PROJECT CONCEPT NOTE

CARBON OFFSET UNIT (CoU) PROJECT

Title: 88 MW Grid-Connected Floating Solar Photovoltaic Project by NHDC at Omkareshwar, Madhya Pradesh, India

Version 1.0

Date 12/12/2025

First CoU Issuance Period: (01 year 02 months 03 days)

Date: 29/10/2024 to 31/12/2025 (Both days included)

Project Concept Note (PCN)
CARBON OFFSET UNIT (CoU) PROJECT

BASIC INFORMATION	
Title of the project activity	88 MW Grid-Connected Floating Solar Photovoltaic Project by NHDC at Omkareshwar, Madhya Pradesh, India
Scale of the project activity	Large Scale
Completion date of the PCN	22/12/2025
Project participants	NHDC Limited
Host Party	India
Applied methodologies and standardized baselines	ACM0002: Grid connected electricity generation from renewable sources Version 22.0[1]
Sectoral scopes	01 Energy industries (Renewable/Non renewable Sources)
Estimated amount of total GHG emission reductions	155,052 CoUs (155,052 tCO_{2eq})

[1] https://cdm.unfccc.int/UserManagement/FileStorage/R0IJ1X9LQ7W2GOYHSMBFCPE3VKZ685

SECTION A. Description of project activity

A.1. Purpose and general description of Carbon offset Unit (CoU) project activity >>

The project 88 MW Grid-Connected Floating Solar Photovoltaic Project by NHDC at Omkareshwar, Madhya Pradesh, India is located in Village Indawadi, Tehsil Punasa, District Khandwa, State Madhya Pradesh, Country India.

The details of the registered project are as follows:

Purpose of the project activity:

The project activity involves the installation of an 88 MW (AC) / 125.54 MWp (DC) grid-interactive Floating Solar Photovoltaic (FSPV) power plant by NHDC Limited, a joint venture of NHPC Limited and the Government of Madhya Pradesh, at the Omkareshwar Reservoir in the state of Madhya Pradesh. The project is part of the larger 600 MW Floating Solar Park being implemented by Rewa Ultra Mega Solar Limited (RUMSL)[2], the state's designated solar park development agency.
The project is located in Indhawadi village, Punasa Taluka, Khandwa District, Madhya Pradesh. NHDC has awarded the full Engineering, Procurement, and Construction (EPC) contract to Tata Power Solar Systems Ltd. (TPSSL), which also undertakes five years of comprehensive Operation & Maintenance (O&M).

Project Investor	Capacity (MW)	State	Commissioning Date
NHDC Limited	88	Madhya Pradesh	29/10/2024

Baseline scenario is that the project would have been generating electricity from the fossil fuel-based power plant in absence of this power plant.

Purchase Agreement was executed on 04/08/2022 at Bhopal between M.P. Power Management Company Limited (MPPMCL), Rewa Ultra Mega Solar Limited (RUMSL), and NHDC Ltd., whereby MPPMCL acts as the Procurer, RUMSL as the facilitator, and NHDC Ltd. as the Solar Power Developer.

The average estimated annual generation of the project is 204,826.00 MWh. The emission reduction from the project is estimated to be around 155,052 tCO2e /annum and a cumulative emission reduction of 1,550,528 tCO2e for the crediting period of 10 years. The total crediting period is aligned with the project's 25-year operational life.

[2] RUMSL (Rewa Ultra Mega Solar Limited) is a joint venture of the Madhya Pradesh government and SECI. It was created to plan and develop large solar parks in Madhya Pradesh, including the 750 MW Rewa Solar Park and the 600 MW Omkareshwar Floating Solar Project. It acts as the state's main solar park developer and manages land, infrastructure, and transmission for large renewable projects.

A.2 Do no harm or Impact test of the project activity>>

Do No Harm Assessment: No harm was identified from the project activity; therefore, no mitigation measures are required.

Rationale: As per the Central Pollution Control Board (MoEF&CC), under the revised classification of industrial sectors dated 07/03/2016, solar power projects fall under the White Category, which includes activities that have no significant environmental impact. Projects in this category are exempt from Environmental Clearance, including Consent to Operate. Under Indian regulations, small-scale solar projects are also not required to carry out an Environmental and Social Impact Assessment.

Despite this, the Project Proponent informed the local community in the project area prior to implementation to understand and record any concerns related to environmental or socio-economic aspects. Feedback received from stakeholders confirmed that no negative impacts are anticipated.

