



# PROJECT CONCEPT NOTE

CARBON OFFSET UNIT (CoU) PROJECT



Title: Solar Power Project by M/S Industrial Bag Packaging  
Version 4.0

Date 22/04/2026

First CoU Issuance Period: 1 year, 4 months & 10 days

Date: 20/08/2024 to 31/12/2025



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

| BASIC INFORMATION                                 |                                                                                              |
|---------------------------------------------------|----------------------------------------------------------------------------------------------|
| Title of the project activity                     | Solar Power Project by M/S Industrial Bag Packaging                                          |
| Scale of the project activity                     | Small Scale                                                                                  |
| Completion date of the PCN                        | 24/03/2026                                                                                   |
| Project participants                              | Lume Solar Energy Pvt. Ltd. (Aggregator)<br><br>Industrial Bag Packaging (Project Proponent) |
| Host Party                                        | INDIA                                                                                        |
| Applied methodologies and standardized baselines  | AMS-I.D: “Grid-connected renewable electricity generation”, Version 18                       |
| Sectoral scopes                                   | Sectoral Scope 01 – Energy industries<br>(Renewable/Non-Renewable Sources)                   |
| Estimated amount of total GHG emission reductions | 1,650 CoUs (1,650 tCO <sub>2</sub> eq) - Total                                               |
|                                                   |                                                                                              |

## SECTION A. Description of project activity

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

The purpose of the project activity is to generate clean and renewable electricity through the installation and operation of a 1250 kW grid-connected solar photovoltaic (PV) captive power plant at the premises of M/S Industrial Bag Packaging, located at Mathak, Anjar, Kutch, Gujarat, India. The details of the registered project are as follows:

#### Purpose of the project activity:

The purpose of this project activity is to generate clean, renewable electricity through a total of **1250 kW grid-connected solar photovoltaic (PV) solar power plant.**

| Village | Taluka | District | Type    | Total installed capacity in kWp | Commissioning date |
|---------|--------|----------|---------|---------------------------------|--------------------|
| Mathak  | Anjar  | Kutch    | RoofTop | 1250 kW                         | 20/08/2024         |

The project has been implemented by M/S Industrial Bag Packaging and facilitated by Lume Solar Energy Pvt. Ltd., which is acting as the aggregator for registration under the carbon credit mechanism. The solar captive power plant supplies renewable electricity to the regional grid, effectively displacing electricity that would otherwise have been generated by fossil-fuel based thermal power plants.

#### Project Details:

| Parameter                          | Description                                         |
|------------------------------------|-----------------------------------------------------|
| Project Name                       | M/S Industrial Bag Packaging                        |
| Project Location                   | R.S. No. 251, Mathak, Anjar, Kutch, Gujarat, India. |
| Installed Capacity                 | 1250 kW (DC)                                        |
| Type of Project                    | Grid-connected solar photovoltaic (PV) plant        |
| Commissioning Year                 | 2024                                                |
| Start of Crediting Period          | August 2024                                         |
| Project Owner                      | Mr. Pramod Jain                                     |
| Aggregator                         | Lume Solar Energy Pvt. Ltd.                         |
| Estimated Annual Generation        | Year 2024 – 546.39 MWh ; Year 2025 – 1679.92 MWh    |
| Expected Annual Emission Reduction | ~1,650 tCO <sub>2</sub> e/year (Rooftop) - Total    |

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

India's economy has historically been dependent on fossil fuels, particularly coal, for electricity generation and industrial energy requirements. Thermal power plants constitute a significant share of the country's power generation, which results in higher greenhouse gas emissions and environmental stress. With the increasing demand for electricity and the need to reduce carbon emissions, the adoption of renewable energy sources such as solar power has become essential for ensuring sustainable and cleaner energy generation.

