PROJECT CONCEPT NOTE

CARBON OFFSET UNIT (CoU) PROJECT

Title: 6.25MW Bundled Small Scale Wind Power Project by Jay International.

Version 1.0

PCN Date 06/02/2025

1st CoU Issuance Period: 30/03/2016 to 31/12/2024 (08 years, 09 months)

1st Monitored Period: 30/03/2016 to 31/12/2024 (08 years, 09 months)

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

BASIC INFORMATION	
Title of the project activity	6.25MW Bundled Small Scale Wind Power Project by Jay International.
Scale of the project activity	Small scale
Completion date of the PCN	06/02/2025
Project participants	Jay International (Project Proponent) Yojan Solutions (Aggregator)
Host Party	INDIA
Applied methodologies and standardized baselines	Type I (Renewable Energy Projects) UNFCCC Methodology Category AMS I.D.: "Grid connected renewable electricity generation" Version 18.0 Standardized Methodology: Not Applicable UCR Protocol Standard Baseline EF
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 **48089** CoUs per year]

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SECTION A. DESCRIPTION OF PROJECT ACTIVITY

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

The proposed project titled under UCR is "**6.25 MW small-scale bundled wind power project by Jay International**", which is a Wind Power project located in District: Jamnagar, Taluka: Kalawad, Village: Galpadar, in the state of Gujarat (India). The project is an operational activity with continuous reduction of GHG, currently being applied under "Universe Carbon Registry" (UCR).

Purpose of the project activity:

The project activity is a renewable power generation initiative that involves the installation and operation of multiple Wind Turbine Generators (WTGs) with a cumulative capacity of 6.25 MW. These WTGs are located in the Jamnagar district of Gujarat, India, and were manufactured and supplied by reputable wind energy technology providers.

The project has been promoted as a bundled initiative by PP in collaboration with other entities, mention in the below table. Jay International, a manufacturer of brass components based in Gujarat, has been authorized by nine windmill-owning entities to act on their behalf for the submission and management of their windmills in a carbon credit project, ensuring compliance and coordination with the relevant processes.

The proposed project activity of 6.25 MW was implemented as a bundled small-scale wind energy initiative, with commissioning dates ranging from February 2016 to March 2017. The details of the Wind Turbine Generators in Jamnagar district are provided below:

WINDMILLS

No.	Project	Latitude	Longitude	WTG ID	Date of Commissioning	Installed Capacity (KW)
1	Arpit Industries	22.194017	70.224172	PWPL/750/15-16/3785	31/03/2016	750
2	H.P International Corporation	22.222331	70.208844	PWPL/750/16-17/4318	10/03/2017	750
3	Jay International	22.199208	70.233225	PWPL/250/15-16/3790	31/03/2016	250
4	Jay Jalaram Extrusions	22.218560	70.211450	PWPL/750/16-17/4320	10/03/2017	750
5	Rupam Impex	22.232533	70.232788	PWPL/750/16-17/4316	27/02/2017	750
6	Rupam Overseas	22.192177	70.233314	PWPL/750/15-16/3789	30/03/2016	750
7	Rupam Products	22.202970	70.234996	PWPL/750/16-17/4315	10/02/2017	750
8	SNK Energy	22.223358	70.207446	PWPL/750/16-17/4319	10/03/2017	750
9	Windson Energy	22.231791	70.2297	PWPL/750/16-17/4317	27/02/2017	750
					TOTAL	**6250**

The purpose of the proposed bundled project activity is to generate electricity using a clean and renewable source of energy i.e., wind energy. The project activity replaces emissions of greenhouse gasses (GHG's) into the atmosphere, by displacing the equivalent amount of electricity generation through the operation of existing fuel fossil fuel-based power plants and future capacity expansions connected to the grid.

In the absence of the project activity the equivalent amount of electricity would have been generated from the fossil fuel-based power plant. Whereas the electricity generation from operation of Wind Energy

Convertors (WEC’s) is emission free.

As per the ex-ante estimate, the project will generate approximately **54815.83 MWh** of electricity per annum. The net generated electricity from the project activity is being sold through NEWNE grid as Power Purchase Agreement signed between Gujarat Energy Development Agency (GEDA), Government of Gujarat, India.

