PROJECT CONCEPT NOTE

CARBON OFFSET UNIT (CoU) PROJECT

Title: "23.2 MW Bundled Wind Energy Project in India by Ghodawat Group"

Version 1.0

Date: 02/09/2025

First CoU Issuance Period: 11 years 0 months 0 days

Date: 01/01/2014 to 31/12/2024

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

BASIC INFORMATION	
Title of the project activity	"23.2 MW Bundled Wind Energy Project in India by Ghodawat Group"
Scale of the project activity	Large Scale
Completion date of the PCN	02/09/2025
Project participants	Ghodawat Energy Pvt Ltd, Ghodawat Reality Pvt Ltd, Star Flexipacks Industries & Sanjay D Ghodawat.
Host Party	INDIA
Applied methodologies and standardized baselines	ACM0002-Consolidated baseline methodology for grid-connected electricity generation from renewable sources -Version 22.0
Sectoral scopes	01 Energy industries (Renewable/NonRenewable Sources)
Estimated amount of total GHG emission reductions	**41,40,059** CoUs (**41,40,059** tCO_{2eq})

SECTION A. Description of project activity

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

The project "**23.2 MW Bundled Wind Energy Project in India by Ghodawat Group**" is a bundle of 4 (four) renewable (wind) energy projects located at the following locations in country: India:

The details of the registered projects are as follows:

			STATE/VILLAGE	
Bundled Sr No :	**Name Of Wind Farm Bundle**	**Installed Capacity (MW)**	**Gujarat**	**Rajasthan**
1	Ghodawat Energy Pvt Ltd	9.2	Jodhpar, Moti Vavdi, Satapar-2,	Temdarai
2	Ghodawat Reality Pvt Ltd	11.6	Maleta, Jamvadi, Hadmatiya	Gorera,
3	Star Flexipacks Industries	0.8	Jodhpar	-
4	Sanjay D Ghodawat	1.6	Maleta	-

Purpose of the project activity:

The project activity is a bundled wind energy initiative with a total capacity of 23.2 MW, operated by Ghodawat Energy Pvt Ltd, Ghodawat Realty Pvt Ltd, Star Flexipacks Industries Ltd, and Sanjay D. Ghodawat, as outlined in the table. Ghodawat Energy Pvt Ltd has an installed capacity of 9.2 MW across sites in Gujarat (Jodhpar, Moti Vavdi, Satapar-2) and Rajasthan (Temdarai). Ghodawat Realty Pvt Ltd operates 11.6 MW at locations in Gujarat (Maleta, Jamvadi, Hadmatiya) and Rajasthan (Gorera). Star Flexipacks Industries Ltd contributes 0.8 MW at Jodhpar, Gujarat, while Sanjay D. Ghodawat contributes 1.6 MW at Maleta, Gujarat.

In the absence of the project activity, electricity would have been delivered to the grid by the operation of fossil fuel-based grid-connected power plants and by the addition of new fossil fuel-based generation sources in the grid. As it's a nature of wind projects (renewable energy), no fossil fuel is involved for power generation in the project activity. The electricity produced by the project is directly contributing to climate change mitigation by reducing the anthropogenic emissions of greenhouse gases (GHGs, i.e. CO2) into the atmosphere by displacing an equivalent amount of power at grid.

With an annual estimated generation of **46,74,336 MWh** the project displaces fossil fuel-based power, significantly reducing approximately **41,40,059 (tCO_2e)** greenhouse gas (GHG) emissions annually. Since the project activity will generate electricity through wind energy, a clean renewable energy source it does not cause any negative impacts on the environment and thereby contributes to climate change mitigation efforts.

Name change clarification: -

Out of the total 11.6 MW capacity of Ghodawat Realty Pvt. Ltd., 3.6 MW in Rajasthan and 4 MW in Gujarat underwent name changes on 04/03/2020 and 09/07/2019, respectively. These changes have been duly recorded and reflected in the respective Power Purchase Agreements (PPAs).

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

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

- **Social benefits:**

1. Social well-being is assessed by contribution by the project activity towards improvement local living standard.
2. The project activity has resulted in increased job opportunities for the local population temporary & permanent basis
3. Manpower was required both during erection & operation of the wind farms. this has resulted in poverty alleviation of the local community & development.