Changing the current energy consumption pattern requires a focused strategy that promotes energy efficiency, reduces dependency on fossil fuels, and encourages the use of renewable energy sources. In this context, the present project is a renewable energy initiative where grid electricity represents the baseline scenario. Electricity generated through solar power contributes to the share of clean and green energy in the grid and helps in reducing emissions associated with conventional fossil-fuel-based power generation.

The Government of India has emphasized the promotion of renewable energy projects that contribute to greenhouse gas mitigation and sustainable development. The Ministry of Environment, Forest and Climate Change has identified economic, social, environmental, and technological well-being as key indicators of sustainable development. The implementation of this solar photovoltaic project contributes positively to these indicators by generating clean electricity through solar energy and supporting the transition towards a more sustainable energy system.

### Social benefits:

- Creates local employment opportunities during installation and operation phases.
- Promotes skill development and capacity building in renewable energy.
- Supports the local community through improved infrastructure and economic activity.
- Demonstrates corporate responsibility toward sustainable development.

### Environmental benefits:

- Reduces greenhouse gas emissions by replacing fossil fuel-based power generation.
- Improves local air quality and reduces pollution.
- Promotes the use of clean and renewable solar energy.
- Contributes to India's climate goals and global emission reduction targets.

### Economic benefits:

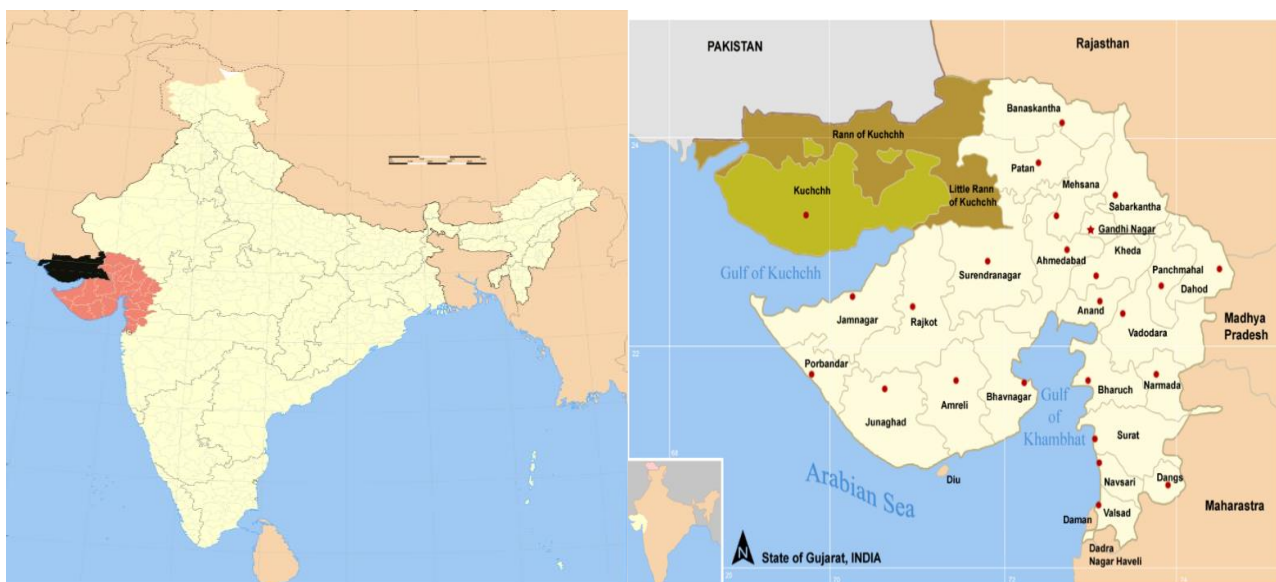
- Generates stable, long-term investment in renewable energy infrastructure.
- Reduces dependence on imported fossil fuels.
- Provides cost savings and reliable energy supply to the grid.
- Encourages regional economic growth through sustainable energy initiatives.

