions factor during the crediting period is required.

OR

(b) Ex-post option: if the ex-post option is chosen, the emission factor is determined for the year in which the project activity displaces grid electricity, requiring the emissions factor to be updated annually during monitoring.

Project owner has chosen ex-ante option for calculation of Simple OM emission factor using a 3-year generation-weighted average, based on the most recent data available at the time of submission of the PSF to the GCC Verifier for validation.

OM determined at validation stage will be the same throughout the crediting period. There will be no requirement to monitor & recalculate the emission factor during the crediting period.

Calculation of the operating margin emission factor (EF_{grid,OMSimple,y}) according to the selected method The operating margin emission factor has been calculated using a 3 year data taken from CEA Database.

Net Generation in Operating Margin (GWh) (incl. Imports)			
2014-15 2015-16 2016-17			
INDIAN Grid	8,08,417	8,71,753	9,16,278

Simple Operating Margin (tCO ₂ /MWh) (incl. Imports)			
2014-15 2015-16 2016-17			2016-17
INDIAN Grid	0.9903	0.9655	0.9636

So,

Weighted Generation Operating Margin	
INDIAN Grid 0.9726	

Calculation of the build margin (BM) emission factor (EF_{grid,BM,y}): GCC project owner can choose between one of the following two options:

- (a) Option 1 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 PSF submission to the GCC Verifier for validation.
- (b) Option 2 The build margin emission factor shall be updated annually, i.e ex post based.

Option 1 as described above is chosen by Project owner to calculate the build margin emission factor for the project activity. BM is calculated ex-ante based on the most recent information available at the time of submission of PSF and is fixed for the entire crediting period, the same is shown below which is taken from CEA database.

Build Margin (tCO ₂ /MWh) (not adjusted for imports)	
	2016-17
Indian Grid	0.8723

B.6.2. Data and parameters fixed ex ante

>>

Data / Parameter Table 1.

Data / Parameter:	EF _{grid,OM} , y
Methodology reference	GCCM001 (Version 3.0)
Data unit	tCO ₂ /MWh
Description	Operating Margin CO2 emission factor in the year y
Measured/calculated /default	Calculated
Data source	Calculated as the last 3 year (2014-15, 2015-16, 2016-17) generation weighted average, sourced from Baseline CO2 Emission Database, Version 16.0, March 2021 published by Central Electricity Authority (CEA), Government of India.
Value(s) of monitored parameter	0.9726
Measurement/ Monitoring equipment (if applicable)	Type of meter Location of meter Accuracy of meter Serial number of meter
Calculation method (if applicable)	Not applicable
QA/QC procedures	This parameter is fixed ex-ante for the entire crediting period.

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Purpose of data	For the calculation of the Baseline Emission.
Additional	
comments	

Data / Parameter Table 2.

Data / Parameter:	EF grid,BM,y	
Methodology	GCCM001 (Version 3.0)	
reference		
Data unit	tCO2e/MWh	
Description	Build Margin CO2 emission factor in year y	
Measured/calculated	CO2 Emission Database, Version 16.0, March- 2021 published by Central	
/default	Electricity Authority (CEA), Government of India.	
Data source	CO2 Emission Database, Version 16.0, March- 2021 published by	
	Central Electricity Authority (CEA), Government of India.	
Value(s) of	0.8723	
monitored		
parameter		
Measurement/	Not Applicable	
Monitoring		
equipment (if applicable)	Type of meter	
applicable)	Location of meter	
	Accuracy of meter	
	Serial number of meter	
Coloulation maths at	Not Applicable	
Calculation method	Not Applicable	
(if applicable)		
QA/QC	This parameter is fixed ex-ante for the entire crediting period.	
procedures		
Purpose of data	For the calculation of the Baseline Emission.	
Additional		
comments		

Data / Parameter Table 3.

Data / Parameter:	EF grid,CM,y
Methodology	GCCM001 (Version 3.0)
reference	

Data unit	tCO₂e/MWh	
Description	Combined Margin CO2 emission factor in year y	
Measured/calculated	Calculated	
/default Data source	CO ₂ Emission Database, Version 16.0, March- 2021 published by Central	
	Electricity Authority (CEA), Government of India.	
Value(s) of	0.9475	
monitored		
parameter Measurement/		
Monitoring		
equipment (if	Type of meter	
applicable)	Location of meter	
αρριισασίο	Accuracy of meter	
	Serial number of meter	
	Not Applicable	
Calculation method	The combined margin emissions factor is calculated as follows:	
(if applicable)	EFgrid,CM,y= EFgrid,OM,y* WOM + EFgrid, BM,y* WBM	
	Where:	
	EFgrid,BM,y= Build margin CO2 emission factor in year y (tCO2/MWh)	
	EFgrid,OM,y= Operating margin CO2 emission factor in year y	
	(tCO2/MWh)	
	WOM = Weighting of operating margin emissions factor (%) = 75%	
QA/QC	WBM= Weighting of build margin emissions factor (%) = 25%	
procedures	This parameter is fixed ex-ante for the entire crediting period.	
Purpose of data	For the calculation of the Baseline Emission.	
Additional	1 of the baldalation of the baseline Emission.	
comments		
331111101110		

B.6.3. Ex-ante calculation of emission reductions

>> Formula used to calculate the net emission reduction for the project activity is ERy =BEy-PEy-LEy

Where,

ERy = Emission Reduction in year y (t CO₂)

BEy = Baseline emission in year y (t CO_2)

PEy = Project emissions in year y (t CO_2)

LEy= Leakage emissions in year y (t CO₂)

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Baseline Emission (BEy)

The baseline emissions are the product of electrical energy baseline EG $_{\rm PJ,Y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

BEy= EG _{PJ,y} * EF grid,cm,y

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 project activity in year y (MWh)

As per Paragraph 26 of the applied methodology GCCM001 (version 3.0), no project emissions considered in the project activity.

Hence, project emissions PEy= 0 t CO₂e

As per paragraph 29 of the applied methodology GCCM001 (version 3.0), no other leakage emissions are considered. In this project activity LEy = 0

Therefore, ERy =BEy.

