



Monitoring Report

CARBON OFFSET UNIT (CoU) PROJECT



Title: 9.62 MW Bundled Solar Power Project by Panoli Intermediates (India) Pvt Ltd. in Gujarat, India

Version 1.2

Date: 01/08/2025

First CoU Issuance Period: 5 years and 5 months

Monitoring Period: 01/08/2019 to 31/12/2024



Monitoring Report (MR) CARBON OFFSET UNIT (CoU) PROJECT

Monitoring Report	
Title of the project activity	9.62 MW Bundled Solar Power Project by Panoli Intermediates (India) Pvt Ltd. in Gujarat, India
UCR Project Registration Number	449
Version	1.2
Completion date of the MR	01/08/2025
Monitoring period number and duration of this monitoring period	Monitoring Period Number: 01 Duration of this monitoring Period: 5 years and 5 months (first and last days included 01/08/2019 to 31/12/2024)
Project participants	Advait Greenergy Private Limited (Representator) M/s. Panoli Intermediates (India) Pvt Ltd. (Developer)
Host Party	India
Applied methodologies and standardized baselines	Applied Methodologies: UNFCCC Approved Small Scale Methodology “AMS-I.D., Grid connected renewable electricity generation”, Version –18.0 Standardized Baselines: N/A
Sectoral scopes	01 Energy industries (Renewable/Non-Renewable Sources)
Actual amount of GHG emission reductions for this monitoring period	2019: 1,863 CoUs (1,863 tCO _{2eq})
	2020: 5,622 CoUs (5,622 tCO _{2eq})
	2021: 5,884 CoUs (5,884 tCO _{2eq})
	2022: 6,845 CoUs (6,845 tCO _{2eq})
	2023: 13,944 CoUs (13,944 tCO _{2eq})
	2024: 11,958 CoUs (11,958 tCO _{2eq})
Total:	46,116 CoUs (46,116 tCO_{2eq})

SECTION A. Description of project activity

A.1. Purpose and general description of project activity >>

a) Purpose of the project activity and the measures taken for GHG emission reductions >>

The project activity aims to harness solar radiation, a renewable energy source, to generate electricity for captive consumption by the project proponent (PP), Ms. Panoli Intermediates (India) Pvt. Ltd. The project involves the installation and operation of a 9.62 MW_{AC} solar power plant, distributed across multiple locations in Gujarat, India, with capacities of 3.75 MW in Patan, 4.07 MW in Bharuch, and 1.8 MW in Panchmahal. During the monitoring period, the actual net electricity generated and supplied to the grid was 53,789.14 MWh, contributing directly to reducing dependency on fossil fuel-based power generation.

The net electricity generated from the project is wheeled to the manufacturing facility of the PP in Gujarat via the Indian grid (previously known as the NEWNE grid)¹. The 1.8 MW capacity is associated with a wheeling agreement signed with Madhya Gujarat Vij Company Limited (MGVCL). The other two capacities, 3.75 MW and 4.07 MW, have separate wheeling agreements executed with Dakshin Gujarat Vij Company Limited (DGVCL). The agreement is valid for a period of 20 years, aligned with the operational lifetime of the project activity, and outlines the terms and conditions for energy injection, transmission losses, scheduling, and settlement.

Since solar photovoltaic (PV) technology does not involve the combustion of fossil fuels, the project generates zero direct GHG emissions during electricity production. The photovoltaic (PV) modules used in the project consist of interconnected photovoltaic cells that convert solar radiation into electrical energy, encapsulated in a protective laminate for long-term performance. By displacing grid electricity that would have otherwise been generated by fossil fuel-based power plants, the project achieved an actual greenhouse gas (GHG) emission reduction of 46,116 tCO₂e during the monitoring period.

By replacing electricity from fossil fuel-based power plants in the regional grid, the project contributes significantly to GHG emission reduction, climate change mitigation, and the promotion of clean energy solutions.

b) Brief description of the installed technology and equipment>>

The project activity involves a Ground-Mounted Photovoltaic (PV) Solar Power Plant with a total installed capacity of 9.62 MW_{AC}. The project utilizes Polycrystalline and Monocrystalline solar photovoltaic technologies to generate clean, renewable energy.