### A.3. Location of project activity

Rooftop:  
Country: India  
District: Kachchh  
Village: Mathak  
Tehsil: Anjar  
State: Gujarat  
Code: 370110

The project location is situated at Village Mathak in Anjar Tehsil of Kutch District in the State of Gujarat, India. The nearest major town to the project site is Anjar, which provides connectivity to other parts of the district. The project site is accessible through well-connected road networks from Anjar and nearby towns. The postal code of the project location is 370110. The geographic coordinates of the project location are 22.993896° N latitude and 70.005167° E longitude.

The location can also be accessed through the following map link:  
<https://maps.app.goo.gl/ks4QWfpjxvGEVgV28>



(Courtesy: Google Maps & Images)

### A.4. Technologies/measures

The project involves the installation of a 1250 kW grid-connected rooftop solar photovoltaic (PV) power system at the premises of M/S Industrial Bag Packaging., located in Gujarat, India.

The system converts sunlight into clean electricity using high-efficiency crystalline silicon PV modules and grid-tied inverters. The electricity generated is used for captive consumption and surplus power, if any, is exported to the grid under the net-metering arrangement with PGVCL.

The project helps in reducing dependency on fossil-fuel-based grid electricity and contributes to greenhouse gas (GHG) emission reduction.

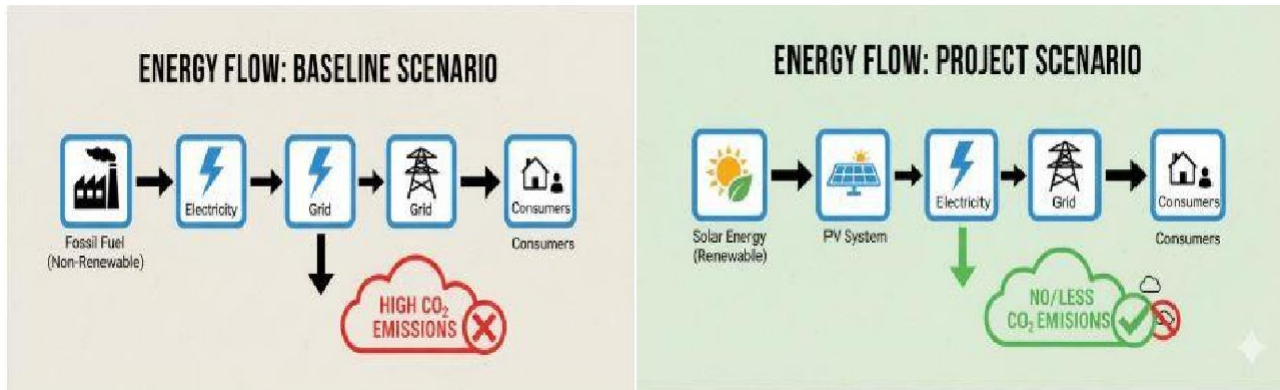
| Specification                | Value                                     |
|------------------------------|-------------------------------------------|
| PV Module Type               | Monocrystalline / Polycrystalline Silicon |
| Installed DC Capacity        | 1250 kW                                   |
| Grid Emission Factor         | 0.757 & 0.736 tCO <sub>2</sub> /MWh       |
| Estimated Emission Reduction | 1,650 tCO <sub>2</sub> e = 1,650 CoUs     |

#### A.5. Parties and project participants

| Party (Host) | Participants                                                                                                                                                                                                                                                                                                                   |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| India        | <p>Lume Solar Energy Pvt. Ltd. (Aggregator)<br/> Contact Person: Urja Shah<br/> Mobile: +91-9429999539<br/> Address: D-1404, – Westgate by Truevalue, SG highway near YMCA Club, Ahmedabad, Gujarat - 380051</p> <p>Industrial Bag Packaging (Project Proponent)<br/> Address: R.S no 251, Mathak, Anjar, Gujarat - 370110</p> |

## A.6. Baseline Emissions>>

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



### Baseline Scenario:

In the absence of the proposed solar project activity, electricity would continue to be generated from fossil fuel-based thermal power plants connected to the regional grid. This results in significant greenhouse gas (GHG) emissions, primarily carbon dioxide (CO<sub>2</sub>), due to the combustion of coal and natural gas for power generation.