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

>> This annual average net electricity generation and annual average GHG emission reductions are with application of degradation factor of 2.5% during the 1st year and 0.83% from 2nd year till the end of 10th year, as per the standard performance warranty by the PV module manufacturers.

Year	Baseline emissions	Project emissions	Leakage (t CO₂e)	Emission reductions
	(t CO ₂ e)	(t CO ₂ e)	(* 2 2 2 7	(t CO ₂ e)
Year 1	2,56,697	0	0	2,56,697
Year 2	2,73,691	0	0	2,73,691
Year 3	2,71,420	0	0	2,71,420
Year 4	2,69,167	0	0	2,69,167
Year 5	2,66,933	0	0	2,66,933
Year 6	2,64,717	0	0	2,64,717
Year 7	2,62,520	0	0	2,62,520
Year 8	2,60,341	0	0	2,60,341
Year 9	2,58,180	0	0	2,58,180
Year 10	2,56,037	0	0	2,56,037
Total	26,39,703	0	0	26,39,703
Total number				
of crediting	10			
years				
Annual	263,970	0	0	263,970
average over				
the crediting				
period				

B.7. Monitoring plan

>>

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

>>

Data / Parameter Table 4.

Data / Parameter:	EG _{PJ,Y}	
Methodology	GCCM001 (Version 3.0)	
reference	GCC Project Sustainability Standard V3.0	
Data unit	MWh	
Description	Quantity of net electricit	y generation supplied by the project plant/unit to
	the grid in year y	
Measured/calculated /default	Measured and Calculate	ed
Data source	JMR/ monthly generation	on report from state electricity board/DISCOM
Value(s) of	278,593	
monitored		
parameter applied		
with basis		
Measurement/		
Monitoring		
equipment	Type of meter(s)	Energy meter
	Location of meter(s)	Substation
	Accuracy of meter(s)	0.2 or 0.5
	Serial number of	To be confirmed during issuance time as per records.
	meter(s) Calibration frequency	Once in a year
	Date of Calibration/	To be confirmed during issuance.
	validity	To be committed during issuance.
	Reference No. of	To be confirmed during issuance.
	Calibration Certificates	
	Calibration Status	To be confirmed during issuance.
Frequency of	Monthly	
Measuring/reading		
Recording frequency	Monthly	
Calculation method	_ 	
(if applicable)		

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QA/QC	The calibration of all meters will be done as per the frequency and fault
procedures	meters will be replaced immediately.
Purpose of data	To calculate baseline emissions and
·	To justify SDG Goals 7.2.
Additional	Data will be archived electronically for a period of 2 years beyond the
comments	end of crediting period.

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

Data / Parameter:	Emission Reductions	
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.	
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity uses clean energy for generation of electricity, Thus CO ₂ emissions are reduced wrt baseline. Emission reductions from project can justify the SDGs 9.4 and 13.2. The impact is Harmless as it is a positive environmental impact.	
Describe the parameters to be		
monitored to demonstrate	Parameter to be monitored	Emission Reductions
compliance with requirements to	Frequency of monitoring	yearly
demonstrate "harmless" condition	Legal /regulatory / corporate limits (if any)	-
or demonstrate Impact on SDG	QA/QC	Calibration of Energy meters is done once in five years.
Remarks		

Data / Parameter:	Solid waste (Plastics, E waste and end of life products)
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.

Describe the related environment /social/SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity generates solid waste, which is sent to the authorized recycling vendor and where it will be treated scientifically. The impact is Harmless as it is a positive environmental impact.	
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact	Parameter to be monitored of life products) generated and disposed Frequency of monitoring Legal /regulatory / corporate limits (if any) Amount of solid waste(Plastics, E waste and exposed of life products) generated and disposed Yearly	
or demonstrate Impact on SDG	QA/QC	Disposed as per prevailing legal laws
Remarks		

Data / Parameter:	Employment	
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.	
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity generates permanent and temporary employment oppurtunities to the local communities, thus contributing to positive social impact and justify SDG 1.1	
Describe the		
parameters to be		
monitored to demonstrate	Parameter to be monitored	Number of locals employed
compliance with requirements to	Frequency of monitoring	Yearly
demonstrate "harmless" condition	Legal /regulatory / corporate limits (if any)	-
or demonstrate Impact on SDG	QA/QC	-
Remarks		

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Data / Parameter:	Skill Development Training	
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.	
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity conducts skill development training and occupational safety trainings for both in house and new qualified people. Trainings also help in effective knowledge dissemination. Thus, contribute to positive social impact and justify SDG 4.4	
Describe the		
parameters to be monitored to		
demonstrate	Parameter to be monitored	Number of persons trained
compliance with requirements to	Frequency of monitoring	Yearly
demonstrate "harmless" condition	Legal /regulatory / corporate limits (if any)	-
or demonstrate Impact on SDG	QA/QC	-
Remarks		

Data / Parameter:	Occupational Incidents/Accidents	
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.	
Describe the related environment /social/SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity conducts occupational safety trainings and follows company EHS policy strictly and thus reduces incident/ accident rate. So it contribute to positive social impact and justify SDG 8.8.	
Describe the parameters to be		
monitored to demonstrate	Parameter to be monitored	Number of Incidents/accidents
compliance with requirements to	Frequency of monitoring	Yearly
demonstrate "harmless" condition	Legal /regulatory / corporate limits (if any)	-
or demonstrate Impact on SDG	QA/QC	

Remarks	

Data / Parameter:	Health services for Stake	eholders
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.	
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity conducts health camps for stakeholders and improves efficiency of health services. Thus contribute to positive social impact and justify SDG 3.8	
Describe the		
parameters to be monitored to		
demonstrate	Parameter to be monitored	Number of Health camps
compliance with requirements to	Frequency of monitoring	Yearly
demonstrate "harmless" condition	Legal /regulatory / corporate limits (if any)	-
or demonstrate Impact on SDG	QA/QC	-
Remarks		

Data / Parameter:	Health services for Employees
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity creates basic health care services, group health insurance and health camps for the employees. Thus contribute to positive social impact and justify SDG 3.8

