



PROJECT CONCEPT NOTE

CARBON OFFSET UNIT (CoU) PROJECT

Title	:	3.99 MW Hybrid Project by Shreeji Coke and Energy Pvt. Ltd.
Version	:	1.0
PCN Date	:	30/12/2024
CoU Issuance Period	:	18 Years
Monitoring Duration	:	01/05/2023 to 31/12/2040

Project Concept Note (PCN) CARBON OFFSET UNIT (CoU) PROJECT	
Title of the project activity	3.99 MW Hybrid project by M/s Shreeji Coke and Energy Pvt. Ltd.
Scale of the project activity	Small Scale
Completion date of the PCN	30/12/2024
Project participants	M/s. Creduce Technologies Private Limited (Aggregator) M/s. Shreeji Coke and Energy Pvt. Ltd. (Project Proponent)
Host Party	India
Applied methodologies and standardized baselines	Applied Baseline Methodology: AMS-I. D: “Grid connected renewable electricity generation”, version 18 Standardized Methodology: Not Applicable.
Sectoral scopes	01 Energy industries (Renewable/Non-Renewable Sources)
Estimated amount of total GHG emission reductions	To be estimated during verification [An ex-ante estimate is 6291 CoUs per year]

SECTION - A - Description of project activity

A.1 General description of Carbon offset Unit (CoU) project activity

The proposed project titled under UCR is “3.99 MW hybrid project by M/s Shreeji Coke and Energy Pvt. Ltd.”, which is wind and solar power project located in Amreli district in the state of Gujarat (India). The purpose of this plant installation and power generation is for captive consumption. PP has the full ownership of the project activity. The project is an operational activity with continuous reduction of GHG, currently being applied under “Universal Carbon Registry” (UCR).

A.1.1 Purpose of the project activity:

The purpose of the proposed project activity is to generate electricity using a clean and renewable source of energy. This project has been promoted by M/s Shreeji Coke and Energy Pvt. Ltd. The project activity was commissioned on 01/05/2023 by Gujarat Energy Development Agency (GEDA), Government of Gujarat, India.

The proposed project activity of 3.99 MW is installation and operation of solar and wind power as per below mentioned details.

Type	Taluka	District	Total installed Capacity	Commissioning date
Wind	Khambha	Amreli	2.1 MW	01/05/2023
Solar	Savar Kundla		1.89 MW	

As per the ex-ante estimate, the project will generate approximately 6,990 MWh of electricity per annum. The net generated electricity from the project activity is used for captive consumption by the project proponent (PP). Wheeling agreement is signed between Paschim Gujarat Vij Company Ltd. (PGVCL) and PP. The project activity would be displacing equivalent quantum of grid electricity resulting in emission reduction of 6,291 tCO₂ per annum. The project activity has been helping in greenhouse gas (GHG) emission reduction by using renewable resources for generating power which otherwise would have been generated using grid mix power plants, which is dominated by fossil fuel based thermal powerplants.

The estimated annual average and the total CO₂e emission reduction by the project activity is expected to be 6,291 tCO₂e, whereas actual emission reduction achieved during the first CoU period shall be submitted as a part of first monitoring and verification.

Since the project activity generates electricity through wind and solar energy, a clean renewable energy source it will not cause any negative impact on the environment and thereby contributes to climate change mitigation efforts

A.1.2 Project's Contribution to Sustainable Development

This project is a greenfield activity where grid power is the baseline. The Indian grid system has been predominantly dependent on fossil fuel-powered plants. Renewable power generation is gradually contributing to the share of clean & green power in the grid; however, the grid emission factor is still on the higher side which defines the grid as a distinct baseline.

The Government of India has stipulated the following indicators for sustainable development in the interim approval guidelines for such projects which are contributing to GHG mitigations. The Ministry


of Environment, Forests & Climate Change, has stipulated economic, social, environmental, and technological well-being as the four indicators of sustainable development. It has been envisaged that the project shall contribute to sustainable development using the following ways:

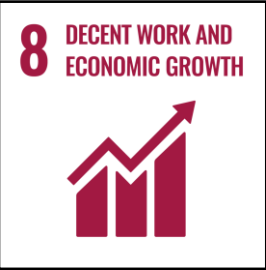

Social well-being: There has been good employment opportunities created for the local workforce during the project construction phase. The project after implementation has also continued to provide employment opportunities for the local populace in a sustained manner and the same would be continued over 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 additional employment opportunities in the region. The electricity replaced in grid will be available for nearby area which directly and indirectly improves the economy and life style of the area. In addition, success of these 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 wind and solar-based power generation and would encourage other entrepreneurs to participate in similar projects. Increased interest in 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 hybrid projects in the region which further motivate more investors to invest in wind power projects. Hence, the project activity leads to technological well-being.