### Project Scenario:

Under the proposed project activity, electricity is generated through a 1250 kW grid-connected captive solar photovoltaic (PV) system using renewable solar energy. This clean energy displaces an equivalent amount of grid electricity generated from fossil fuels, thereby reducing GHG emissions & contributing to Sustainable, low-carbon development.

## A.7. Debundling

This M/S Industrial Bag Packaging project is not a debundled component of a larger project activity. It operates as an independent project with separate ownership, financing, and implementation boundaries.

## 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 - Type I – Renewable Energy Project

CATEGORY- AMS-I. D: “Grid Connected Renewable Electricity Generation”, Version 18

The project is a 1250 kW grid-connected solar power plant installed for captive consumption facility under a net metering arrangement. As per AMS-I.D, the key applicability condition is that renewable electricity generation displaces grid electricity. In this case, the entire electricity generated by the solar plant is consumed within the facility, directly reducing the electricity that would otherwise have been sourced from the grid. Since the baseline scenario is grid electricity supply, and the project activity replaces this with renewable generation, the project results in displacement of grid-based electricity. Therefore, despite being a captive consumption project, it qualifies as a grid-connected renewable electricity generation activity, making AMS-I.D the appropriate methodology.

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

The project activity involves generation of grid-connected electricity from the construction and operation of a new solar power-based project for captive consumption at the facility of Industrial Bag Packaging. The project activity has an installed capacity of 1250 kW, which qualifies for a small-scale project activity under Type-I of the Small-Scale methodology. The project status corresponds to the methodology AMS-I.D., Version 18, and the applicability of the methodology is discussed below.

| Applicability Criterion                                                                                                                                                                                                                                                                                                                                            | Project Case                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:<br>(a) Supplying electricity to a national or a regional grid; or<br>(b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling. | The project activity is a Renewable Energy Project which falls under applicability criteria option 1 (b)<br>Hence the project activity meets the given applicability criterion. |
| 2. This methodology is applicable to project activities that:<br>(a) Install a Greenfield plant;<br>(b) Involve a capacity addition in (an) existing plant(s);<br>(c) Involve a retrofit of (an) existing plant(s);<br>(d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or<br>(e) Involve a replacement of (an) existing                            | The option (a) of applicability criteria 2 is applicable as project is a Greenfield plant /unit.<br>Hence the project activity meets the given applicability criterion.         |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| plant(s).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                  |
| <p>3. Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <p>(a) The project activity is implemented in existing reservoir, with no change in the volume of the reservoir; or</p> <p>(b) The project activity is implemented in existing reservoir, where the volume of the reservoir(s) is increased and the power density as per definitions given in the project emissions section, is greater than 4 W/m<sup>2</sup>.</p> <p>(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<sup>2</sup>.</p> | <p>The project activity involves installation of Solar PV. Hence, this criterion is not applicable. The projects fall under: AMS-I.D.: Grid connected renewable electricity generation.</p>                                      |
| <p>4. 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.</p>                                                                                                                                                                                                                                                                                                                                                                                  | <p>The proposed project is 1250 kW Solar Power Project, i.e., only component is renewable power project below 15MW, thus this criterion is not applicable to this project activity.</p>                                          |
| <p>5. Combined heat and power (co-generation) systems are not eligible under this category.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>The project is Solar Power Project and thus, the criterion is not applicable to this project activity.</p>                                                                                                                    |
| <p>6. 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.</p>                                                                                                                                                                                                                                                                                                                                                                                               | <p>The proposed project is a greenfield 1250 kW Solar Power Project, i.e., no capacity addition was done to any existing power plant. Thus, this criterion is not applicable to this project activity.</p>                       |
| <p>7. 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.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>The proposed project is a greenfield 1250 kW Solar Power Project, i.e., no retrofit, rehabilitation or replacement was done to any existing power plant. Thus, this criterion is not applicable to this project activity.</p> |
| <p>8. In the case of landfill gas, waste gas, wastewater treatment and agro-industries</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>The proposed project is a greenfield 1250 kW solar power project hence, this criterion is not</p>                                                                                                                             |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <p>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.</p> | <p>applicable to this project activity.</p>                                                                                                 |
| <p>9. In case biomass is sourced from dedicated plantations, the applicability criteria in the tool “Project emissions from cultivation of biomass” shall apply.</p>                                                                                                                                                                                                                                                                                                                                             | <p>No biomass is involved, the project is only a Solar Power Project and thus the criterion is not applicable to this project activity.</p> |