In this system, solar radiation is directly converted into electricity by photovoltaic (PV) cells. These cells generate a small electric voltage when light strikes the junction between a metal and a semiconductor (such as silicon) or between two different semiconductors.

Each photovoltaic module consists of multiple interconnected photovoltaic cells, sealed in an environmentally protective laminate, forming the core component of the PV generating unit. Multiple PV modules are assembled into PV panels, which are then mounted on a supporting structure to create a PV array. This advanced solar power system ensures efficient energy conversion, long-term durability, and zero direct greenhouse gas (GHG) emissions, contributing to sustainable energy generation with a typical operational life for 20 years.

¹ [National Grid](#)

c) Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.)>>

The duration of the crediting period corresponding to the monitoring period covered in this monitoring report.

UCR Project ID or Date of Authorization : 449
Start Date of Crediting Period : 01/08/2019
Project Commissioned : 15/06/2019

d) Total GHG emission reductions achieved or net anthropogenic GHG removals by sinks achieved in this monitoring period>>

The total GHG emission reductions achieved in this monitoring period is as follows:

ERs Generated for the Monitoring Period	
Start date of this Monitoring Period	01/08/2019
Carbon credits claimed up to	31/12/2024
Total ERs generated (tCO _{2eq})	46,116 tCO _{2e}
Leakage	0 tCO _{2e}

e) Baseline Scenario>>

In the absence of the project activity, the equivalent amount of electricity would have been generated by power plants connected to the Indian grid, which are predominantly based on fossil fuels. As a result, the baseline scenario for the project activity is grid-based electricity generation, which also represents the pre-project scenario.

Since the project activity involves electricity generation from solar energy, it operates as a zero-emission system, as solar power does not involve the combustion of fossil fuels or the release of greenhouse gases (GHGs) into the atmosphere. By displacing fossil fuel-based electricity from the grid, the project directly contributes to reducing carbon emissions and promoting sustainable energy development.

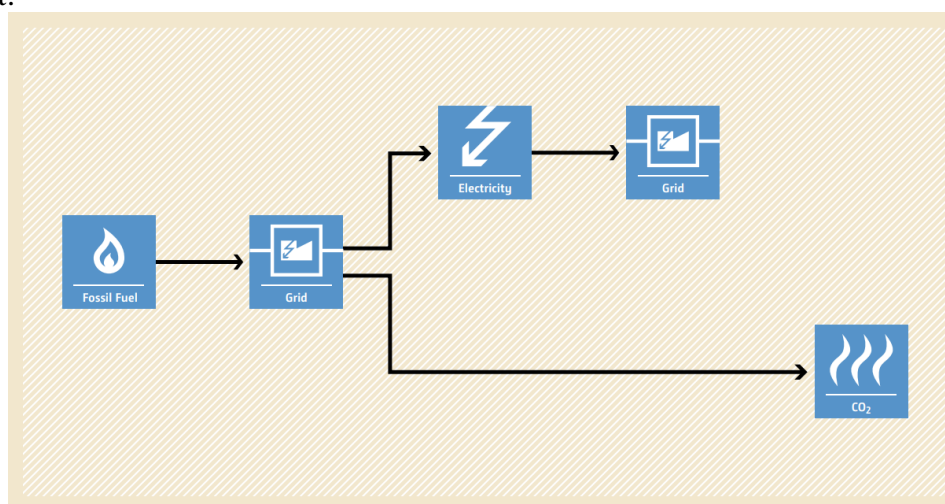


Figure 1: Baseline Scenario

A.2. Location of project activity>>

A.3. Parties and project participants >>

Party (Host)	Participants
Government of India	Representator: Advait Greenergy Private Limited Project Proponent (Developer): M/s. Panoli Intermediates (India) Pvt Ltd.

A.4. References to methodologies and standardized baselines >>

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

TYPE: I–Renewable Energy Projects

CATEGORY: AMS–I.D., Grid connected renewable electricity generation, Version 18.0²

A.5. Crediting period of project activity >>

This monitoring report covers 1st monitoring period.