The project activity would be displacing equivalent quantum of grid electricity resulting in emission reduction of **48890 tCO_2e** per annum. The project activity has been helping in greenhouse gas (GHG) emission reduction by using renewable resources (wind energy) for generating power which otherwise would have been generated using grid mix power plants, which is dominated by fossil fuel based thermal power plants.

The estimated annual average and the total CO2e emission reduction by the project activity is expected to be **48890 CoUs (48890 tCO_2eq)** 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 energy, a clean renewable energy source it will not cause any negative impact on the environment and thereby contributes to climate change mitigation efforts.

Project's Contribution to Sustainable Development

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

The Government of India has stipulated 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, environment 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: The project would help in generating direct and indirect employment benefits accruing out of ancillary units for manufacturing towers for erection of the Wind Turbine Generator (WTG) and for maintenance during operation of the project activity. It will lead to development of infrastructure around the project area in terms of improved road network etc. and will also directly contribute to the development of renewable infrastructure in the region.

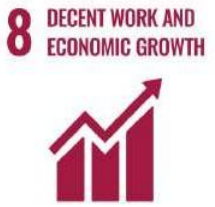
Economic well-being: The project is a clean technology investment decided based on carbon revenue support, which signifies flows of clean energy investments into the host country. The project activity requires temporary and permanent, skilled and semi-skilled manpower at the project location; this will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

The generated electricity will be utilized for captive consumption, thereby reducing the demand from the grid. In addition, improvement in infrastructure 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 project activity employs state of art technology which has high power generation potential with optimized utilization of land. The successful operation of project activity would lead to promotion of this technology and would further push R&D efforts by technology providers to develop more efficient and better machinery in future.

Environmental well-being: The project activity will generate power using zero emissions wind 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 energy for generating electricity which is a clean source of energy. The project activity will not generate any air pollution, water pollution or solid waste to the environment which otherwise would have been generated through fossil fuels.

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

SDG Goals	Description
GOAL 7 	The project activity has generated **54815.83 MWh** of clean energy, which with increased shared will increase the affordability at a cheaper rate to end user. The project activity will utilize Wind energy (renewal resource) to generate power. The project activity will increase the share of renewable resource-based electricity in global mix of energy consumption.
GOAL 8 	Decent work and economic growth. The project activity generates additional employment for skilled and unskilled, also the project situated in a remote area will provide employment opportunities to unskilled people from villages. Training on various aspects including safety, operational issues, and developing skill sets will also be provided to employees.
GOAL 13 	This 6.25 MW wind power project meets the SDG 13 goal by saving fossil fuel and producing clean energy. This project has avoided **48089** tons of CO_2 emissions during this monitoring period. 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.

With regards to ESG credentials:

At present, specific ESG credentials for the project have not been formally evaluated. However, the project significantly contributes to various ESG indicators. Some examples applicable to this project are detailed below:

Environmental Criteria (E):

Environmental criteria include aspects such as energy use, waste management, pollution, natural resource conservation, and climate change mitigation. In the case of the ***"6.25 MW Small-Scale Bundled Wind Power Project by Jay International"***:

- Utilizes renewable wind energy, reducing dependence on fossil fuels.
- Contributes to GHG emission reduction and conservation of natural resources.
- Mitigates risks associated with non-renewable energy, such as pollution and rising power costs.

Social Criteria (S):

Social criteria assess the project's impact on business relationships, equitable employment, and stakeholder engagement. For this project:

- The project proponent has established robust policies to ensure equitable employment, prioritizing the creation of local jobs during the installation, operation, and maintenance of the wind turbines.
- Adequate health and safety measures are implemented to safeguard the well-being of employees involved in the project.
- Corporate Social Responsibility (CSR) activities of the proponents support local stakeholders, contributing to the social sustainability of the region.
- The project contributes to regional socio-economic growth by improving energy access and enhancing the quality of life for local communities.