There are social, environmental, economic and technological benefits which contribute to sustainable development.

Project Activity Contribution to Sustainable Development
The Ministry of Environment, Forest and Climate Change (MoEF&CC) has identified four indicators for sustainable development:
(a) Social well-being
(b) Economic well-being
(c) Environmental well-being
(d) Technological well-being

This project supports these indicators in the following ways:

1. Social well-being

- The project will create direct and indirect employment during construction and operation, including opportunities for local residents. This will help improve the living standards of the surrounding communities.
- Development of the project will support better basic infrastructure and public amenities in the project area.

2. Economic well-being

- The project will mobilize investment across sectors involved in the manufacturing of major solar power plant components.
- The job opportunities generated will support economic growth in the region.

3. Environmental well-being

- The project uses renewable solar energy to generate electricity, which replaces power that would otherwise be produced by fossil fuel plants. This leads to a reduction in emissions, including greenhouse gases.
- Solar power generation avoids issues such as solid waste (fly ash) and water management that are common in conventional fossil fuel power plants.
- Since solar energy is renewable, the project supports long-term conservation of natural resources.

4. Technological well-being

- The project strengthens the supply chain related to equipment supply, installation, operation, and maintenance, which supports wider technology adoption.
- The project will help develop a skilled workforce for operations and maintenance activities.

ESG Credentials for the Floating Solar Project: While a formal ESG assessment has not been conducted, the floating solar project supports key indicators under Environment, Social, and Governance.

Environment

- The project generates clean electricity using a renewable source, reducing dependence on fossil fuels and lowering greenhouse gas emissions.
- Floating solar minimizes land use and helps conserve natural habitats that would otherwise be disturbed by land-based installations.
- The project avoids air pollutants, solid waste issues, and high-water consumption associated with conventional power plants.
- Renewable energy generation reduces long-term environmental risks and supports climate goals.

Social

- The project creates employment opportunities during construction and operation, including roles for local communities.
- Improved income opportunities and related community development activities support social upliftment.
- The project owner maintains policies for safe working conditions, fair employment practices, and stakeholder engagement.

Governance

- The project is developed and managed with transparent processes and adherence to all regulatory requirements, including environmental clearances and grid approvals.
- Strong internal systems ensure accurate monitoring and recording of electricity generation from the floating solar plant.
- The project owner follows good governance practices, maintaining accountability and compliance with national and local standards.
- Proper documentation, audits, and reporting reinforce responsible management and sound operational governance.

United Nations Sustainable Development Goals: The project activity generates electrical power using wind energy, which is generated from windmills, thereby displacing non-renewable fossil resources resulting to sustainable, economic and environmental development. In the absence of the project activity equivalent amount of power generation would have taken place through fossil fuel dominated power generating stations. Thus, the renewable energy generation from project activity will result in reduction of the greenhouse gas emissions.

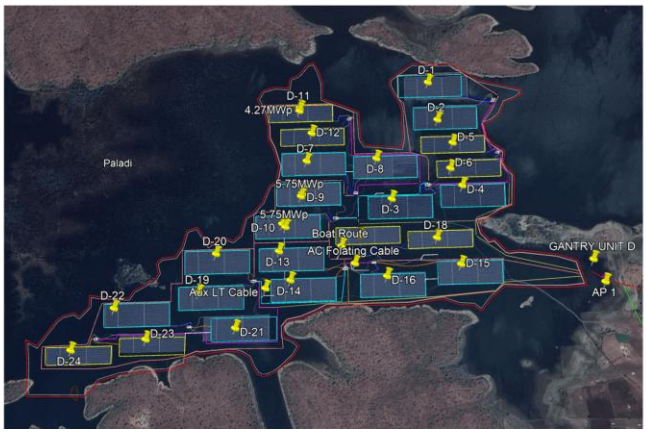
SDG 7 Energy		The project contributes SDG Target 7.2 “By 2030, increase

		substantially the share of renewable energy in the global energy mix" by the utilization of solar power as a renewable energy source.
SDG 8 Economic Growth		The project creates direct and indirect employment opportunities during construction and operation phases, so it contributes to SDG Target 8.5 "By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities and equal pay for work of equal value".
SDG 13 Climate Change:		Take urgent action to combat climate change and its impacts. So, it contributes to SDG Target 13.2.2 Total greenhouse gas emissions per year.