Length of the crediting period corresponding to this monitoring period: 5 years and 5 months
01/08/2019 to 31/12/2024

A.6. Contact information of responsible persons/entities >>

Representator	
Name	Advait Greenergy Private Limited
Contact Person	Ms. Avantika Gupta
Mobile	+91 9079765066
E-mail	avantika.gupta@advaitgroup.co.in
Address	Advait Energy Transitions Limited, 1 st and 2 nd Floor, KIFS Corporate House, Iskcon Ambli Road, Beside Hotel Planet Landmark, Near Ashok Vatika, Ambli, Ahmedabad – 380058
Project Proponent (Developer)	
Name	M/s. Panoli Intermediates (India) Pvt Ltd.
Contact Person	Mr. Anupam Chaturvedi
Mobile	+91 9737586359
E-mail	anupam@kcil.co.in
Address	"Saraniwas" 20-21, Hari Nagar Co-Op - Society, Gotri Road, Vadodara - 390 007, Gujarat (INDIA)

² [AMS-I.D.](#)

SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity >>

a) Provide information on the implementation status of the project activity during this monitoring period in accordance with UCR PCN>>

The project activity with an aggregated capacity of 9.62 MW was installed and operated of solar power plant in Patan, Bharuch and Panchmahal districts in the state of Gujarat are per details listed below:

Project Developer	Capacity (MW _{AC})	Commissioning Date	Location	Status
M/s. Panoli Intermediates (India) Pvt. Ltd.	3.75	15-Jun-19	Village: Rupnagar Taluka: Sami District: Patan State: Gujarat Country: India	Operational
	4.07	30-Sep-22	Village: Sarod Taluka: Jambusar District: Bharuch State: Gujarat Country: India	Operational
	1.8	09-Sep-22	Village: Kadachala Taluka: Halol District: Panchmahal State: Gujarat Country: India	Operational

b) For the description of the installed technology(ies), technical process and equipment, include diagrams, where appropriate>>

The technical arrangements of the bundled project activity are taken from the technical inspection letter and panel images as provided below:

Project Developer	M/s. Panoli Intermediates (India) Pvt. Ltd.		
Location	Sarod	Patan	Halol
Capacity (MW _{DC})	4.9995	3.9975	2.0
Capacity (MW _{AC})	4.07	3.75	1.8
SPV Module Type	Monocrystalline	Polycrystalline & Monocrystalline	Monocrystalline
SPV Module & Model	Renewsys DESERV SGALACTIC-535	Renewsys DESERV 3M6-325 & JA SOLAR JAM72S30-540/MR	Trina TSM-550DE19
Nos. of PV Modules/ Rating	9345/ 535 Wp	12300/ 325 Wp &	3670/ 550 Wp

		930/ 540 Wp	
Inverter Make	Huawei SUN2000-200KTL-H2	Hitachi HIVERTER-201i	Huawei SUN2000-200KTL-H2
Inverter Type	String	String	String
Nos. of Invertors/ Rating	22/ 185 kW	03/1250 kW	09/200 kW
ABT Meter Make	Secure Apex 150	Secure Apex 150	Secure Apex 150
ABT Meter Class	0.2s	0.2s	0.2s
ABT Meter Voltage	3 x 63.5 V	3 x 63.5 V	3 x 63.5 V
ABT Meter Current	-/5A	-/5A	-/5A
Meter Details			
Main Meter	DG0225B	GJ4290B	MJ0209B
Check Meter	DG0226B	GJ7887B	MG0210B
ABT Main Meter	GJ6208B	UPA004B	GJ7386B
ABT Check Meter	GJ6209B	UPT061B	GJ7387B

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

The implementation and operation of the project activity have not resulted in any adverse social or environmental impacts; therefore, no mitigation measures are required.

Rational: As per the Central Pollution Control Board (CPCB), Ministry of Environment, Forest, and Climate Change (MoEFCC), Government of India, the final document on the revised classification of industrial sectors (07/03/2016)³ categorizes solar power projects under the "**White Category**." This classification is designated for industries and activities that have minimal or no pollution potential. Consequently, projects under this category are exempt from the requirement for Environmental Clearance or a "Consent to Operate" from the Pollution Control Board (PCB), as they do not pose any significant environmental risks. Furthermore, as per Indian regulatory provisions, Environmental and Social Impact Assessments (ESIA) are not mandated for solar power projects.

In addition to its environmental neutrality, the project activity contributes to sustainable development by delivering social, economic, and technological benefits. It promotes clean energy generation, reduces dependence on fossil fuel-based electricity, supports local employment opportunities, and facilitates the advancement of renewable energy infrastructure in India.