Governance Criteria (G):

Governance criteria encompass the operational transparency, accountability, and adherence to legal and regulatory frameworks. For this project:

- The project proponent practices strong governance principles, ensuring full compliance with all local and national regulations. All necessary No Objection Certificates (NOCs) and approvals for the wind turbines have been secured.
- Operational transparency is maintained through the accurate monitoring, recording, and verification of electricity generated from the wind power project.
- The governance structure is supported by detailed reporting and management practices, as reflected in the company's annual reports, showcasing accountability and a commitment to best practices.
- The project's ownership and management are aligned with ethical governance practices, ensuring the effective execution and long-term sustainability of the initiative.

A.3. Location of project activity >>

Country:	India
State:	Gujarat
District:	Jamnagar
Taluka:	Kalawad
Village:	Galpadar
Pin code:	361006

The project sites are well connected from highway and railway station. The geographic co-ordinates of the project location have been given below:

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

A.4. Technologies/measures >>

The proposed project activity involves the installation and operation of Wind Turbine Generators (WTGs) manufactured and supplied by Pioneer Wincon, with a combined installed capacity of 6.25 MW in the state of Gujarat, India. The project comprises:

- 8 WTGs of 750 kW each
- 1 WTG of 250 kW

The total installed capacity of the project is 6.25 MW. The technical details for the WTGs are as follows:

750 kW WTGs (8 Units)

- **Turbine Model**: Pioneer Wincon 750/57
- **Rated Power**: 750 kW per turbine
- **Rotor Diameter**: 57.0 m
- **Hub Height**: 73 m

Turbine Type:

- Direct driven, horizontal axis wind turbine with variable rotor speed
- Independent pitch system for each blade

Operational Data

- **Cut-in Wind Speed**: 4.0 m/s
- **Rated Wind Speed**: 10.7 m/s
- **Cut-out Wind Speed**: 25.0 m/s
- **Extreme Wind Speed**: >52.5 m/s
- **Rated Rotational Speed**: 25.2 RPM

Rotor

- **Orientation**: Upwind
- **Number of Blades**: 3
- **Blade Material**: Fiberglass-reinforced polyester

Electrical Details

- **Output Voltage**: 690 V
- **Frequency**: 50 Hz
- **Tower**
- **Tower Type**: Tubular lattice
- **Height**: 73 m (Hot-dip galvanized steel)

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250 kW WTG (1 Unit)

- **Turbine Model**: Pioneer Wincon P250/29.6
- **Rated Power**: 250 kW
- **Rotor Diameter**: 29.6 m
- **Hub Height**: 50 m

Turbine Type:

- Direct driven, horizontal axis wind turbine with stall regulation
- Pivotable blade tip aerodynamic braking

Operational Data

- **Cut-in Wind Speed**: 3.5 m/s
- **Rated Wind Speed**: 15.0 m/s
- **Cut-out Wind Speed**: 25.0 m/s
- **Extreme Wind Speed**: >52.5 m/s
- **Rated Rotational Speed**: 38.5 RPM

Rotor

- **Orientation**: Upwind
- **Number of Blades:** 3

- **Blade Material**: Fiberglass-reinforced polyester

Electrical Details

- **Output Voltage**: 415 V
- **Frequency**: 50 Hz

Tower

- **Tower Type**: Lattice structure
- **Height**: 50 m (Hot-dip galvanized steel)

SCADA and Monitoring

All the WTGs are connected to a **Central Monitoring Station (CMS)** through high-speed WLAN modem or fibre optic cable. This setup enables real-time monitoring of turbine performance with a **Graphical User Interface (GUI)** for ease of operation.

A **Supervisory Control & Data Acquisition System (SCADA)** is also integrated, providing:

- Graphical representation of turbine data
- Long-term data storage
- Access to daily generation reports and power curve analytics
- Tools for problem diagnosis both offline and online