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Describe the parameters to be monitored to		
demonstrate	Parameter to be monitored	Number of Employees with health facilities
compliance with requirements to	Frequency of monitoring	Yearly
demonstrate "harmless" condition	Legal /regulatory / corporate limits (if any)	-
or demonstrate Impact on SDG	QA/QC	-
Remarks		

Data / Parameter:	Labour rights Protection										
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.										
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.		es minimum wages to all employees as per wages of labour rights. Thus contribute to positive social 3									
Describe the											
parameters to be											
monitored to demonstrate	Parameter to be monitored	Number of Employees without minimum wage									
compliance with requirements to	Frequency of monitoring	Yearly									
demonstrate "harmless" condition	Legal /regulatory / corporate limits (if any)	O(zero)									
or demonstrate Impact on SDG	QA/QC -										
Remarks											

Data / Parameter:	Child labour
Purpose:	To demonstrate positive impacts of aspects wrt baseline scenario / BAU / pre- existing scenario and to demonstrate that they do not cause any net harm to environment / society or have an impact on SDG as per selected indicators.

environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project activity has strong HR policy towards no exploitation of child labour at workplace. Thus contribute to positive social impact and it is harmless.										
demonstrate compliance with requirements to demonstrate "harmless" condition	Parameter to be nonitored frequency of nonitoring egal /regulatory / orporate limits (if any)	Number of child labour engaged Yearly 0 (zero)									

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

>> No Harmful parameters

Data / Parameter:	XX									
Purpose:	To demonstrate compliance of XXXX aspects to legal/regulatory/corporate requirements or 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.										
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate "harmless" condition or demonstrate Impact on SDG	Parameter to be monitored Frequency of monitoring Legal /regulatory / corporate limits (if any) QA/QC									

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Program of Risk Management Actions to mitigate risk related to aspect (if any for aspects assessed to be harmful)

S.No.	Action and targets	Responsibility	Resource Requirement	Target to be Achieved by (insert date)	Key Performance Indicators (KPI)	Targets achieved on (insert date)				
1										
2										
3										
4										
5										
6										
Date of Closing the Program:										
					•					

B.7.3. Sampling plan

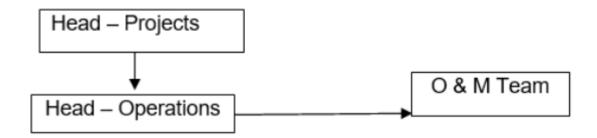
>> Not Applicable

B.7.4. Other elements of the monitoring plan

>> The monitoring plan is developed in accordance with the modalities and procedure with project activity and is proposed for grid-connected solar power projects being implemented in Tamil Nadu and Karnataka, India. The monitoring plan, describes about the monitoring team , parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.

The authority and responsibility for registration, monitoring, measurement, reporting and reviewing of the data rests with the project owner. The following structure is proposed for data monitoring, collection, data archiving and calibration of equipment for this project activity. The team comprises of the following members:

Organizational Structure for Monitoring



Responsibilities of Head- Projects:

Tracking and reviewing the overall functioning and maintenance of the project activity from Head (Operations). Head (Operations) will be reporting Head (Projects).

Responsibilities of Head-Operations:

Overall functioning of the project activity and Coordinating with the O & M Team for the proper functioning of Project activity. He will be reporting to Head (Projects).

Responsibilities of O & M Team:

O & M team is responsible for Operations and Maintenance related issues. They are also responsible for day-to-day data collection and monitoring, ensures completeness and reliability of data (calibration of equipment).

Data Measurement

The export and import energy will be measured continuously using above mentioned Main and Check meters located at the substations. Readings of meters shall be taken on monthly basis by authorized officer of SEB in the presence of project owner or his representative. Based on the Meter Reading Statement to project owner, invoices will be raised. These invoices can be used for cross checking the meter readings taken for the respective project activity.

Data collection and archiving

Export & Import readings from main & check meter are collected under the supervision authorized representative of project owner. The net electricity supplied to grid are calculated based on export & import readings. Export and Import data would be recorded and stored in electronic &/or paper. The records are checked periodically by the Head (Operations) and discussed thoroughly with the O & M Team. The period of storage of the monitored data will be 2 years after the end of crediting period or till the last issuance of ACCs for the project activity whichever occurs later. Both the main and check meter of the project are found within the acceptable limits of accuracy functioning properly.

Mismatch in Monitoring Period and the Billing Period

In case the dates of a particular monitoring period do not match with the dates of the billing period, the net electricity exported to the grid would be calculated from: A= Difference of number of days which are not matching of billing period and monitoring period. B=Number of days of the billing period/month which was not matched with the monitoring period. C= Net electricity supplied to the grid for that given billing period/month The calculated value after apportioning would be used for calculation of emission reductions during that period.

Emergency preparedness

The project activity will not result in any unidentified activity that can result in substantial emissions from the project activity. No need for emergency preparedness in data monitoring is visualized. In the unlikely event of failure of both Main meter & Check meter installed at sub-station, where both

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the faulty meters are required to repair or replaced simultaneously, the export & import readings from Main & Check Meter installed at the inter-connection point at the project site will be used for monitoring of net electricity exported to the grid.

Personnel Training

In order to ensure a proper functioning of the project activity and a properly monitoring of emission reductions, the staff will be trained. The plant helpers will be trained in equipment operation, data recording, reports writing, operations and maintenance and emergency procedures in compliance with the monitoring plan.

Section C. Start date, crediting period type and duration

C.1. Start date of the Project Activity

>>

Project Name	Capacity	DOC
M/s. RT Renewable Energy India Pvt Ltd	15	28/03/2016
M/s. SEI Phoebus Pvt Ltd	50	08/02/2016
M/s. SEI Adhavan Power Pvt Ltd	50	31/03/2016
M/s. SEI Venus Private Ltd	30	28/03/2017
M/s. SEI Diamond Pvt Ltd	30	28/03/2017

So taking the earliest among the above as start date of project, i.e.,08/02/2016.

C.2. Expected operational lifetime of the Project Activity

>>25 Years

C.3. Crediting period of the Project Activity

>>

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

>> Start date of Crediting Period: 07/02/2017
End date of Crediting Period: 06/02/2027

C.3.2. Duration of crediting period

>>10 Years

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, interfacing the generators with the State Electricity Board by setting up HT transmission lines and installation of other accessories. As there is not any significant impacts due to implementation of project activity on air, water, soil quality and ambience are envisaged due to the project activity. However, further analysis has been done in section E.