### **B.3. Applicability of double-counting emission reductions**

- The project is implemented by M/S Industrial Bag Packaging, with Lume Solar Energy Pvt. Ltd. as the authorized aggregator.
- The project will be registered only once under the Universal Carbon Registry (UCR).
- A unique identification number will be assigned to the project upon submission to UCR.
- Project ownership, location, and grid connectivity are distinct and verifiable.
- All generation and monitoring data will be recorded and maintained by the project owner and aggregator.
- The project’s emission reductions are not claimed under any other registry or mechanism.

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

The project boundary includes the physical, geographical site(s) of:

- **A total 1250 kW grid-connected solar photovoltaic (PV) captive power plant located at Gujarat, India.**
- The boundary covers all key components: solar panels, inverters, transformers, switchyard, and metering point.
- It also includes the transmission line up to the interconnection point with the state electricity grid.
- The regional grid is part of the boundary, as the project exports renewable power to it.

| Source   |                                                | GHG | Included? | Justification/Explanation                                              |
|----------|------------------------------------------------|-----|-----------|------------------------------------------------------------------------|
| Baseline | Grid-connected electricity generation          | CO2 | Yes       | CO2 emissions from electricity generation in fossil fueled power plant |
|          |                                                | CH4 | No        | Excluded for simplification. This is conservative                      |
|          |                                                | N2O | No        | Excluded for simplification. This is conservative                      |
| Project  | Emissions from solar PV electricity generation | CO2 | No        | Solar power generation does not produce direct GHG emissions.          |
|          |                                                | CH4 | No        | Excluded for simplification. This is conservative                      |
|          |                                                | N2O | No        | Excluded for simplification. This is conservative                      |

## B.5. Establishment and description of baseline scenario (UCR Standard or Methodology)

As per para 19 of the approved consolidated methodology AMS-I.D 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 photovoltaic solar power plant to harness clean energy from solar radiation for electricity generation. In the absence of the project activity, the equivalent amount of electricity required would have been generated by the operation of grid-connected fossil fuel-based power plants and by the addition of new fossil fuel-based generation sources into the grid. The electricity supplied by the grid is predominantly generated from conventional sources, mainly fossil-fuel-based power plants. Hence, the baseline for the project activity is the equivalent amount of electricity produced by the Indian grid.

### Baseline Emissions

Baseline Emissions include only CO<sub>2</sub> 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 <sub>y</sub>      | = | Baseline emissions in year y (tCO <sub>2</sub> )                                                                                                                                                                                                                                                                                        |
| EG <sub>PJ,y</sub>   | = | Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of this project activity in year y (MWh)                                                                                                                                                                                |
| EF <sub>grid,y</sub> | = | UCR recommended emission factor of 0.757 tCO <sub>2</sub> /MWh has been considered, this is conservative as compared to the combined margin grid emission factor which can be derived from Database of Central Electricity Authority (CEA), India. (Reference: General Project Eligibility Criteria and Guidance, UCR Standard, page 4) |

The project operates as a captive solar power project, where the electricity generated is primarily self-consumed by the identified captive users in accordance with the Net Metering Agreement. The generated electricity is utilized by the captive users through the grid infrastructure and offsets the electricity that would otherwise be sourced from the regional grid.