Safety Systems

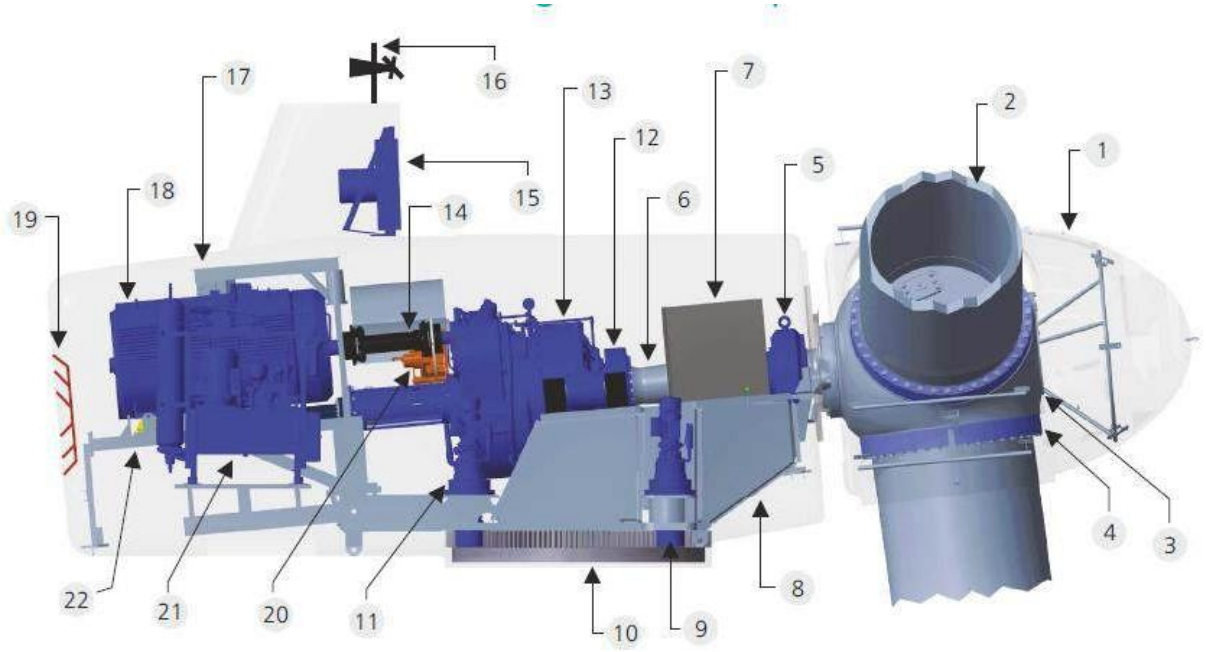
The WTGs are equipped with advanced safety systems and instrumentation for tracking individual functions, including:

- Overspeed protection
- High wind shutdown mechanisms
- Automatic braking systems