Even the report on "Developmental impacts and Sustainable Governance Aspects of Renewable Energy Projects" prepared by MNRE dated September 2013[#]. This report clearly mentioned that solar PV project activity operations do not result in direct air pollution, noise pollution.

D.2. Environmental impact assessment and management action plans

>> The guidelines on Environmental Impact Assessment have been published by Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006##. Further amendments to the notification have been done on 14/07/2018. As per the notification:

"The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity:

- 1) All new projects or activities listed in the Schedule to this notification;
- 2) Expansion and modernization of existing projects or activities listed in the Schedule to this notification with addition of capacity beyond the limits specified for the concerned sector, that is, projects or activities which cross the threshold limits given in the Schedule, after expansion or modernization;
- 3) Any change in product mix in an existing manufacturing unit included in Schedule beyond the specified range."

As the solar power generation projects are not listed in any of the categories of the schedule, so the Project Activity is considered environmentally safe and as per Host party- India no EIA is required.

https://smartnet.niua.org/sites/default/files/resources/report-on-developmental-impacts-of-RE.pdf

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

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Section E. Environmental and social safeguards

>>

E.1. Environmental safeguards

>>

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards									er's Conclusion	GCC Project Verifier's Conclusion (To be included in Project Verification Report only)
		Description of Impact (positive or negative)	Legal/ voluntary corporate requirem	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 environmenta I impact	Explanation of the Conclusion	3 rd Party Audit
			ent / regulator y/ voluntary corporate threshold Limits	Not Applica ble	Harmless	Harmful	Operational Controls	Program of Risk Management Actions	Monitoring parameter and frequency of monitoring	Ex- Ante scoring of the environmenta I impact (as per scoring matrix Appendix-02)	Ex- Ante description and justification/expl anation of the scoring of the environmental impact	Verification Process
Environm ental Aspects on the identified categorie s ¹⁴ indicated below.	Indicators for environmen tal 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 requiremen ts /legal limits / voluntary corporate limits related to the identified risks of environme ntal impacts.	If no environm ental impacts are ed, then the Project Activity is unlikely to ause any harm (is safe) and shall be indicated as Not Applica ble	If environmen tal impacts exist, but are expected to be in compliance with applicable national regulatory /stricter voluntary corporate requirement s and will be within legal/ voluntary corporate limits by way of plant design and operating	If negative environm ental impacts exist that will not be in complian ce with the applicabl e national legal/ regulator y requirem ents or are likely to exceed legal limits, then the	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/regulato r requirements	Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been identified as Harmful.	Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless of harmful. The frequency of monitoring to be specified as well including the data source.	-1 0 +1	Confirm the score of environmental impact of the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.	Describe how the GCC Verifier has assessed that the impact of the Project Activity against the particular aspect and in case of 'harmful impacts'' how has the project adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net positive impacts of the project with respect to the most likely baseline alternative.

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

					principles, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as Harmless //f the project has an positive impact on the environmen t mark it as "harmless" as well.	Project Activity is likely to cause harm (may be un-safe) and shall be indicated as Harmful	or industry best practice or stricter voluntary corporate requirements					
Referenc e to paragrap hs of Environm ental and Social Safeguar ds Standard		Paragraph 12 (a)	Paragraph 13 (c)	Paragrap h 13 (d) (i)	Paragraph 13 (d) (ii)	Paragrap h 13 (d) (iii)	Paragraph 13 (e) (i)	Paragraph 13 (e) (ii)	Paragraph 12 (c) and Paragraph 13 (f)	Paragraph 22		Paragraph 24 and Paragraph 26 (a) (i)
Enviro nment - Air	SO _x emissions (EA01)	The project activity does not cause SOx emissions. The project activity avoids SOx emissions that would have generated from the similar activity in the baseline, where the fuel used are fossil fuels.	National Ambient Air Quality Standard s as notified by CPCB.	Not Applica ble	-	-	-	-	-	0	The Project proponent confirms that the project activity will not cause SOx emissions.	
	NO _x emissions (EA02)	The project activity does not cause NOx emissions. The project activity avoids NOx emissions that would have generated from the similar activity in the baseline, where the fuel used are fossil fuels.	National Ambient Air Quality Standard s as notified by CPCB.	Not Applica ble	-	-	-	-	-	0	The Project proponent confirms that the project activity will not cause NOx emissions.	
	CO ₂ emissions (EA03)	Project Activity generates Electricity from renewable source. Hence no CO2 emissions from the project activity.	National Ambient Air Quality Standard s as notified by CPCB.	-	Harmless	-	-	-	Emission reductions in tCO ₂ e per year	+1	Project owner concludes that, the project has is being executed with the aim to produce electricity from renewable	

CO emissions (EA04)	In the absence of present scenario, fossil fuel based power plants produce more Co ₂ emissions to generate electricity. The project activity does not produce any CO emissions within or outside the project boundary. In the absence of	National Ambient Air Quality Standard s as notified	Not Applica ble	-	-	-	-	-	0	PP concludes that, there is no CO emissions are observed during operation of plant.	
	project activity, there is a possibility to produce CO emissions.	by CPCB.									
Suspende d particulate matter (SPM) emissions (EA05)	Executed Project activity does not produce any SPM emissions except during construction.	National Ambient Air Quality Standard s as notified by CPCB.	Not Applica ble	-	-	-	-	-	0	PP concludes that, no SPM emissions produced from the Project activity during Operational phase. Negligible amount of emissions during construction.	
Fly ash generatio n (EA06)	Fly ash emissions are not produced from this project activity either within or outside the project boundary. In the absence of project activity, conventional power plant may produce Fly ash emissions	National Ambient Air Quality Standard s as notified by CPCB.	Not Applica ble	-	-	-	-	-	0	PP confirms that, in the baseline scenario (grid) some of the fossil fuel power plants may produce Fly ash emissions, on which data is not available.	
Non- Methane Volatile Organic Compoun ds	Not Applicable										