A.3. Location of project activity >>

Country: India
State: Madhya Pradesh
District: Khandwa
Tehsil: Punasa
Village: Indawadi

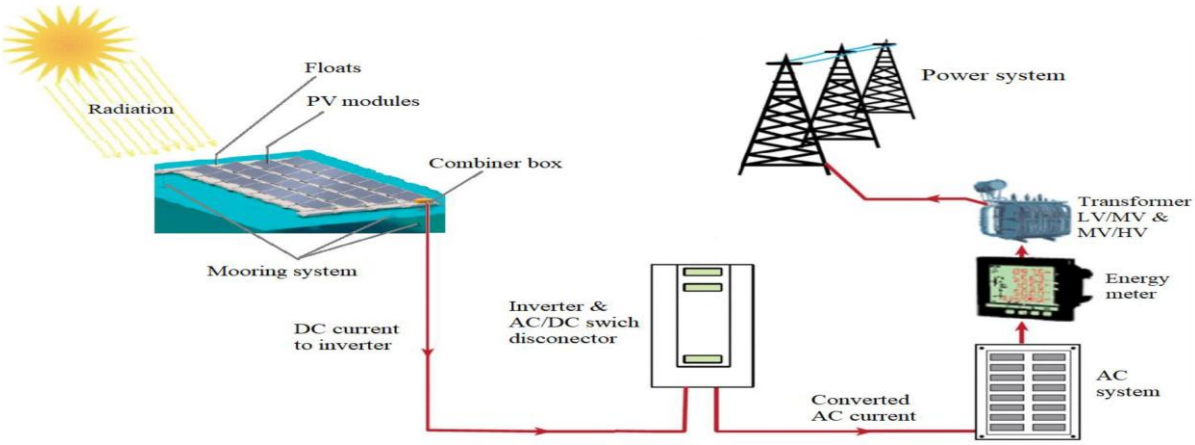
Geo-coordinates: 22°13'16.4"N 76°13'36.7"E (22.221210, 76.226864)



A.4. Technologies/measures >>

The proposed 88 MW (AC) floating solar photovoltaic (PV) power plant is being developed on the surface of the Omkareshwar Reservoir, located near Punasa Tehsil, Khandwa District, in the state of Madhya Pradesh, India. The project utilizes the floating solar PV technology to harness solar energy over a water surface, optimizing land use and reducing evaporation losses.

The project is being implemented under the ACM0002 Version 22.0 methodology for grid-connected renewable electricity generation. The floating PV system is installed on a designated water surface area within the reservoir, with adequate anchoring and mooring systems to ensure stability and performance.



The electricity generated from the floating solar PV plant is evacuated to the 220 kV Saktapur substation through a dedicated 33 kV transmission network. The Madhya Pradesh Power

Management Company Limited (MPPMCL) monitors the energy injected into the grid via metering at the interconnection point and issues Monthly Energy Generation Reports to the project owner.

This project qualifies as a greenfield renewable energy installation, as no renewable energy generation facility existed at the site prior to implementation. The project contributes to the displacement of grid electricity that would otherwise be generated from fossil fuel-based power plants, thereby reducing greenhouse gas (GHG) emissions.

Project Details:

Parameter	Description
Parent Company	NHDC Limited (Joint Venture of NHPC Ltd. & Govt. of MP)
EPC Contractor	Tata Power Solar Systems Limited
Project Capacity	88 MW (AC)
Technology	Floating Solar PV
Location	Omkareshwar Reservoir, Khandwa District, Madhya Pradesh
Grid Connectivity	220 kV Saktapur Substation via 33 kV transmission line
Date of Commissioning	29/10/2025
Operational Life	25 years (as per OEM specifications and O&M practices)

The electricity generated from project activity (operational solar power plant) is connected to the National grid. The project activity thus reduces the anthropogenic emissions of greenhouse gases (GHGs) associated with equivalent amount of electricity generation from the existing grid connected power plants (mostly fossil fuel based) and from addition of new generation sources into the grid.