Social well-being:

There have been good employment opportunities created for the local workforce during the project construction phase. The project after implementation has also continued to provide employment opportunities for the local populace in a sustained manner and the same would be continued over the project life time. The employment opportunities created will contribute towards alleviation of poverty in the surrounding area throughout the lifetime of the project activity.

Economic well-being:

The project is a clean technology investment decided based on carbon revenue support, which signifies flows of clean energy investments into the host country. The project activity requires temporary and permanent, skilled and semi-skilled manpower at the project location; this will create

³ [Environment Ministry](#)

additional employment opportunities in the region. In addition, success of this kind of project will provide new opportunities for industries and economic activities to be setup in the area. Apart from getting better employment opportunities, the local people will get better prices for their land, thereby resulting in overall economic development.

Technological well-being:

The successful operation of project activity would lead to promotion of solar based power generation and would encourage other entrepreneurs to participate in similar projects. Increased interest in solar energy projects will further push R&D efforts by technology providers to develop more efficient and better machinery in future. The project activity leads to the promotion and demonstrates the success of solar projects in the region which further motivate more investors to invest in solar power projects. Hence, the project activity leads to technological well-being.

Environmental well-being:

The project activity will generate power using zero emissions solar based power generation facility which helps to reduce GHG emissions and specific pollutants like SO_x, NO_x, and SPM associated with the conventional thermal power generation facilities. The project utilizes solar energy for generating electricity which is a clean source of energy. Also, being a renewable resource, use of solar energy to generate electricity contributes to resource conservation. It reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. The impact on land, water, air and soil is negligible. Thus, the project causes no negative impact on the surrounding environment contributing to environmental well-being.

With regards to ESG credentials:

At present specific ESG credentials have not been evaluated, however, the project essentially contributes to various indicators which can be considered under ESG credentials. Some of the examples are as follows:

Under Environment:

Environmental criteria may include a company's energy use, waste, pollution, natural resource conservation, and treatment of animals etc. For PP, energy use pattern is now based on renewable energy due to the project and it also contributes to GHG emission reduction and conservation of depleting energy sources associated with the project baseline. Also, the criteria can be further evaluated on the basis of any environmental risks which the company might face and how those risks are being managed by the company. Here, as the power generation will be based on solar power, the risk of environmental concerns associated with non-renewable power generation and risk related to increasing cost of power etc. are now mitigated. Hence, project contributes to ESG credentials.



Under Social:

Social criteria reflect on the company's business relationships, qualitative employment, working conditions with regard to its employees' health and safety, interests of other stakeholders' etc. With respect to this project, the PP has robust policies in place to ensure equitable employment, health & safety measures, local jobs creation etc. Also, the organizational CSR activities directly support local stakeholders to ensure social sustainability. Thus, the project contributes to ESG credentials.

Under Governance:

Governance criteria relate to overall operational practices and accounting procedure of the organization. With respect to this project, the Project Proponent practices a good governance practice with transparency, accountability and adherence to local and national rules & regulations etc. This can be further referred from the company's annual report. Also, the project activity is a

solar power project owned and managed by the PP for which all required NOCs and approvals are received. The electricity generated from the project can be accurately monitored, recorded and further verified under the existing management practice of the company. Thus, the project and the proponent ensure good credentials under ESG.

SDG	Relevant SDG Target	Project Contributions
SDG7: Affordable and Clean Energy 	Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix.	<p>The project contributes to Sustainable Development Goal 7 by generating 9.62 MW of renewable electricity using polycrystalline and monocrystalline photovoltaic (PV) modules.</p> <p>The project generated a total 53,789.14 MWh electricity supplied directly to the grid, thereby reducing the dependency on fossil fuel-based electricity and enhancing access to sustainable, affordable energy.</p>
SDG13: Climate Action 	Target 13.2: Integrate climate change measures into national policies, strategies and planning.	<p>The project avoids significant greenhouse gas emissions during the monitoring period by replacing conventional fossil fuel-based energy sources with solar power.</p> <p>This directly supports Sustainable Development Goal 13 by contributing to climate change mitigation and promoting a transition to low-carbon energy infrastructure.</p> <p>The project resulted in total reduction of 46,116 tonnes of CO₂ equivalent (tCO₂e) over its crediting period.</p> <p>This significant reduction in greenhouse gas emissions supports national and global targets for carbon mitigation and represents a transition towards low-carbon energy infrastructure.</p>

B.3. Baseline Emissions>>

“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 through the addition of new fossil fuel-based generation sources to meet the growing demand.”