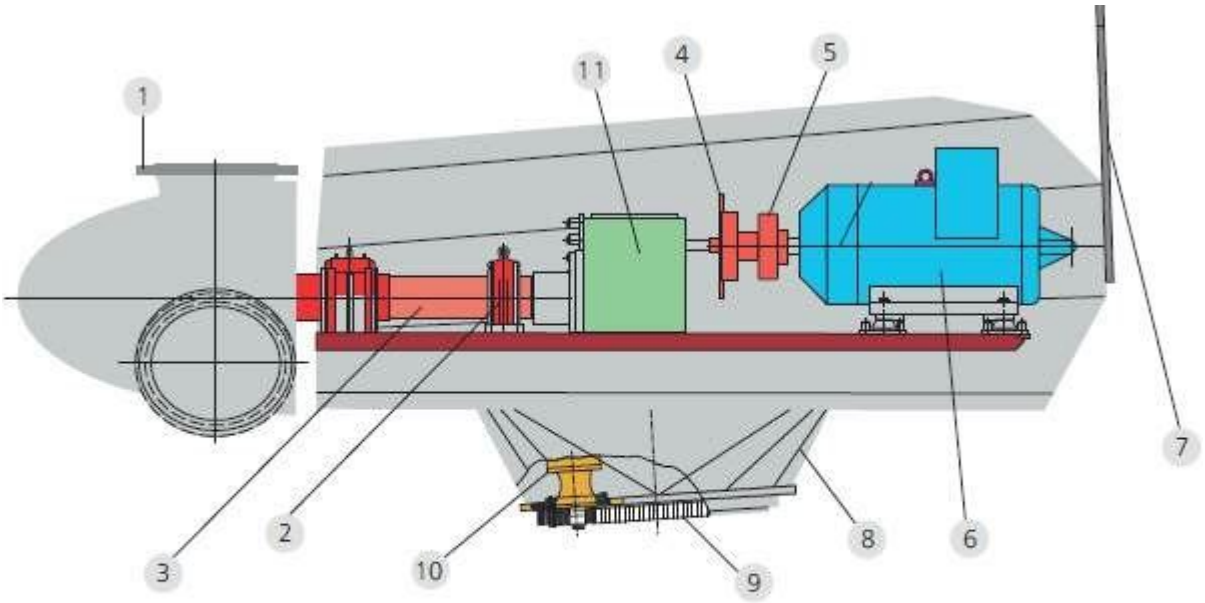
Lifetime and Baseline Scenario

The lifetime of each WTG is **20 years**, as per manufacturer specifications.

In the absence of the project activity, the equivalent amount of electricity would have been imported from the Indian national grid (NEWNE), which is predominantly based on fossil fuels. Hence, the baseline scenario for this project is the grid-based electricity system, which was also the pre-project scenario.



1. Nose cone
2. Blade
3. Hub
4. Blade Bearing
5. Bearing Housing
6. Main Shaft
7. Top Panel
8. Bottom Frame
9. Yaw Pinion
10. Yaw Flange
11. Yaw Motor
12. Shrink Disc
13. Gear Box
14. CD Coupling
15. Gear Box Cooler
16. Anemometer & Windvane
17. Material Lifting Crane
18. Generator
19. Rear Louver
20. Mechanical Brake Unit
21. Hydraulic Power Unit
22. Generator Console



1. Hub
2. Bearing Housing
3. Main Shaft
4. Brake Disc
5. Flexible Coupling
6. Generator
7. Wind Vane
   Anemometer
8. Bottom Frame
9. Slew Ring
10. Yaw Motor
11. Gear Box

A.5. Parties and project participants >>

Party (Host)	Participants
INDIA	**Jay International (Project Proponent)** Address: Plot No 464, GIDC, Shankar Teri Udhyognagar, Jamnagar – 361004 Gujarat (India) **Yojan Solutions (Aggregator)** UCR Contact: naimishraval@yojan.in **UCR ID: 577644419** Contact Person: Dipti Raval Email: projects@yojan.in