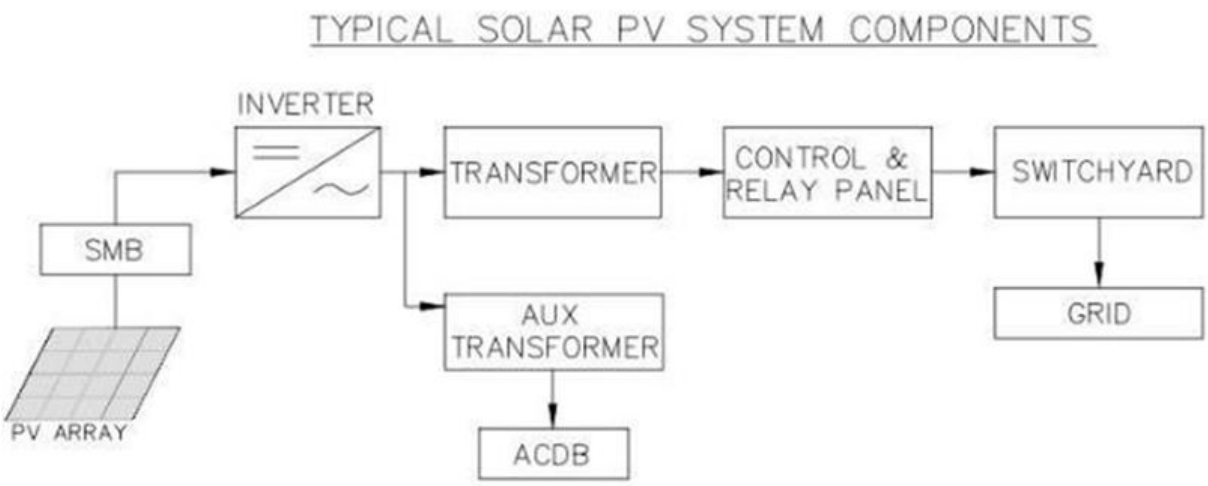
The average estimated annual generation of the project is 204,826.00 MWh. The emission reduction from the project is estimated to be around 155,052 tCO2e /annum and a cumulative emission reduction of 1,550,528 tCO2e for the crediting period of 10 years. The total crediting period is aligned with the project's 25-year operational life.

The operational life of the installed solar module is 25 years based upon the manufacturer's specifications and standard operational & maintenance practices followed at the project site.

Grid connected solar power plant comprises of the main equipment and components listed below.

- Solar PV Modules
- Central inverters
- Module Mounting system
- Grid connect equipment
- Monitoring system
- SCADA
- Cables & connectors

A simple block diagram, related to the interconnection of various systems for grid connectivity, is shown below for reference.



Solar PV Module –

A photovoltaic module is a packaged interconnected assembly of photovoltaic cells, which converts sunlight into energy. For this project, poly crystalline PV technology solar module of 540 Wp has been considered.

Make	Model	Technology	Nominal Power (Wp)	Quantity (Nos.)
TATA Power Solar	TP590	Mono PERC, 156 cut cells, 10BB	590	69,430
TATA Power Solar	TP585	Mono PERC, 156 cut cells, 10BB	585	4,524
TATA Power Solar	TP595	Mono PERC, 156 cut cells, 10BB	595	33,140

Inverter & other equipment's:

Equipment Name	Make	Capacity / Spec	Quantity
Solar Inverter	FIMER	4400 kW, 1500V DC/690V AC	12
Solar Inverter	FIMER	3300 kW, 1500V DC/690V AC	8

Module Mounting Structure (MMS)

HDPE based floats equipped with module mounting arrangements through clamps, nuts and bolts are manufactured, assembled and floated into the water body with modules installed at the bank/shore. The entire island of floating solar is then tugged to the identified location of installation through boat, where the provisions of anchoring and mooring is already made beforehand. The design is made based on site level studies of bathymetric study, geotechnical investigation, etc.

Monitoring System

The proposed system will record and maintain all key technical data, including daily solar radiation, sunshine hours, plant operating hours, and the total energy exported to the grid. This will support accurate estimation of generation and other performance parameters related to the installed array capacity.

SCADA System

The plant will be fully operated through a SCADA system designed as per standard engineering practices and relevant codes. It will monitor key parameters, detect faults, and enable remote control of equipment. The system will support energy invoicing, incident detection down to the string level, and provide data on availability, performance ratio, and generation. It will be built with reliable and redundant components to ensure smooth operation.