This project activity represents a voluntary investment by the project proponent, replacing an equivalent amount of fossil fuel-derived electricity from the Indian grid with clean solar energy. The project proponent was not obligated to undertake this investment, as it was not mandated by any

national or sectoral policy. However, through this initiative, the project has contributed to reducing greenhouse gas (GHG) emissions, promoting renewable energy adoption, and supporting India's transition to a low-carbon economy.

The continued operation of the project will displace fossil fuel-based electricity generation, reduce carbon emissions and mitigating the impacts of climate change. Furthermore, the project proponent anticipates that the carbon revenues generated from 01/08/2019 to 31/12/2024 through the sale of carbon credits (CoUs) will assist in loan repayment and long-term maintenance of the solar power plant, ensuring its sustained operation and contribution to clean energy generation

B.4. Debundling>>

The project activity 9.62 MW Bundled Solar Power Project by Panoli Intermediates (India) Pvt Ltd. in Gujarat, India is not a debundled component of a larger project activity.

SECTION C. Application of methodologies and standardized baselines

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

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

TYPE: I–Renewable Energy Projects

CATEGORY: AMS–I.D., Grid connected renewable electricity generation, Version 18.0⁴

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

The project activity is solar based renewable energy source, zero emission power project connected to the Gujarat state grid, which forms part of the Indian grid. The project activity will displace fossil fuel-based electricity generation that would have otherwise been provided by the operation and expansion of the fossil fuel-based power plants in Indian grid.

The project activity has installed capacity of 9.62 MW which will qualify for a small-scale project activity under Type-I of the Small-Scale methodology. The project status is corresponding to the methodology AMS–I.D., version 18 and applicability of methodology is discussed below:

Applicability Condition	Justification
1. This methodology is applicable to project activities that: a) Install a Greenfield plant; b) Involve a capacity addition in (an) existing plant(s) c) Involve a retrofit of (an) existing plant(s) d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or e) Involve a replacement of (an) existing plant(s).	The project activity involves installation of greenfield solar power generation plant. Hence the methodology is applicable to the project activity.
2) Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir; b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m ² ; c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m ² .	The project activity is NOT a hydro power project. Hence the condition does not apply.
3) If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	The project activity only has renewable component (i.e. solar power) of 9.62 MW and hence meets the applicability condition.

⁴ [AMS-I.D.](#)

4) Combined heat and power (co-generation) systems are not eligible under this category.	The project activity is a greenfield solar power generation project and hence this condition does not apply.
5) In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	The project activity is a greenfield project and NOT a capacity addition project. Hence the condition does not apply.
6) In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement power plant/unit shall not exceed the limit of 15 MW.	The project activity is a greenfield project. Hence the condition does not apply.
7) In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid, then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as “AMS-I.C.: Thermal energy production with or without electricity” shall be explored.	The project activity is a solar power project. Hence the condition does not apply.
8) In case biomass is sourced from dedicated plantations, the applicability criteria in the tool “Project emissions from cultivation of biomass” shall apply.	The project activity is Neither a fossil fuel switch project nor a biomass fired power plant. Hence the condition does not apply.

C.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 is uniquely identifiable based on its location coordinates,
- Project has dedicated commissioning certificate and connection point,
- Project is associated with energy meters which are dedicated to the consumption point for project developer

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

As per the applicable methodology AMS–I.D., Grid-Connected Renewable Electricity Generation, Version 18, “The spatial extent of the project boundary includes the project power plant and all power plants physically connected to the electricity system to which the project power plant is linked”.