	(NMVOCs) (EA07)											
	Odor (EA08)	Not Applicable										
	Noise Pollution (EA09)	Not Applicable										
	Others (EA10)	Not Applicable										
	Add more rows if required and correspon ding notation with EA as prefix)											
Enviro nment - Land	Solid waste Pollution from Plastics (EL-01)	Solid waste from plastics usually generated during operational phase.	Solid Waste Managem ent Rules- 2016	-	Harmless	-	By establishin g standard procedures in compliance with SWM rules.	-	Solid waste(Plastics) quantity per year	+1	PP confirms the plastic waste generated will be collected and disposed as per the regulations.	
	Solid waste Pollution from Hazardou s wastes(E L02)	Limited quantity of hazardous wastes are generated during maintenance activities. In the baseline scenario, the solid waste pollution from hazardous wastes is very high.	Hazardou s and Other Wastes (Manage ment and Transbou ndary Movemen t) Amendm ent Rules, 2016	Not Aplicabl e	-	-	-	-	-	0	PP Concludes that, hazardous waste generated from project activity will be collected and disposed off as per the regulations	
	Solid waste Pollution	Solid waste from Biomedical waste usually generated from	Biomedic al Waste Managem	Not Applica ble	-	-	It should be Collected and		-	0	PP Concludes that, solid waste generated from	

	from Bio- medical wastes (EL03)	Health care centres at site and periodical Health camps conducted	ent Rules, 2016				disposed properly through authorized vendors authorized by Pollution Control Board and comply with the rules of Bio medical waste disposal guidelines at selected dump site If not managed properly will become Harmful.				Biomedical waste will be collected and disposed of properly.	
	Solid waste Pollution from E- wastes (EL04)	There is chance to produce E-wastes from the project activity.	E-waste (Manage ment and Handling) Rules	-	Harmless	-	It will be Collected and disposed properly through authorized vendors and comply with the rules of E Waste disposal guidelines	-	Solid waste(E- waste) quantity per year	+1	PP concludes that, the solid waste from E-wastes will be collected and disposed properly.	
	Solid waste Pollution from Batteries (EL05)	The project activity will generate solid waste from batteries, at the end of life of batteries.	Battery Waste Managem ent rules- 2016	Not Applica ble	-	-	-	-	-	0	PP concludes that the batteries will be returned to the manufactures as a part of Battery Management Rules.	
	Solid waste Pollution from end of life products/	In project activity, Solid waste is generated from the end of life products/ equipment.	Solid Waste Managem ent Rules, 2016	-	Harmless	-	It will be Collected and disposed properly as per the rules.	-	Solid waste(end of life products) quantity per year	+1	PP concludes that, the waste from End-of-life products /equipment will be e collected and disposed off	

	equipmen t (EL06)										as per regulations.	
	Soil Pollution from Chemical s (including Pesticides , heavy metals, lead, mercury) (EL07)	Not Applicable										
	land use change (change from cropland /forest land to project land) (EL08)	Project activity is established in non crop land and non forest land, so is no change in land use.	-	Not Applica ble	-	-	-	-	-	0	Project activity is in non crop/ non forest area.	
	Others (EL09)	Not Applicable										
	Add more rows if required											
Enviro nment - Water	Reliability/ accessibili ty of water supply (EW01)	Not Applicable										
	Water Consumpt ion from ground and other sources (EW02)	Ground water will be utilised for cleaning of modules at the site.	No Regulatio n	Not Applica ble	-	-	-	-	-	0	PP confirms that there is no major impact from the project activity, by water consumption from ground and other sources.	
	Generatio n of	Not Applicable										

	wastewat er (EW03)										
	Wastewat er discharge without/wi th insufficien t treatment (EW04)	Not Applicable									
	Pollution of Surface, Ground and/or Bodies of water (EW05)	Not Applicable									
	Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)	Not Applicable									
	Others (EW07)	Not Applicable									
	Add more rows if required										
Enviro nment - Natural Resour ces	Conservin g mineral resources (ENR01)	The project activity generates electricity from renewable source i.e., using Solar, so we conserve natural resources as, in the baseline scenario, electricity is generated by using fossil fuels.	No Regulatio ns	Not Applica ble	-	-	-	-	0	PP concludes that, project activity will conserve mineral resources, as the electricity generated from the project activity is based	

									on renewable sources	
Protectir / enhancir plant life (ENR02)	ng									
Protectin / enhancin species diversity (ENR03)	ng									
Protectir / enhancir forests (ENR04)	ng									
Protectir./ enhancir other depletab natural resource (ENR05)	g le s									
Conserv g energy (ENR06)										
Replacin fossil fuels with renewab sources energy (ENR07)	replacing fossil fuels with solar for the generation of electricity.	No Regulatio n	-	Harmless	-	-	Emission reductions per year	+1	The Project activity Supply Energy to the grid through the Renewable Source of energy.	
Replacin ODS wit non-ODS refrigera s (ENR08)	S nt			-	-					
Others (ENR09)	Not Applicable									

Add more rows if required								
Net Score:					+5			
Project Owner's Conclusion in PSF:	The Proj	ect Owne	r confirm	s that the P	roject Activity	will not cause	any net harm	to Environment.
GCC Project Verifier's Opinion:	The GCC \	/erifier ce	rtifies tha		et Activity [is no m to the enviro		use any] or [is l	ikely to cause] net

E.2. Social Safeguards

>>

Impact of Proj Activity on	ect	Inform	ation on Impacts,	s, Do-No-Harm Risk Assessment and Establishing Safeguards					Project Owner's Conclusion		GCC project Verifier's Conclusion (To be included in
											Project Verification Report only)
		Description of Impact (positive or negative) Legal requirement /Limit, Corporate policies / Industry best practice Do-No-Harm Risk Assessment Risk Mitigation Action Plans (for aspects marked as Harmful) Performance indicator for monitoring of impact.				Ex-ante scoring of environm ental impact	Explanatio n of the Conclusion	3 rd Party Audit			
				Not Applicable	Harmless	Harmful	Operational / Management Controls	Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix- 02)	Ex- Ante scoring of social impact of the project	Ex- Ante description and justificatio n/explanati on of the scoring of social impact of the project	Verification Process Will the Project Activity cause any harm?
Social Aspects on the identified categories ¹⁵ indicated below.	Indicators for social impacts	Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all source 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).	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/regulat ory limits (if any) including basis of conclusion	Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative) and in case of "harmful aspects how has the project owner adopted Risk Mitigation Action / management action plans and policies to negative social impacts to levels the