A.5. Parties and project participants >>

Party (Host)	Participants
India	Organization name: NHDC LIMITED Office Zone: NHDC Parisar Shyamla Hills Bhopal Address: NHDC Parisar, near hotel Lake view Ashoka, Shyamla hills, Bhopal (m.p.), Bhopal, Madhya Pradesh-462013, India

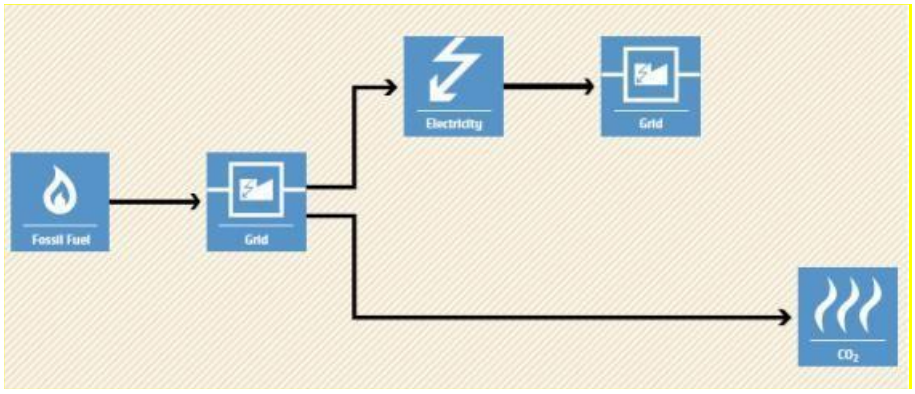
A.6. Baseline Emissions>>

The baseline scenario identified at the PCN stage of the project activity is:

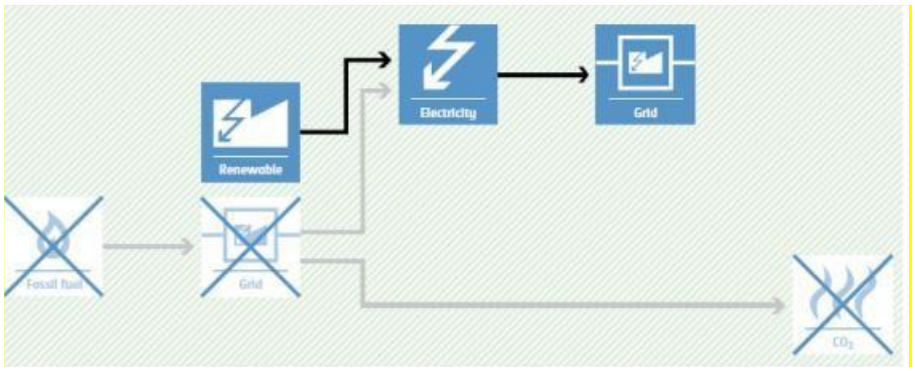
In the absence of the project activity, the equivalent amount of electricity would have been generated from fossil fuel-based power plants and exported to the regional grid (which is connected to the unified Indian Grid system) as national grid is predominantly sourcing from fossil fuel-based power plants. Hence, baseline scenario of the project activity is the grid-based electricity system.

Schematic diagram showing the baseline scenario:

Baseline Scenario:



Project Scenario:



A.7. Debundling>>

This project is not a de-bundled component of a larger project activity.

SECTION B. Application of methodologies and standardized baselines

B.1. References to methodologies and standardized baselines >>

SECTORAL SCOPE – 01 Energy industries (Renewable/Non-renewable sources)

TYPE: I - Renewable Energy Projects.

CATEGORY: ACM0002 Grid-connected electricity generation from renewable sources V 22.0

B.2. Applicability of methodologies and standardized baselines >>

The project activity is a green field grid connected floating solar power project with cumulative capacity of 88 MW Hence, Consolidated Methodology ACM0002: Grid-connected electricity generation from renewable sources is applied. The applicability of this methodology is established through assessment of the following conditions.

Applicability condition	Justification of compliance
Para 05: This methodology is applicable to grid-connected renewable energy power generation project activities that: a) Install a Greenfield power plant; b) Involve a capacity addition to (an) existing plant(s); c) Involve a retrofit of (an) existing operating plant(s)/unit(s); d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or e) Involve a replacement of (an) existing plant(s)/ unit(s). f) Install a Greenfield power plant together with a grid-connected Greenfield pumped storage power plant. The greenfield power plant may be directly connected to the PSP or connected to the PSP through the grid.	The project activity is installation of a greenfield floating solar power (renewable) project. Hence the project activity meets the applicability condition of the methodology.
Para 07: In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that:	The project activity does not involve the integration of BESS hence this condition is not applicable.