Therefore, the total electricity generated by the project is considered as the total net electricity generation (EGPJ,y ) for the purpose of emission reduction calculations.

Hence,

| Baseline Emissions Calculation |                                           |            |          |      |
|--------------------------------|-------------------------------------------|------------|----------|------|
| Sr.No                          | Year                                      | EGpy (MWh) | EFgrid,y | BEy  |
| 1                              | 2024                                      | 546.39     | 0.757    | 414  |
| 2                              | 2025                                      | 1679.92    | 0.736    | 1236 |
| 3                              | BE (tCO2e) for the period of 2024 to 2025 |            |          | 1650 |

#### Project Emissions

As per paragraph 39 of AMS-I.D., for most renewable energy project activities emission is zero. Since the project activity is run of solar type Solar Power Plant Installation, project emission for this plant is nil.

Hence,

$$PE = 0$$

#### Leakage Emissions

As per paragraph 42 of AMS-I.D. Version-18, all projects other than Biomass projects have zero leakage.

Hence,

$$LE = 0$$

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

Hence,

$$ER = 1,650 - 0 - 0 = 1,650 \text{ CoUs}$$

## B.6. Prior History

The project activity is a small-scale solar project and was not applied under any other GHG mechanism prior to this registration with UCR. Also, project has not been applied for any other environmental crediting or certification mechanism. Hence project will not cause double accounting of carbon credits (i.e., COUs).

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

First Issuance Period: 1 year, 4 months & 10 days

Crediting Period Duration: 20/08/2024 to 31/12/2025 - (inclusive of both dates)

Monitoring Period Duration: 20/08/2024 to 31/12/2025

Start Date of Crediting Period: 20/08/2024

Project Commissioned: 20/08/2024

Technical Life Time: 25 years from the start date

#### **B.8. 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

#### **B.9. Monitoring period number and duration**

First Issuance Period: 1 year, 4 months & 10 days – 20/08/2024 to 31/12/2025

## B.8. Monitoring plan

The project activity essentially involves generation of electricity from solar energy. The employed solar photovoltaic captive power plant can only convert solar radiation into electrical energy and does not use any fossil fuel for electricity generation; thus, no special ways and means are required to monitor leakage from the project activity. The recording of the electricity generated and consumed is carried out through installed energy meters at the facility of the project proponent.

Details of Installed Meter:

|   |                       |            |
|---|-----------------------|------------|
| 1 | Net Meter Details     |            |
|   | Serial No             | GHB02842   |
|   | Accuracy Class        | 0.5 S      |
|   | Make                  | Secure     |
| 2 | Calibration Details   |            |
|   | Calibration Date      | 20-08-2024 |
|   | Calibration Frequency | 5 Years    |

| Data/Parameter                     | Electricity Generated by the Solar PV System (EGPJy)                                                                                                                                                                                                             |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data unit                          | MWh/year                                                                                                                                                                                                                                                         |
| Description                        | Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of this project activity in year y                                                                                                               |
| Source of data<br>Value(s) applied | Electricity bill (Utility Bill)<br>(Generation data is given in the excel sheet)                                                                                                                                                                                 |
| Measurement methods and procedures | The net electricity generation by the solar power plant is recorded through the net meter. The generation data is monitored and recorded on a monthly billing cycle for the purpose of tracking the electricity generated from the grid-connected solar project. |
| Monitoring frequency               | Monthly                                                                                                                                                                                                                                                          |
| Purpose of data                    | To calculate the baseline emissions                                                                                                                                                                                                                              |