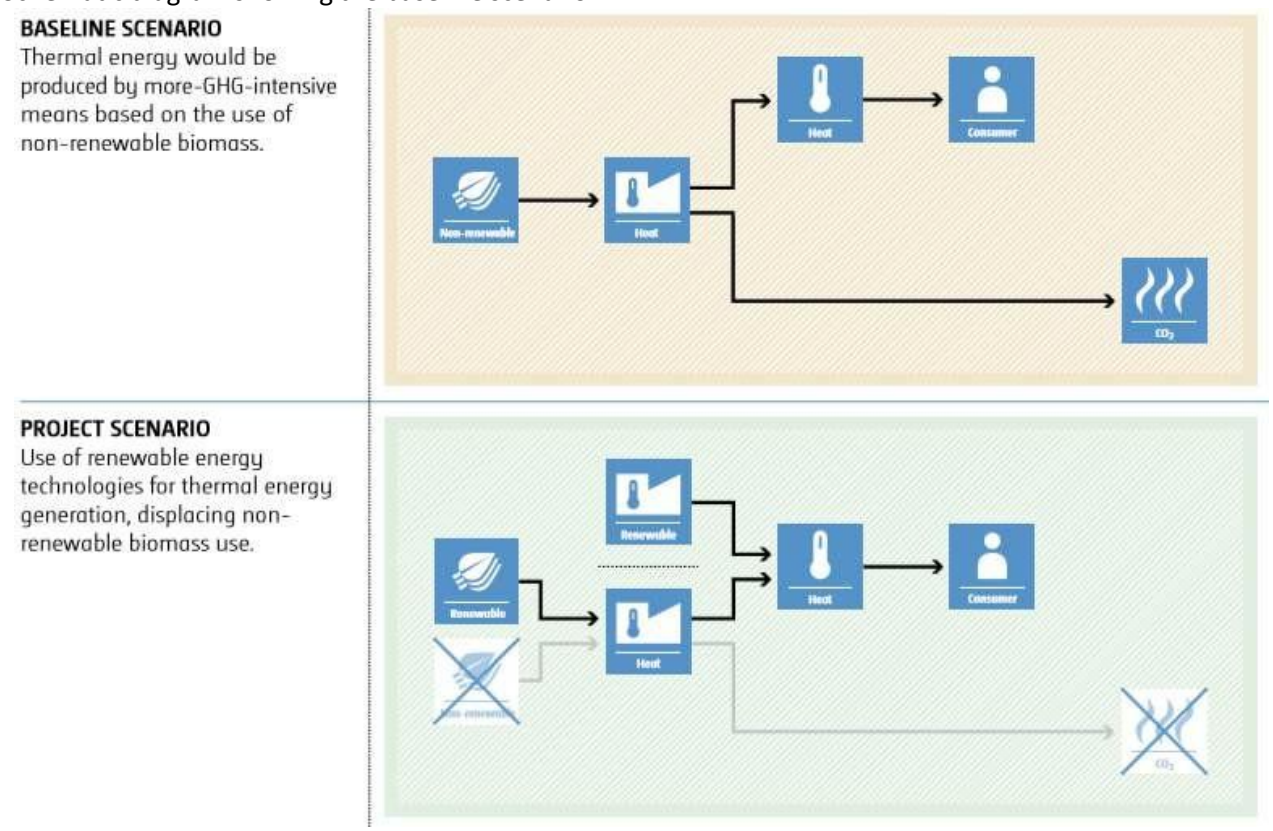
A.6. Baseline Emissions>>

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

• Grid

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



A.7. Debundling>>

This project activity is not a de-bundled component of a larger project activity. Similarly, each of the bundle members is also not a de-bundled component of any larger project activity

SECTION B. APPLICATION OF METHODOLOGIES AND STANDARDIZED BASELINES

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

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

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

The project activity involves the generation of grid-connected electricity from the construction and operation of a new wind power-based project. The project has an **installed capacity of 6.25 MW**, qualifying it as a small-scale project activity under **Type-I of the Small-Scale Methodology (AMS-I.D., version 18)**.
The project status corresponds to the AMS-I.D. methodology, version 18, for renewable electricity generation.

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: (a) Supplying electricity to a national or a regional grid; or (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 i.e., wind power project which falls under applicability criteria option 1 (a) i.e., "Supplying electricity to a national or a regional grid" Hence the project activity meets the given applicability criterion as well as satisfies the applicability illustration mentioned in Appendix of AMS-ID Table 1 – Scope of AMS-I.D. version 18.
2. 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 option (a) of applicability criteria is applicable as project is a Greenfield plant /unit. Hence the project activity meets the given applicability criterion.
3. 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 existing reservoir, with no change in the volume of the reservoir; or	The project activity involves installation of Wind Turbine Generators (WTGs); hence, this criterion is not applicable.

(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^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	
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.	The proposed project is 6.25 MW Wind power project, i.e., only component is renewable power project below 15MW, thus the criterion is not applicable to this project activity.
5. Combined heat and power (co-generation) systems are not eligible under this category.	The project is wind power project and thus the criterion is not applicable to this project activity.
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.	The proposed project is 6.25 MW Wind power project, i.e., only component is renewable power project below 15MW, thus the criterion is not applicable to this project activity.
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.	The proposed project is 6.25 MW Wind power project, i.e., only component is renewable power project below 15MW, thus the criterion is not applicable to this project activity.
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.	The proposed project is 6.25 MW Wind power project, i.e., only component is renewable power project below 15MW, thus the criterion is not applicable to this project activity.
9. In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply.	Not biomass is involved, the project is only a wind power project and thus the criterion is not applicable to this project activity

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 dedicated commissioning certificate and connection point,
- Project is associated with energy meters which are dedicated to the consumption point for 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 Wind Turbine Generators (WTGs) and the Indian grid system.