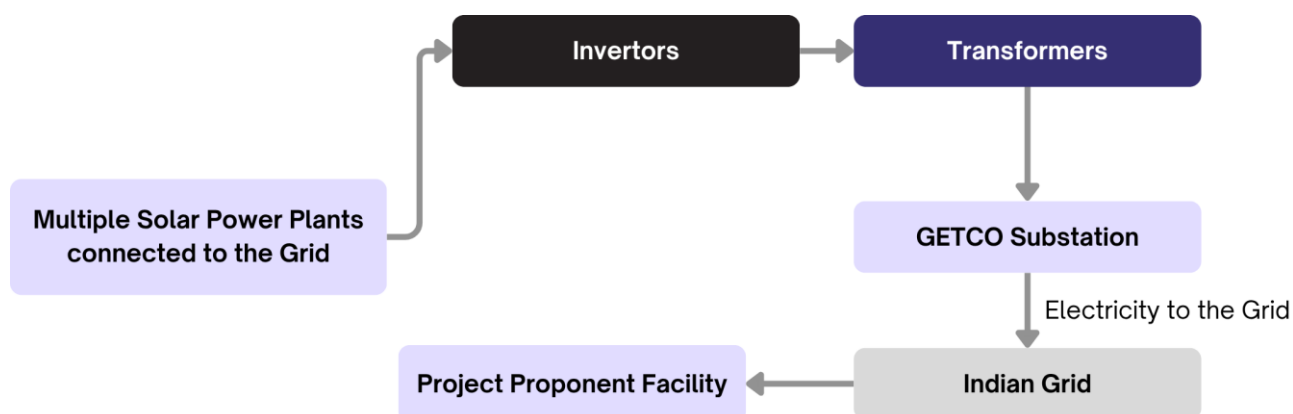


Figure 3: Project Boundary

Thus, the project boundary for this solar power project includes the Solar PV systems and the Indian grid system, as the project feeds electricity into the grid for captive consumption.

Source		Gas	Included?	Justification/ Explanation
Baseline	Grid connected electricity generation	CO ₂	YES	Main emission source
		CH ₄	NO	Minor emission source
		N ₂ O	NO	Minor emission source
		Other	NO	No other GHG emissions were emitted from the project
Project	Greenfield Solar Power Project Activity	CO ₂	NO	No CO ₂ emissions are emitted from the project
		CH ₄	NO	Project activity does not emit CH ₄
		N ₂ O	NO	Project activity does not emit N ₂ O
		Other	NO	No other emissions are emitted from the project

C.5. Establishment and description of baseline scenario (UCR Protocol) >>

This section provides details of emission displacement rates/ coefficients/ factors established by the applicable methodology selected for the project.

As per the approved consolidated methodology AMS-I.D., Grid connected renewable electricity generation, Version 18, if the project activity is the installation of a new grid-connected renewable power plant/ unit, 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 of a new solar power plant to harness the green power from solar energy and to use for captive purpose via grid interface through wheeling arrangement. 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 as a fairly conservative estimate for Indian projects not previously verified under any GHG program. The UCR recommends a grid emission factor of 0.757 tCO₂/MWh for the 2024 vintage year as a fairly conservative estimate for Indian projects not previously verified under any GHG program.

In this project activity, the emission factor is determined in two distinct phases. For the period year up to 2023, a grid emission factor of 0.9 tCO₂/MWh is applied and for the year 2024, a grid emission factor of 0.757 tCO₂/MWh in accordance with the updated UCR guidelines.

In the Project Concept Note (PCN), a conservative grid emission factor of 0.9 tCO₂/MWh was used for ex-ante emission reduction estimates, as recommended by UCR for projects not previously registered under any GHG program.⁵

Net GHG Emission Reductions and Removals

Thus,

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y = Emission reductions in year y (tCO₂/y)

BE_y = Baseline Emissions in year y (t CO₂/y)

PE_y = Project Emissions in year y (t CO₂/y)

LE_y = Leakage Emissions in year y (t CO₂/y)

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 are to be calculated as follows:

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

Where;

BE_y	Baseline Emissions in year y (t CO ₂)
$EG_{PJ,y}$	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{grid,y}$	UCR recommended emission factors of 0.9 tCO ₂ /MWh and 0.757 tCO ₂ /MWh has been considered.

Baseline Emissions table based on actual generation

Baseline Emissions Table	
Year	(tCO ₂ e)
2019	1,863
2020	5,622
2021	5,884
2022	6,845

⁵ [UCR Standard Update](#)

2023	13,944
2024	11,958

Project Emissions

As per paragraph 39 of AMS-I.D., Grid connected renewable electricity generation, Version 18, only emission associated with the fossil fuel combustion, emission from operation of geo-thermal power plants due to release of non-condensable gases, emission from water reservoir of Hydro should be accounted for the project emission. Since the project activity is a solar power project, project emission for renewable energy plant is nil.