Environmental well-being: The project activity will generate power using zero emissions hybrid-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 wind and solar energy for generating electricity which is a clean source of energy. Also, being a renewable resource, use of wind and 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.

SDG Goals	Description
<p style="text-align: center;">Goal 7</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p style="margin: 0;">7 AFFORDABLE AND CLEAN ENERGY</p>  </div>	<ul style="list-style-type: none"> ➤ The project activity will generate clean energy, which with increased shared will increase the affordability at a cheaper rate to end user. ➤ The project activity will utilize wind and solar energy (renewal resource) to generate power. The project activity will increase the share of renewable resource-based electricity to global mix of energy consumption
<p style="text-align: center;">Goal 8</p>	<ul style="list-style-type: none"> ➤ Decent work and economic growth.

	<ul style="list-style-type: none"> ➤ This project activity generates additional employment for skilled and unskilled, also the project situated in remote area will provide employment opportunities to unskilled people from villages. The training on various aspect including safety, operational issues and developing skill set will also be provided to employees ➤ This project will 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
<p style="text-align: center;">Goal 13</p> 	<ul style="list-style-type: none"> ➤ This 3.99 MW hybrid project meets the SDG 13 goal by saving fossil fuel and producing clean energy. ➤ This project is expected to reduce CO₂ emissions 6,291 tons per year. ➤ SDG 13 on clean energy is closely related and complementary. ➤ In a Greenfield project, electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected power plants. Thereby the project activity reduces the dependence on fossil fuel-based generation units and as there are no associated emissions with this project it contributes to the reduction of greenhouse gases (GHG) emissions.

A.1.3 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 the project proponent, the 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 that the company might face and how those risks are being managed by the company. Here, as the power generation will be based on hybrid 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, the 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 project proponent 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 activity, the PP 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. 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.

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

There was no harm identified from the project and hence no mitigations measures are applicable.

Rational: as per ‘Central Pollution Control Board (Ministry of Environment & Forests, Govt. of India)’, final document on revised classification of Industrial Sectors under Red, Orange, Green and White Categories (07/03/2016), it has been declared that hybrid project activity falls under the “White category”. White Category projects/industries do not require any environmental clearance such as ‘Consent to Operate’ from PCB as such project does not lead to any negative environmental impacts. Additionally, as per Indian Regulation, Environmental and Social Impact Assessment is not required for hybrid projects.

Additionally, there are social, environmental, economic and technological benefits which contribute to sustainable development. The key details have been discussed in the previous section.

A.3 Location of the project activity

The project sites are well connected from airport and railway station. The geographic co-ordinates of the project locations are given below:

Type	Taluka	District	Coordinates
Wind	Khambha	Amreli	21°02'36.1"N 71°19'04.1"E
Solar	Savar Kundla		21°06'45.1"N 71°22'02.0"E

The representative location map is shown below



Figure-1- Location of the project activity (courtesy: google images and www.mapsofindia.com)

A.4 Technologies/measures

The proposed project activity is installation and operation of Single Wind Turbine Generator (WTG) manufactured and supplied by M/s Suzlon Generators Ltd. with installed capacity of 3.99 MW in the state of Gujarat state of India.

Apart from the above technical specification of WTG, the connectivity of all the WTG is to a Central Monitoring Station (CMS) through high-speed WLAN modem or fiber optic cable which helps in providing real time status of the turbine at CMS with easy GUI (Graphical User Interface) and ability to monitor the functioning of the turbine from CMS.

A Supervisory Control & Data Acquisition System (SCADA) provides a graphical representation of data providing ease to understand the behavior of WTG, long time data storage facility, access to daily generation report and power curve related information & helps to analyze the problem with graphical tools offline as well as online. The other specifications include a safety system with instrumentation for tracking individual functions of the wind turbine generator. The life time of the WTG is 20 years as per manufacturer specifications.