Source		GHG	Included?	Justification/Explanation
Baseline	Grid connected electricity generation	CO_2	Yes	Main emission source
		CH_4	No	Minor emission source
		N_2O	No	Minor emission source
Project	Greenfield Wind 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_2O	No	Project activity does not emit N_2O

B.5. Establishment and description of 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 of a new WTGs to harness the wind energy and use it for Selling Purpose i.e., the Indian grid system through Power purchase agreement. In the absence of the project activity, the equivalent amount of power 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 power produced from 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.

The "grid emission factor" refers to the CO_2 emission factor (tCO_2/MWh) associated with each unit of electricity supplied by an electricity system. The UCR recommends an emission factor of 0.9 tCO_2/MWh as a fairly conservative estimate for Indian projects that have not been previously verified under any GHG program for the vintage years 2013–2023.

For the 2024 vintage year, a grid emission factor of 0.757 tCO_2/MWh has been considered. 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 used to calculate the emission reduction under a conservative approach.

B.5.1. Net GHG Emission Reductions and Removals

Thus,

$$ERy = BEy – PEy – LEy$$

Where:
ERy = Emission reductions in year y (tCO_2/y)
BEy = Baseline Emissions in year y (tCO_2/y)
PEy = Project emissions in year y (tCO_2/y)
LEy = Leakage emissions in year y (tCO_2/y)

Baseline Emissions

Baseline emissions include only CO_2 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:

$$BEy = EG\ BL,yl \times EF,\ CO_2,\ GRID,\ y$$

BEy:	Baseline emissions in year y (tCO_2/y)
EG BL,yl:	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, CO2, GRID, y:	UCR recommended emission factor of 0.9 tCO_2/MWh for the vintage years 2013–2023 has been considered. (Reference: General Project Eligibility Criteria and Guidance, UCR Standard, page 4) For the 2024 vintage year, a grid emission factor of 0.757 tCO_2/MWh has been considered

Estimated annual baseline emission reductions (BEy) = 48089 tCO_2e/ year

Project Emissions

As per AMS-I.D. 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 **wind power project**, project emission for renewable energy plant is nil.
Thus, **PEy = 0**

Leakage Emission

As per paragraph 22 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 as 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, = 48089 -0-0 = tCO_2/year (i.e., 48089 CoUs/year).

B.6. Prior History>>

Following are the key details under the prior history of the project: (a) the project was not applied under any other GHG mechanism. Hence project will not cause Double accounting of carbon credits (i.e., COUs).

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

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>>

Monitored Period: 01

01 Monitored Duration: 30/03/2016 to 31/12/2024 (08 years, 09 months)

B.10. Monitoring plan>>

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 2013-2023 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	https://a23e347601d72166dcd6-16da518ed3035d35cf0439f1cdf449c9.ssl.cf2.rackcdn.com//Documents/UCRStandardAug2024updatedVer7_020824191534797526.pdf
Value(s) applied	0.9

Measurement methods and procedures	-
Monitoring frequency	Ex-ante fixed parameter

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 a grid emission factor of 0.757 tCO_2/MWh for the 2024 vintage year as a fairly conservative estimate for Indian projects not previously verified under any GHG program.
Source of data	https://cea.nic.in/wp-content/uploads/2021/03/User_Guide_Version_20.0.pdf
Value(s) applied	0.757
Measurement methods and procedures	-
Monitoring frequency	Ex-ante fixed parameter
Purpose of data	For the calculation of the Emission Factor of the grid

Data / Parameter:	EGPJ,facility, y
Data unit:	MWh
Description:	Total electricity produced by the project activity
Source of data:	Electricity Generation data though monitoring system
Measurement procedures (if any):	Data Type: Measured Monitoring equipment: Energy Meters and inverter data 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) For example, the difference between the measured quantities of the grid export and the import will be considered as net export: EGPJ,y = EGExport – EGImport
Monitoring frequency:	Monthly
Value applied:	**48089** (Ex-ante estimate)
QA/QC procedures:	Calibration of the Main meters will be carried out once in five (5) years as per National Standards (as per the provision of CEA, India) and faulty meters will be duly replaced immediately as per the provision of power purchase agreement
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.