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

					project having positive impact on society. To the BAU / baseline scenario must also mark their aspect as "harmless"						are unlikely to cause any harm. Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.
Reference to paragraphs of Environmental and Social Safeguards Standard		Paragraph 12 (a)	Paragraph 13 (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		Paragraph 24 and Paragraph 26 (a) (ii)
Social - Jobs	Long- term jobs (> 10 year) created/ lost (SJ01)	There is a positive impact of the project activity on the creation of long-term jobs during its operational time.	No Regulations	-	Harmless	-	-	Number of local persons(> 1 year) employed per year	+1	PP has an internal goal to execute the business to improve the local economy and employme nt and improve direct/indir ect employme nt generation and Economic value addition.	
	New short- term jobs (< 1 year) created/	There is a positive impact of the project activity on the creation of short-term jobs for local worker during its construction phase and operational phase.	No Regulations	-	Harmless	-	-	Number of persons employed(< 1 year) per year	+1	PP has an internal goal to execute the business to	

lost (SJ02)									improve the local economy and employme nt and improve direct/indir	
									ect employme nt generation and Economic value addition.	
Sources of income generati on increase d / reduced (SJ03)	The project activity creates employment for people and also infrastructure development nearby project area. The project activity will also help in increased income of the old and new small enterprises established in the neighborhood of the project due to increased economic activity in the area.	No regulations	Not Applicable	-	-	-	-	0	PP confirms that, the project activity provide jobs for people, infrastructu re developme nt increase in source of income generation to local people.	
Avoiding discrimin ation when hiring people from different race, gender, ethnics, religion, marginali zed groups, people with	Not Applicable									

	disabilitie s (SJ04) (human										
Social - Health & Safety	rights) Disease preventio n (SHS01)	Not Applicable									
	Occupati onal health hazards (SHS02)	In project activity there may be chance to happen accidents during construction and operational phase.	No Regulations	-	Harmless	-	-	Accidents/inciden ts rate per year	+1	PP has strict EHS policy to reduce accidents and ensures employees health and safety,	
	Reducin g / increasin g accident s/Inciden ts/fatality (SHS03)	In project activity reduces the chance to happen accidents during construction and operational phase by its EHS policy.	No Regulations	-	Harmless	-	-	Accidents/inciden ts rate per year	+1	PP has strict EHS policy to reduce accidents and ensures employees health and safety,	
	Reducin g / increasin g crime (SHS04)	Not Applicable									
	Reducin g/ increasin g food wastage (SHS05)	Not Applicable									
	Reducin g/ increasin g indoor air pollution (SHS06)	Not Applicable									

	Efficienc y of health services (SHS07)	The project activity enables in improved efficiency of health services in and around the project location.	No Regulations	-	Harmless	-	-	Health camps per year	+1	PP concludes that health camps will be conducted in and around the project area, periodically	
	Sanitatio n and waste manage ment (SHS08)	Not Applicable									
	Other health and safety issues (SHS09)	Not Applicable									
	Add more rows if required										
Social - Education	specializ ed training / educatio n to local personn el (SE01)	There is positive impact as training will be given to new people as well as the in house staff on the project related technology.	No Regulations		Harmless	-		Number of persons trained per year	+1	Project proponent Confirms that, the training on technology to people will upgrade their skills and knowledge about project.	
	Educatio nal services improved or not (SE02)	The project proponent will improve educational services by providing infrastructure and other services,	No Regulations	Not Applicable			-	-	0	PP confirms its contributio n towards improveme nt in	

		around the project activity								educationa I services within the local communiti es.	
	Project- related knowled ge dissemin ation effective or not (SE03)	Project activity transfers the knowledge on new renewable energy technology.	No Regulations	-	Harmless	-	-	Number of persons trained per year	+1	PP concludes that, they provide effective training on project, periodically	
	Other educatio nal issues (SE03)	Not Applicable									
	Add more rows if required (SE04)										
Social - Welfare	Improvin g/ deteriora ting working condition s (SW01)	In the absence of the project activity, the people from local communities would have to work somewhere with fatiguing work conditions. The project activity provides permanent and temporary employment to people.	No Regulations	-	Harmless	-	-	Number of local persons employed per year	+1	PP confirms that the working conditions have been improved, by adopting various policies.	
	Commun ity and rural welfare (indigeno us people and	The project activity enables welfare of the rural communities.	No Regulations	-	Harmless	-	-	Allocated fund per year	+1	PP confirms that, he contributes towards welfare of the rural	

communi ties)									communiti es.	
(SW02)										
Poverty alleviatio n (more people above poverty level) (SW03)	By generating direct and indirect employment opportunities, the project activity contributes to the efforts of poverty alleviation.	No Regulations	Not Applicable	-	-	-	-	0	PP concludes that, the Poverty alleviation occurs due to providing direct and indirect employme nt opportuniti es.	
Improvin g / deteriora ting wealth distributi on/ generati on of income and assets (SW04)	Not Applicable									
Increase d or / deteriora ting municipa I revenues (SW05)	Not Applicable									
Women's empower ment (SW06) (human rights)	Women are not been employed at the project activity as is in far remote location.	-	Not Applicable	-		-	-	-		
Reduced / increase d traffic	Not Applicable									

congesti on (SW07)										
Exploitati on of Child labour (human rights) (SW08)	Positive impact as company has strong HR policy	Corporate regulation: Zero	-	Harmless	-	-	Number of child labour per year	+1	Project owner confirms that the company's HR policy is strictly practiced at site and confirms no child labour is deployed at the site, at any cost.	
Minimum wage protectio n (human rights) (SW09)	Positive impact as company follow the regulation of minimum wages projection for its employees.	Wages Act & HR Policy	-	Harmless	-	-	Number of employees without minimum wage per year	+1	The company confirms that it ensures minimum wages protection to its employees	
Abuse at work place. (wi th specific reference to women and people with special disabilities / challenges) (human rights) (SW10)	Not Applicable									