| Data/Parameter   | Grid Emission Factor (EFgrid) – UCR recommended                                                                                                                      |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Data unit        | tCO <sub>2</sub> e/MWh                                                                                                                                               |
| Description      | Represents the amount of CO <sub>2</sub> emissions avoided per unit of renewable electricity generated and supplied to the grid.                                     |
| Value(s) applied | UCR Standard / Central Electricity Authority (CEA) published regional grid emission factors for India. 0.757 & 0.736 tCO <sub>2</sub> e/MWh (as per UCR Standard for |

|                                    |                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    | <p>the Western Grid).</p> <p>Link:</p> <p><a href="https://medium.com/@UniversalCarbonRegistry/ucr-cou-standard-update-2025-vintage-ucr-indian-grid-emission-factor-announced-d9a5efd237bf">https://medium.com/@UniversalCarbonRegistry/ucr-cou-standard-update-2025-vintage-ucr-indian-grid-emission-factor-announced-d9a5efd237bf</a></p> |
| Measurement methods and procedures | Default emission factor as per UCR-approved methodology; reviewed periodically against latest CEA baseline database.                                                                                                                                                                                                                        |
| Monitoring frequency               | Once per billing cycle. (monthly)                                                                                                                                                                                                                                                                                                           |
| Purpose of data                    | To calculate the emission factor of the grid                                                                                                                                                                                                                                                                                                |

## ANNEXURE 1 (Emission Reduction Calculation)

### Month - Wise Solar Energy Generation (kWh) (16th to 15th Billing Cycle)

| Year - 2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Generation Data  | Year - 2025             | Generation Data   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------------|-------------------|
| 20th Aug-15th Sep                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 91005.39         | 16th Jan-15th Feb       | 136572.8          |
| 16th Sep-15th Oct                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 149692.8         | 16th Feb-15th Mar       | 154562.47         |
| 16th Oct-15th Nov                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 134937.6         | 16th Mar-15th April     | 190118.4          |
| 16th Nov-15th Dec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 111529.6         | 16th April-15th May     | 191372.8          |
| 16th Dec-15th Jan*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 118467.2         | 16th May-15th June      | 194828.8          |
| <b>Total Generation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>605632.59</b> | 16th June-15th July     | 100473.6          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | 16th July-15th Aug      | 118908.8          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | 16th Aug-15th Sep       | 147817.6          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | 16th Sep-15th Oct       | 140799.9          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | 16th Oct-15th Nov       | 130697.6          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | 16th Nov-15th Dec       | 114537.6          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | 16th Dec-31st Dec       | *41981.6          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | <b>Total Generation</b> | <b>1620690.37</b> |
| <p>Note: The generation for the period from <b>16th December to 31st December</b> has been derived from the January electricity invoice and apportioned on a pro-rata (average) basis.</p> <p>Note: For the period <b>16th Dec – 15th Jan</b>, the CoUs have been calculated on a <b>pro-rata (average)</b> basis. Accordingly, the total value of <b>118,467.2</b> has been equally apportioned, resulting in <b>59,233.6</b> for each sub-period (<b>16th Dec – 31st Dec</b> and <b>1st Jan</b>)</p> |                  |                         |                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                         |                   |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                         |                   |

### Year-Wise Emission Reduction Calculation for Project Activity

| Year                                                                                | Total No.of Electricity delivered in MWh | Recommended emission factor tCO2/MWh | Total CoUs generated |
|-------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------|----------------------|
| 2024                                                                                | 546.39899                                | 0.757                                | 414                  |
| 2025                                                                                | 1679.92397                               | 0.736                                | 1236                 |
| <b>Total CoUs to be issued for the first monitoring period (Year: 2024 to 2025)</b> |                                          |                                      | <b>1650</b>          |

Note: \*The values have been derived based on the **relevant billing periods** and, where required, **apportioned on a pro-rata (average) basis** to ensure accurate allocation across specific date ranges within the billing cycle.