a) Integrate BESS with a Greenfield power plant; b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic1 or wind power plant(s)/unit(s); c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s); d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/ unit(s). *e)* Integrate a BESS together with a Greenfield power plant that is operating in coordination with a PSP. The BESS is located at site of the greenfield renewable power plant.	
Para 08: The methodology is applicable under the following conditions: a) Hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/ unit, wave power plant/unit or tidal power plant/unit; b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical	The project activity involves construction and operation of greenfield grid-connected floating solar power project. Hence, complies to this applicability condition (a). Since the project activity does not include capacity additions, retrofits, rehabilitations, or replacements of existing plant/unit the applicability condition (b) is not applicable/ relevant for the project activity. The project activity does not involve the integration of BESS hence this condition (c) is not applicable. The project activity does not involve the integration of BESS hence this condition (d) is not applicable. The project activity does not involve the PSP; hence this condition (e) is not applicable.

reference period and the implementation of the project activity; c) In case of Greenfield project activities applicable under paragraph 5 (a) above, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g. by referring to feasibility studies or investment decision documents); d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies 2 may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions following the requirements under section 5.4.4 below. The charging using the grid or using fossil fuel electricity generator should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. During the time periods (e.g. week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period. e) In case the project activity involves PSP, the PSP shall utilize the electricity generated from the renewable energy power plant(s) that is operating in coordination with the PSP during pumping mode.	
Para 09: In case of hydro power plants, one of the	The project activity involves construction and operation of greenfield grid-connected floating solar

following conditions shall apply: a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, is greater than 4 W/m^2 c) The project activity results in new single or multiple reservoirs and the power density is greater than 4 W/m^2 d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, is lower than or equal to 4 W/m^2 and all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project is greater than 4 W/m^2; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m^2 are: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.	power project using solar energy for generation of electricity hence this applicability condition is not applicable/relevant to the project activity as the applicability conditions is related to hydro power projects
Para 10: In the case of integrated hydro power projects, project participants shall: a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively	The project activity involves construction and operation of greenfield grid-connected floating solar power project using solar energy for generation of electricity; hence this applicability condition is not applicable/relevant to the project activity as the applicability conditions is related to hydro power projects.

constitute to the generation capacity of the integrated hydro power project; or b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs.	
Para 11: In the case of PSP, the project participants shall demonstrate in the PDD that the project is not using water which would have been used to generate electricity in the baseline.	This project is not a PSP. Hence, this condition is not applicable.
Para 12: The methodology is not applicable to: a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; b) Biomass fired power plants/units.	The project activity involves construction and operation of greenfield grid-connected floating solar power project using solar energy for generation of electricity hence this applicability condition is not relevant as the same pertains to switching from fossil fuels to renewable energy sources or biomass fired power plants/units.
Para 13: In the case of rehabilitations, retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance"	The project activity involves construction and operation of greenfield grid-connected solar power project using solar energy for generation of electricity hence the applicability condition "10" is not relevant as the same pertains to retrofits, rehabilitations, replacements, or capacity additions.

B.3. Applicability of double counting emission reductions >>

There is no double accounting of emission reductions in the project activity due to the following reasons:

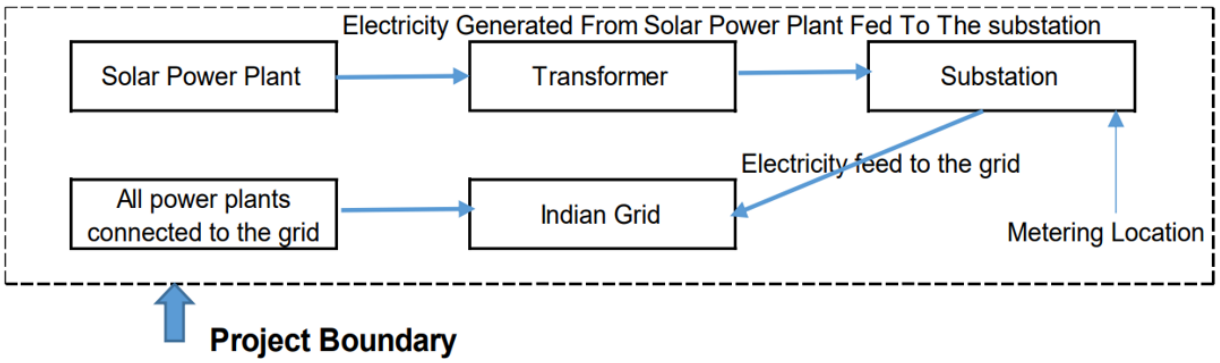
- Project has dedicated commissioning certificate and connection point.
- Project is associated with energy meters (with meter serial number) which are dedicated to the consumption point for project developer.