Other social welfare issues (SW11)						
Avoidanc e of human traffickin g and forced labour (human rights)	Not Applicable					
Avoidanc e of forced eviction and/or partial physical or economi c displace ment of IPLCs (human rights)	Not Applicable					
Provision s of resettlem ent and human settleme nt displace ment (human rights) (CW14)	Not Applicable					

	Add more rows if required									
Net Score:	Net Score:		+11							
Project Owr	ner's Conclusion in PSF:	The Project Owner confirms that the Project Activity will not cause any net harm to society.								
GCC Project Verifier's Opinion:		The GCC Verifier certifies that the Project Activity [is not likely to cause any] or [is likely to cause] 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			GCC Project Verifier's Conclusion (To be included in Project Verification Report only)	
			Project-level SDGs	Project-level Targets/Actions	Contribution of Project- level Actions to SDG Targets	Monitoring	Verification Process	Are Goal/ Targets Likely to be Achieved?
Describe UN SDG targets and indicators See: https://unstats.un.org/sdgs/indicators/indicators/ors-list/	Describe the UN- level target(s) and correspo nding indicator no(s)	Has the host country declared the SDG to be a national priority? Indicate Yes or	Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column for guidance.	Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).	Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets	Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG indicator and its corresponding target, frequency of monitoring	Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s).	Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or no)

Goal 1: End poverty in all its forms everywhere	1.1: By 2030, Eradicate extreme poverty for all people everywh ere, Currently measure d as people living on less than \$1.25 a day. Indicator s 1.1.1	Yes	Eradicate extreme poverty for all locally employed people	At least onsite employment creation to the local communities	By providing direct and indirect employment opportunities to the local communities.	Employment records and 3rd party contracts executed, Number of locals employed per year	
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	NA	NA	NA	NA	NA	NA	
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.8 Achieve universal health coverage	Yes	Achieve health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential	Ensure health care services and financial risk protection to the employees.	Organizing Health camps, periodically Providing group health insurance	Records of group health insurance, health camps conducted	

	including financial risk protectio n, access to quality essential health-care services and access to safe, effective, quality and affordabl e essential medicine s and //vaccine s for all Indicator s: 3.8.1		medicines and vaccines for the employees.		Adopting EHS policy within the project boundary	and EHS training programs Number of health camps per year Number of employees with healthservic es	
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	By 2030, substanti ally increase the number of youth and adults who have relevant skills, including technical and vocation al skills, for	Yes	Substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship, from local stakeholders	To train the, employed local youth and adults with relevant skills through trainings during the installation and operational phases of the project	Empowered local stakeholders with digital literacy and training on relevant technologies	Records of trainings and workshops conducted, Number of persons trained per year	

	employm ent, decent jobs and entrepre neurship Indicator s: 4.4.1						
Goal 5. Achieve gender equality and empower all women and girls	NA	NA	NA	NA	NA	NA	
Goal 6. Ensure availability and sustainable management of water and sanitation for all	NA	NA	NA	NA	NA	NA	
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.2 "By 2030, Increase substanti ally the share of renewabl e energy in the global energy mix" Indicator 7.2.1.	Yes	To increase the share of renewable energy in the National energy mix.	Net electricity supplied to the grid by project activity in a year.	The solar Power plant contributes directly to achieve the SDG target because the project activity delivers renewable energy, which would otherwise generate by fossil fuel dominated grid connect power plants.	The net electricity supplied to the grid by the project activity is continuously monitored through energy meter. Amount of energy supplied to Grid per year	
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive	8.8 Protect labour rights and promote	Yes	Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, and those in	Ensure to protect labour rights and have no occupational injuries.	By paying wages as per the minimum wages act of the country	Through payslips EHS records maintained	

ampleyment and	aafa aad		procesious ampleument is the				
employment and decent work for all	safe and secure working environm ents for all workers, including migrant workers, in particular women migrants, and those in precarious employment Indicator s: 8.8.1		precarious employment in the project activity.		By implementing strict EHS policy to protect labour rights .	Number of accidents\in cidents per year	
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.4: By 2030, upgrade infrastruc ture and retrofit industrie s to make them sustaina ble, with increase d resource –use efficiency and greater adoption of clean and environm entally sound	Yes	To upgrade infrastructure to make them sustainable, with increased resource –use efficiency and greater adoption of clean and environmentally sound technologies The project activity executed is solar power plant for generating and supplying clean electricity without any harmful emissions	Project activity generates 278,593 MWh per annum and with reduction of 263,970 tonnes Co2 emission per annum	The project helps adoption of clean energy technologies by implementing solar power plant. Project thus generates clean energy with reduction of 263,970 tonnes Co2 emission per annum	Generation records/ JMR. Emission reductions per year	

	technolo gies and industrial processe s, with all countries taking action in accordan ce with their respective capabilities. Indicator-9.4.1:						
Goal 10. Reduce inequality within and among countries	NA	NA	NA	NA	NA	NA	
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	NA	NA	NA	NA	NA	NA	
Goal 12. Ensure sustainable consumption and production patterns	NA	NA	NA	NA	NA	NA	
Goal 13. Take urgent action to combat climate change and its impacts	13.2 Integrate climate change measure s into national policies, strategie s and planning	Yes	To reduce GHG emissions	Reduce 263,970 (tCo ₂ /year) per annum	The reduction in GHG emissions will combat climate change	Electricity produced by the renewable generating unit in records multiplied by an emission factor or this PSF	

					Number of emission reductions per year		
NA	NA	NA	NA	NA	NA		
NA	NA	NA	NA				
NA	NA	NA	NA				
NA	NA	NA	NA				
	NA NA	NA NA	NA NA NA NA NA	NA NA NA NA NA NA NA NA	NA N	NA N	NA N

SUMMARY	Targeted	Likely to be Achieved
Total Number of SDGs	7	7
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF	Diamond	Diamond

Section G. Local stakeholder consultation

G.1. MODALITIES FOR LOCAL STAKEHOLDER CONSULTATION

>>Local stakeholder consultation was carried out by project developer at plant site. Consultation was in the form of meeting/ questionnaire. Local stakeholders include:

- 1. villagers from nearby village,
- 2. Local leaders and
- 3. Panchayat representatives.