Thus, **PE_y = 0**.

Leakage Emissions

As per paragraph 42 of AMS-I.D., Grid connected renewable electricity generation, Version 18, 'If a biomass project activity shall be followed to quantify leakages pertaining to the use of biomass residues; leakage is to be considered'. In the project activity, there is no transfer of energy generating equipment and therefore the leakage from the project activity is considered as zero.

Thus, **LE_y = 0**.

$$ER_y = BE_y$$

Total Emission reduction by the project for the current monitoring period is calculated as below.

Emission Reduction table based on actual generation

	(tCO ₂ e)	(tCO ₂ e)	(tCO ₂ e)	(tCO ₂ e)
Year	Baseline Emissions	Project Emissions	Leakage Emissions	Emission Reduction
2019	1,863	0	0	1,863
2020	5,622	0	0	5,622
2021	5,884	0	0	5,884
2022	6,845	0	0	6,845
2023	13,944	0	0	13,944
2024	11,958	0	0	11,958
Total	46,116	0	0	46,116

C.6. Prior History>>

The project was not applied under any other GHG mechanism. Hence project will not cause double accounting of carbon credits (i.e., COUs)

C.7. Monitoring period number and duration>>

First Monitoring Period: 5 years and 5 months - 01/08/2019 to 31/12/2024

C.8. Changes to start date of crediting period >>

There is no change in start date of crediting period. Crediting period start date is 01/08/2019.

C.9. Permanent changes from PCN monitoring plan, applied methodology or applied standardized baseline >>

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

C.10. Monitoring plan>>

Parameters for monitoring during the crediting period.

Data / Parameter Table 1

Data/Parameter	EF _{grid,y}					
Data unit	tCO ₂ /MWh					
Description	CO2 emission factor per unit of energy of the fossil fuel used in the baseline generation source (Grid) displaced due to the project activity, during the year y					
Source of data	<p>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.</p> <p>The UCR recommends an emission factor of 0.9 tCO2/MWh for the 2013–2023 years as a fairly conservative estimate for Indian projects not previously verified under any GHG program.</p> <p>The UCR recommends a grid emission factor of 0.757 tCO2/MWh for the 2024 vintage year as a fairly conservative estimate for Indian projects not previously verified under any GHG program. UCR CoU Standard Update</p>					
Value(s) applied	<table><tr><td>Emission Factor (Till 2023)</td><td>0.90</td></tr><tr><td>Emission Factor (2024 Onwards)</td><td>0.757</td></tr></table>		Emission Factor (Till 2023)	0.90	Emission Factor (2024 Onwards)	0.757
Emission Factor (Till 2023)	0.90					
Emission Factor (2024 Onwards)	0.757					
Measurement methods and procedures	As per the requirements in “Tool to calculate the emission factor for an electricity system”					
Monitoring frequency	-					
Purpose of data	Calculation of baseline emission					

Data / Parameter Table 2

Data / Parameter:	EG_{PJ,y}
Data unit:	MWh
Description:	Net electricity supplied to the Indian grid facility by the project activity
Source of data:	Generation Statements

Measurement procedures (if any):	Data Type: Measured Monitoring equipment: Energy Meters are used for monitoring Archiving Policy: Electronic			
	The electricity generation is monitored directly through energy meters installed by GETCO. The generation data is recorded, maintained, and periodically revised by GETCO based on their own meter readings and calibration processes.			
	Capacity (MW _{AC})	4.07	3.75	1.8
	Main Meter	DG0225B	GJ4290B	MJ0209B
	Check Meter	DG0226B	GJ7887B	MG0210B
	ABT Main Meter	GJ6208B	UPA004B	GJ7386B
	ABT Check Meter	GJ6209B	UPT061B	GJ7387B
Monitoring frequency:	Monthly			
Value applied	53,789.14 MWh			
QA/QC procedures:	Continuous monitoring, hourly measurement monthly recording. Tri-vector (TVM)/ABT energy meters with accuracy class 0.2s			
Purpose of data:	Calculation of baseline emission			
Any comment:	The renewable power generated by the project is wheeled for captive consumption. Therefore, during monitoring and verification, the provisions outlined in the wheeling agreement may be referred to as supporting documentation.			