- Project is uniquely identifiable based on its location coordinates.

B.4. Project boundary, sources and greenhouse gases (GHGs)>>

The spatial extent of the project boundary includes the project power plant / unit and all power plants / units connected physically to the electricity system that the project power plant is connected to. The project boundary therefore includes the project site where the power plant has been installed, associated power evacuation infrastructure, energy metering points, switch yards the national grid of India.

Single Line diagram of project activity:



Source		GHG	Included?	Justification/Explanation
Baseline	Grid connected electricity generation	CO_2	Yes	Main emission source
		CH_4	No	Minor emission source
		N_2O	No	Minor emission source
		Other	No	Project activity does not emit other forms of GHG emissions
Project	Greenfield Solar Power Project Activity	CO_2	Yes	Main emission source
		CH_4	No	Project activity does not emit CH_4
		N_2O	No	Project activity does not emit N_2O
		Other	No	Project activity does not emit other forms of GHG emissions

B.5. Establishment and description of baseline scenario >>

As per the approved consolidated methodology ACM0002. Version-22, if the project activity is the installation of a new grid-connected renewable power plant, the baseline scenario is the following: "The baseline scenario is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid".

The project activity involves setting up a new floating solar power plant to harness the green power from solar energy and sell it to the grid by signing a PPA. 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 power produced at grid from the other conventional sources which are predominantly fossil fuel based. Hence, the baseline for the project activity is the equivalent amount of power produced at the Indian grid.

A "grid emission factor" refers to a CO2 emission factor (tCO2/MWh) which will be associated with each unit of electricity provided by an electricity system. The UCR recommends an emission factor of 0.9 tCO2/MWh for the 2013-2023 years and as a conservative estimate for Indian projects not previously verified under any GHG program. Also, for vintage of 2024[3] in accordance with the UCR standard all UCR Indian RE projects shall use the new conservative grid emission factor of 0.757 tCO2/MWh in their emission reduction calculations for the 2024 vintage year, the same has been complied with.

Estimated Emission Reductions: $ER_y = BE_y - PE_y$

As per the para 72 of ACM0002 version 22.0, the formula to calculate the emission reductions is

$$\mathbf{ER_y = BE_y - PE_y}$$

Where:

ER_y	=	Emission reductions in year y (tCO_2e/yr)
BE_y	=	Baseline emissions in year y ($t\ CO_2e/yr$)
BE_y	=	Project emissions in year y ($t\ CO_2e/yr$)

Baseline emissions:

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 in year y can be calculated as follows:

$$BE_y = EG_{PJ,y} \times EF_{Grid,y}$$

Where,

BE_y	= Baseline emissions in year y (t CO2)
$EG_{PJ,y}$	= Quantity of net electricity generation that is produced and fedinto the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{Grid,y}$	= Grid emission factor in year y (t CO2/MWh)

[3] https://medium.com/@UniversalCarbonRegistry/ucr-cou-standard-update-2024-vintage-ucr-indian-grid-emission-factor-announced-ddb790cdc603

Project Emissions: As per para 40 of the applied methodology ACM0002 (version 22.0), for most renewable energy power generation project activities, PEy = 0
Since, this is a renewable energy power project, the project emissions are considered as zero.
Hence, project emissions PEy = 0 tCO2e.

Leakage Emissions: As per Para 71 of ACM0002 Version 22.0 The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport etc. are neglected. No other leakage emissions are considered.

Hence, Estimated annual baseline emission reductions (BEy)

BEy = EGPJ,y × EFGrid,y
BEy = EGPJ,y × 0.757 tCO2/MWh
BEy = 2,048,260.04 × 0.757
BEy = 1,550,528 t CO2e (For 10 Year)

Estimated annual baseline emission reductions (BEy) = 155,052 t CO2e

Crediting Period	Net generation with Degradation factor	Emission Factor	Baseline emissions	Project emissions	Emission reductions
Year	MWh/Year	tCO2e/MWh	(t CO2e)	(t CO2e)	(t CO2e)
Year 01	204,806.00	0.757	155,038	0	
Year 02	204,703.60	0.757	154,960	0	
Year 03	204,703.60	0.757	154,960	0	
Year 04	205,264.43	0.757	155,385	0	
Year 05	204,703.60	0.757	154,960	0	
Year 06	204,703.60	0.757	154,960	0	
Year 07	204,703.60	0.757	154,960	0	
Year 08	205,264.43	0.757	155,385	0	
Year 09	204,703.60	0.757	154,960	0	
Year 10	204,703.60	0.757	154,960	0	
Total	2,048,260.04	0.757	1,550,528	0	
Total number of crediting years	10				
Annual average over the crediting period	204,826.00	-	155,052	-	155,052