Technical details for WTG manufactured by M/s Suzlon Generators Ltd. are as follows:

LOCATION NO :59	MAKE: SUZLON
CAPACITY: 2100KW	MODEL NO: S120DFIG2.1MW
SR.NO: MH5217C22206	ROTOR DIA: 120METERS
HUB HEIGHT: 140METERS	BLADES: SUZLON SB59
SWEPT AREA: 11,225m ²	MAXIMUM ROTOR SPEED: 14.5 U/min
GENERATOR TYPE: A SYNCHRONOUS SLIP RING SINCHRONOUS GENERATOR.	FREQUENCY: 50Hz
GENERATOR SPEED: 1300 U/min	VOLTAGE: 690V
TOWER TYPE: STEEL TUBULAR, HYBRID LATTICE	OPERATING DATA:
RATED POWER: 2.1MW	WIND CLASS: IEC S
CUT IN WIND SPEED: 3 M/Sec	RATED WIND SPEED: 9.5 m/Sec
CUT OUT WIND SPEED: 26.1 m/Sec (3-second average)	: 18 m/Sec (10-minute average)
TRANSFORMER:	MAKE: SUZLON

CAPACITY: 2400 KVA	Sr. No: S X AD/0169
VOLTAGE RATIO: 33/0.690 KV	HT BREAKER:
MAKE: POPULAR-ABB	CAPACITY: 1250 AMP,36KV

Technical details for Solar Power System are as follows:

PLANT CAPACITY: 1320KW	SOLAR PV CELLS:
MAKE: GOLDI	CAPACITY: 540Wp
TOTAL No. OF MODULES 3500	TOTAL CAPACITY (KWp) : 1890
INVERTERS:	MAKE: SOLIS
CAPACITY: 220KW	No. OF INVERTERS: 6
TRANSFORMER:	MAKE: TELWANE
CAPACITY: 1400KVA	VOLTAGE RATIO: 33/0.800KV
Sr. NO: TPE-7565	HT BREAKER:
MAKE: TRICOLITE-ABB	CAPACITY: 1250AMP
VOLTAGE: 36 KV	Sr. NO: 1VYN020223000139

Photovoltaic module consists of several photovoltaic cells connected by circuits and sealed in an environmentally protective laminate, which forms the fundamental building blocks of the complete PV generating unit. Several PV panels mounted on a frame are termed as PV Array. The project activity has used the reliable and proven technology from supplier to ensure that an environmentally safe and sound technology is only being implemented in the proposed project activity leading to the GHG reduction.

A.5 Parties and project participants

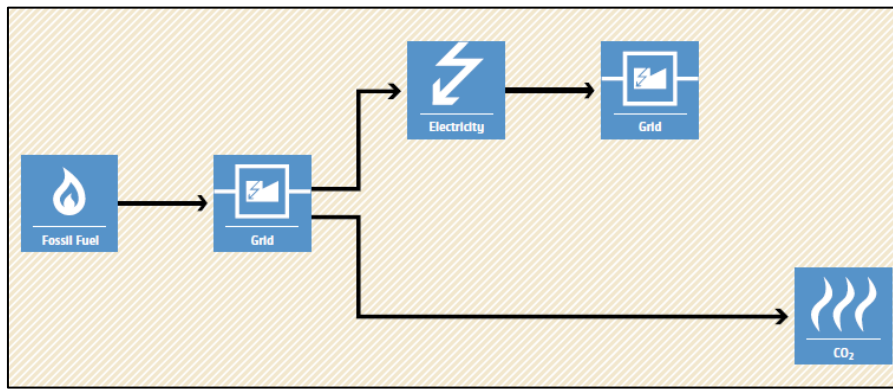
Party (Host)	Participants
India	<p>Creduce Technologies Private Limited (Aggregator)</p> <p>Contact person Shailendra Singh Rao</p> <p>Mobile +91 9016850742, 9601378723</p> <p>Address 2-O-13,14 Housing Board Colony, Banswara, Rajasthan -327001, India</p> <p>M/s Shreeji Coke and Energy Pvt. Ltd. (Project Owner)</p> <p>Address: C/O Manjulaben Haridas Lal, Grain market, Tin Darwaja, Jamnagar, 361001, Gujarat - India.</p>