LSC meeting details are presented in below table:

Project Developer	Capacity (MW)	Date of LSC	Location
RT Renewable Energy India Pvt Ltd	15	05/02/2022	Paralachi, Virudhunagar, Tamilnadu
SEI Phoebus Pvt Ltd	50	08/02/2022	Paniur, Virudhunagar, Tamil Nadu
SEI Adhavan Power Pvt Ltd	50	10/02/2022	Veerakudi village, Tiruchuli taluk, Virudhnagar – dist., Tamil Nadu
SEI Diamond Pvt Ltd	30	12/02/2022	Survey no. 343, Varavukaval, Chitradurga, Karnataka
SEI Venus Pvt Ltd	30	12/02/2022	Survey no. 343, Varavukaval, Chitradurga, Karnataka

In the meeting Project representative started with speech and he explained all technical aspects of project to stakeholders. Invitations were given to stakeholders through notice and phone calls. Most of the questions were related to employment opportunities, economic development and benefits from the project to local communities, surrounding areas and other development activities.

The project representatives and their team explained salient features of the project activity to the stakeholders including the impacts of the project activity on social and economical and environment.

The local stakeholders and other persons related to project activity opinions and responses were recorded. The Local Stakeholder consultation documents will be provided to GCC Verifier during project verification of project activity.

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G.2. SUMMARY OF COMMENTS RECEIVED

>>All respondents and communities in and around the project activity were aware of the proposed project activity. And they all expressed their support and cooperation for the project activity.

Most of the comments were related to employment opportunities, any development activities and supply of free electricity to local villages. The project proponent addressed that:

- The project activity will provide the employment opportunities to the local skilled and unskilled workers and also offer skill training centers on project technology. It will improve social and economic benefits to the local communities and surrounding areas. Project owner has assured that they will provide the direct employment opportunities to the local people based on their education and skills.
- 2. Development activities will be taken as per the Local community requirements and the fund available with the Project proponent. It was also told to give representation from local stakeholder regarding the development activities required to the Project In charge.
- 3. It was also told the electricity generated will be supplied to grid and no free supply will be delivered to locals.

From the project activity there is no negative impact on the environment and there were no objections raised by the stakeholders. All comments were positive about the project activity, no further actions are needed.

G.3. CONSIDERATION OF COMMENTS RECEIVED

>> No negative comments were received for the project activity. The possible benefits of the project activity for the stakeholders were acknowledged.

There were no further comments raised by the stakeholders and they are supportive for setting up of the solar projects in their region.

Section H. Approval and authorization

>>At present "Host country attestation on double counting" not received and declare that as and when required, the project owner will submit host country attestation for meeting the requirements of CORSIA.

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APPENDIX 1. CONTACT INFORMATION OF PROJECT OWNERS

Project Owner name	M/s SEI Adhavan Power Pvt Ltd
(as per LON/LOA)	
Country	INDIA
Address	Flat No 6J, Century Plaza, 560-562, Anna Salai, Teynampet, Chennai,
	Tamil Nadu, India- 600018
Telephone	+91 40301200
Fax	
E-mail	srinivas.popuri@greenkogroup.com
Website	https://greenkogroup.com/
Contact person	Mr. Srinivas Popuri.

APPENDIX 2. AFFIRMATION REGARDING PUBLIC FUNDING

>> The bundled project that there would be no divergence of Official Development Assistance (ODA) in any of the project activity. This would be confirmed through undertaking / declaration from the project owner.

APPENDIX 3. APPLICABILITY OF METHODOLOGY(IES)

>> Refer Section B2 of PSF

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

>> Refer Section B6 of PSF

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APPENDIX 5. FURTHER BACKGROUND INFORMATION ON MONITORING PLAN

>> Refer section B7 of PSF

APPENDIX 6. SUMMARY REPORT OF COMMENTS RECEIVED FROM LOCAL STAKEHOLDERS

>> Refer Section G2 of PSF

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

>> Not applicable as the project category is A2

Complete this form in a	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	
Projectde- 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))	

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Pre-registration changes to the Project Activity (Tick as applicable)	Pre-registration Changes		Reference A		Approved		Provide a summary of pre-registration changes
(Tick as applicable)	Deviations from approved baseline and monitoringmethodology						
	Deviations from applied Tool & Guidance						
	Deviations from the rules						
	Other						
Post-registration changes to the Project Activity (Tick as applicable)	Post registration Changes	-	erence ımber	App	proved		vide 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						

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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)	1 st			
			2 nd			
			3 rd			
	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					-

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Details of Previous					
Issuance Requests	Issuance Request	Period (start & end dates)	ERs as per registered PDD	Quantity of Credits requested to be issued	Quantity of Credits issued
	1 st				
	2 nd				
	3 rd				
	4 th				
	5 th				
	Add rows				
	Total				
List any open issues in the Validation and last Verification Report (e.g., FARs, if any) and how they have been addressed					
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					
Provide the list of all the registered documents related to this project, as available on the programs website and the					

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corropponding	
corresponding	
URLs.	
UILS.	
	,

Appendix 8. FURTHER INFORMATION ON DETERMINATION OF BUNDLE IN PROJECT ACTIVITY.

>> As per clarification No.1, the projects/activities in this bundle form homogeneous type bundle based on two level analysis as all activities in the bundle have:

- 1. Similarity in Technological Considerations i.e., All activities in this bundle apply same type of technology (solar-PV).
- 2. Similarity in Economic and Policy Considerations i.e., Activities under this bundle have same additionality approach (Investment analysis).
- 3. Similarity in Environmental or Methodological Considerations i.e., Activities in this bundle have same methodology, baseline and monitoring approach.

Appendix 9. PUBLIC DECLARATION FOR A2 (Sub Type 2 and 3), B1 & B2 PROJECTS ON NON CONTINUATION FROM CDM/GHG/NON-GHG PROGRAMS.

>> Not Applicable

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DOCUMENT HISTORY

DOCUMENT THOTON							
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 CORSIA¹⁶; 					

¹⁶See ICAO recommendation for conditional approval of GCC at https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/Excerpt_TAB_Report_Jan_2020_final.pdf

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

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