B.6. Prior History>>

The project activity is a large-scale solar power project, and this project was never applied under any other GHG mechanism prior to this registration with UCR. Also, the capacity or the total project has not been applied for any other environmental crediting or certification mechanism. Hence the project will not cause double accounting of carbon credits (i.e., COUs).

B.7. Changes to start date of crediting period >>

The start date of the crediting period is considered from 29/10/2024

B.8. Permanent changes from PCN monitoring plan, applied methodology or applied standardized baseline >>

There are no permanent changes from the registered PCN monitoring plan and applied methodology.

B.9. Monitoring period number and duration>>

First Issuance Period:– 29/10/2024 to 31/12/2025 (Both days Inclusive)
(01 year 02 months 03 days)

First Monitoring Period: – 29/10/2024 to 31/12/2025 (Both days Inclusive)
(01 year 02 months 03 days)

B.8. Monitoring plan>>

Data/Parameter	$EF_{Grid,y}$
Data unit	tCO_2 /MWh
Description	All renewable energy projects registered under UCR must now use a conservative grid emission factor of 0.757 tCO_2/MWh, based on the Central Electricity Authority's latest CO_2 Baseline Database Version 20.0 (Dec 2024). This update ensures consistency, authenticity, and adherence to UCR's principle of conservativeness in estimating emission reductions. The emission factors for the years 2013 to 2023 remain unchanged at 0.9 tCO_2/MWh. Project developers and auditors are required to apply the new 0.757 tCO_2/MWh factor for all relevant emission reduction calculations for 2024 vintage credits.
Source of data Value(s) applied	The emission factor is taken from the Central Electricity Authority (CEA) CO_2 Baseline Database, Version 20.0 (Dec 2024). This value is officially adopted under the UCR CoU Standard Update (Jan 22, 2025) for calculating emission reductions for the 2024 vintage year. Value(s) Applied[4]: 0.757 tCO_2/MWh (Indian Grid Emission Factor for 2024 vintage, conservative default for UCR RE projects).
Measurement methods and procedures	-
Monitoring frequency	Ex-ante fixed parameter
Purpose of data	For the calculation of Emission Factor of the grid

Data / Parameter:	$EG_{PJ,y}$ net

[4] https://a23e347601d72166dcd6-16da518ed3035d35cf0439f1cdf449c9.ssl.cf2.rackcdn.com/Documents/UCRCoUStandardAug2022updatedVer6_090822220127104470.pdf

Data unit:	MWh
Description:	Net electricity supplied to the India grid facility by the project activity. Source of
Source of data:	Joint Meter Reading Report
Measurement procedures (if any):	Data Type: Measured Monitoring equipment: Energy Meters are used for monitoring Archiving Policy: Electronic Calibration frequency: Once in 5 years (considered as per provision of CEA India). The net electricity generated by the project activity will be calculated.
Monitoring frequency:	The recording frequency will be on a monthly basis. The monitoring of the data parameters will be on a continuous basis. The net energy exported to the grid is measured every month using calibrated energy meter by the State Electricity Board authorities in the presence of the project implementer or its representatives. The meter/s shall be jointly inspected and sealed by authorised representatives of the company and the state utility. Measuring procedure: Will be measured by an export-import energy meter. The net electricity exported by the project plant would either be directly sourced as a measured parameter or be calculated by deducting the amount of imported electricity from the total amount of exported electricity. Accuracy class of energy meter: 0.2s Calibration Frequency: As per the Central Electricity Authority the testing and calibration frequency should be once in five years. Value applied: To be applied as per actual data
QA/QC procedures:	Calibration of the Main meters will be carried out once in five (5) years as per National Standards (as per the provision of CEA, India) and faulty meters will be duly replaced immediately as per the provision of power purchase agreement. Cross Checking: Quantity of net electricity supplied to the grid will be cross checked from the invoices raised by the project participant to the grid.
Any comment:	Calculation of baseline emission.