A.6 Baseline Emissions

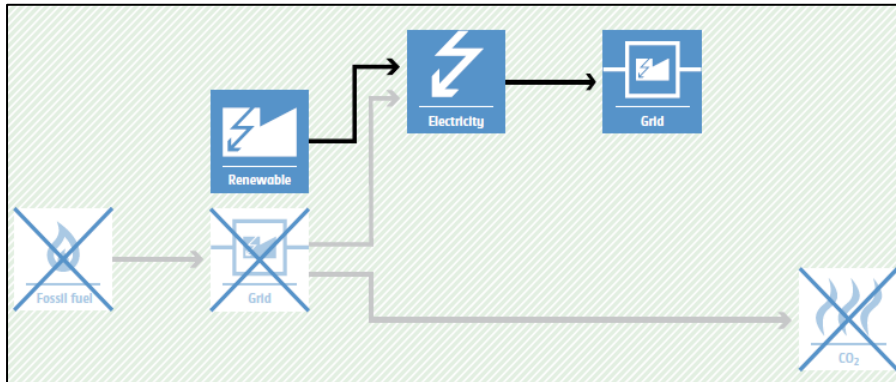
The baseline scenario identified at the PCN stage of the project activity is:

In the absence of the project activity, the equivalent amount of electricity would have been imported from the grid (which is connected to the unified Indian Grid system (NEWNE Grid)), which is carbon intensive due to being predominantly sourced from fossil fuel-based power plants. Hence, the baseline scenario of the project activity is the grid-based electricity system, which is also the pre-project scenario. Schematic diagram showing the baseline scenario:

Baseline Scenario:



Project Scenario:



A.7 De-bundling

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

1. http://www.cea.nic.in/executive_summary.html

SECTION - B - Application of methodologies and standardized baselines

B.1 Reference to methodologies and standardized baselines

Sectoral scope	: 01, Energy industries (Renewable/Non-renewable sources)
Type	: I-Renewable Energy Projects
Category	: AMS. I.D. (Title: “Grid connected renewable electricity generation”, version 18)

B.2 Applicability of methodologies and standardized baselines

The project activity has an installed capacity of 3.99 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 the applicability of the methodology is discussed below:

Applicability Criterion	Project Case
<p>1. This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:</p> <p>(a) Supplying electricity to a national or a regional grid; or</p> <p>(b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.</p>	<p>The project activity is a renewable energy project (i.e., wind and solar power project) that uses the generated energy for captive consumption.</p> <p>Thus, it fulfills applicability criteria option 1 (b).</p>
<p>2. This methodology is applicable to project activities that:</p> <p>(a) Install a greenfield plant;</p> <p>(b) Involve a capacity addition in (an) existing plant(s);</p> <p>(c) Involve a retrofit of (an) existing plant(s);</p> <p>(d) Involve a rehabilitation of (an) existing plant(s);</p> <p>(e) Involve a replacement of (an) existing plant(s).</p>	<p>The option (a) of applicability criteria 2 is applicable as project is a greenfield plant/unit. Hence the project activity meets the given applicability criterion.</p>
<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/m².</p> <p>(c) The project activity results in new</p>	<p>The project activity involves installation of WTG and Solar power System; hence, this criterion is not applicable.</p>

<p>reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m²</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 a 3.99 MW Hybrid Power Project, i.e., the only component is a renewable power project below 15 MW, thus the 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 a hybrid 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>This is a green field project and no expansion and retrofitting were carried out. Hence this criterion is not applicable.</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 3.99 MW hybrid power project, i.e., the only component is a renewable power project below 15 MW, thus the criterion is not applicable to this project activity.</p>
<p>8. 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.</p>	<p>The proposed project is a greenfield 3.99 MW Hybrid power project; hence, this criterion is not applicable to this project activity.</p>

9. In case biomass is sourced from dedicated plantations, the applicability criteria in the tool “Project emissions from cultivation of biomass” shall apply.	No biomass is involved, the project is only a wind and solar power project and thus the criterion is not applicable to this project activity.
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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 is uniquely identifiable based on its location coordinates,
- Project has a dedicated commissioning certificate and connection point,
- Project is associated with energy meters which are dedicated to the consumption point for the project developer.

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

As per applicable methodology AMS-I.D. Version 18, “The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the project power plant is connected to.”

Thus, the project boundary includes the hybrid power plant and the Indian grid system.

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 hybrid Electric 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

B.5 Establishment and description of the baseline scenario

As per 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 a new hybrid power plant to harness the wind and 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. 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) that 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 - 2020 years as a fairly conservative estimate for Indian projects not previously verified under any GHG program. Also, for the vintage 2023-2024, the combined margin emission factor calculated from the CEA database in India results in higher emissions than the default value. Hence, the same emission factor has been considered to calculate the emission reduction under a conservative approach.

B.5.1 Net GHG Emission Reductions and Removals

$$\text{Thus, } ER_y = BE_y - PE_y - LE_y$$

Where:

$$ER_y = \text{Emission reductions in year } y \text{ (tCO}_2\text{/y)}$$

$$BE_y = \text{Baseline Emissions in year } y \text{ (tCO}_2\text{/y)}$$

$$PE_y = \text{Project emissions in year } y \text{ (tCO}_2\text{/y)}$$

$$LE_y = \text{Leakage emissions in year } y \text{ (tCO}_2\text{/y)}$$

- **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:

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

$$BE_y = \text{Baseline emissions in year } y \text{ (tCO}_2\text{)}$$

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

$$EF_{grid,y} = \text{UCR recommended emission factor of 0.9 tCO}_2\text{/MWh has been considered.}$$

(Reference: General project eligibility criteria and guidance, UCR Standard, page 4)

Estimated annual baseline emission reductions (BE_y)

$$= 6,990 \text{ MWh/year} \times 0.9 \text{ tCO}_2\text{/MWh}$$

$$= 6,291 \text{ tCO}_2\text{/year}$$

- **Project Emissions**

As per paragraph 39 of AMS-I.D. version-18, only emissions associated with fossil fuel combustion, emissions from the operation of geothermal power plants due to the release of non-condensable gases, and emissions from a water reservoir of hydro should be accounted for the project emission. Since the project activity is a hybrid electric power project, project emission for renewable energy plants is nil.

Thus, PE = 0

• **Leakage Emission**

As per paragraph 42 of AMS-I.D. version-18, 'If the energy generating equipment is transferred from another activity, 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 zero.

Hence, LE = 0

The actual emission reduction achieved during the first CoU period shall be submitted as a part of the first monitoring and verification. However, for the purpose of an ex-ante estimation, the following calculation has been submitted:

Hence Net GHG emission reduction, = 6,291-0-0 = 6,291 tCO₂/year (i.e., 6,291 CoUs/year)

B.6 Prior History

The project activity is a small-scale hybrid project and was not applied under any other GHG mechanism prior to this registration with UCR. Also, the 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 the start date of crediting

The crediting period under UCR has been considered from the date of the commissioning of the project. There is no change in the start date of crediting period.

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

Not applicable.

B.9 Monitoring period number and duration

Total Crediting Period: 18 Years 06 Months

Date: 01/05/2023 to 31/12/40 (inclusive of both dates).

B.10 Monitoring Plan

Data and Parameters available (ex-ante values):

Data / Parameter	UCR recommended emission factor
Data unit	tCO ₂ /MWh
Description	A "grid emission factor" refers to a CO ₂ emission factor (tCO ₂ /MWh) which will be associated with each unit of electricity provided by an electricity system. The UCR recommends an emission factor of 0.9 tCO ₂ /MWh for the 2013 - 2022 years as a fairly conservative estimate for Indian projects not previously verified under any GHG program. Hence, the same emission factor has been considered to calculate the emission reduction under conservative approach.
Source of data	cea.nic.in/wpcontent/uploads/baseline/2024/04/User_Guide_Version_19.0.pdf
Value applied	0.9

Measurement methods and procedures	-
Monitoring frequency	Ex-ante fixed parameter
Purpose of Data	For the calculation of Emission Factor of the grid
Additional Comment	The combined margin emission factor as per the CEA database (current version 19, December 2023) results in a higher emission factor. Hence for 2023 vintage UCR default emission factor remains conservative.

Data and Parameters to be monitored (ex-ante values):

Data / Parameter	$EG_{PJ, facility, y}$
Data unit	MWh
Description	Net electricity supplied to the NEWNE grid facility by the project activity
Source of data	Joint Meter Reading report/Energy generation report
Measurement procedures (if any):	Data Type: Measured Monitoring equipment: Energy Meters are used for monitoring Recording Frequency: Continuous monitoring and Monthly recording from Energy Meters, Summarized Annually Archiving Policy: Paper & Electronic Calibration frequency: 5 years (as per CEA provision) Based on the joint meter reading certificates/credit notes, and energy generation report.
Measurement Frequency:	Monthly
Value applied:	6,990 (Ex-ante estimate)
QA/QC procedures applied:	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.
Purpose of data:	The Data/Parameter is required to calculate the baseline emission.
Any comment:	Data will be archived electronically for a period of 36 months beyond the end of crediting period.