- **Environmental benefits:**

1. The project utilizes wind energy for generating electricity which otherwise would have generated through alternate fuel (most likely – fossil fuel) based power plant, contributing to reduction in specific emission including GHG emission.
2. As wind power projects produce no end products in the form of solid waste (ash, etc). they address the problem of the solid waste disposal encountered by most other sources of power
3. Being a renewable resource, using wind energy to generate electricity contributes to resources conservation, thus the project activity causes no negative impact on the surrounding environment.

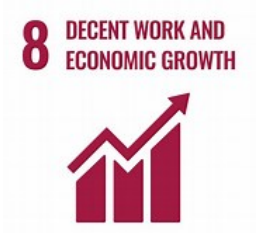
- **Economic benefits:**

1. The project activity has created direct & indirect job opportunities to the local community during installation & operation of the WEGS.
2. The investment for the project activity has increased the economic activity the local area.
3. The project activity generates electrical power using wind energy, which is generated from windmills, there by displacing non-renewable fossil resources resulting to sustainable, economic and environmental development.

   In the absence of the project activity equivalent amount of power generation would have taken place through fossil fuel dominated power generating stations. Thus, the renewable energy generation from project activity will result in reduction of the greenhouse gas emissions.

   Positive contribution of the project to the following

   Sustainable Development Goals:
   - **SDG13**: Climate Action
   - **SDG 7:** Affordable and Clean Energy
   - **SDG 8:** Decent Work and Economic Growth
   - **SDG 1:** No Poverty
   - **SDG 2:** Zero Hunger
   - **SDG 4:** Quality Education

Development Goals	Targeted SDG	Target Indicator (SDG Indicator)
SDG 13: Climate Action 	13.2: Integrate climate change measures into national policies, strategies and planning Target	13.2.1: Number of countries that have communicated establishment or operationalization of an integrated policy/ strategy/ plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)
SDG 7: Affordable and Clean Energy 	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix Target	7.2.1: Renewable energy share in the total final energy consumption.
SDG 8: Decent Work and Economic Growth. 	8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value Target: Training, O&M staff.	8.5.1: Average hourly earnings of female and male employees, by occupation, age and persons with disabilities. No.of Employees – 38
SDG 1: No Poverty	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic,	1.a.1 Total official development assistance grants from all donors that focus on poverty reduction as a share of the recipient country's gross national income.

	social and environmental shocks and disasters.	
SDG 2: Zero Hunger 	2.1 By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.	2.a.1 The agriculture orientation index for government expenditures.
SDG 4: Quality Education 	4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.	4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.

A.3. Location of project activity >>

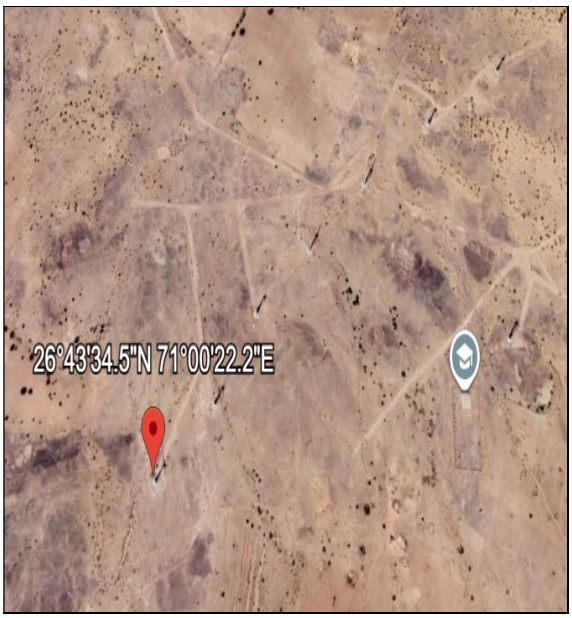
Customer Name	Project Make	Total Capacity	Date Of Commissioning	Site	State	Longitude	Latitude
Ghodawat Energy Pvt Ltd	Wwil	0.8	01-05-2007	Jodhpar	Gujarat	21.98779363	69.29380024
Ghodawat Energy Pvt Ltd	Wwil	0.8	01-08-2007	Moti Vavdi	Gujarat	22.0984643	70.29329832
Ghodawat Energy Pvt Ltd	Wwil	0.8	01-08-2007	Moti Vavdi	Gujarat	22.09659095	70.29403291
Ghodawat Energy Pvt Ltd	Wwil	0.8	01-12-2006	Satapar-2	Gujarat	21.97813992	69.31114806
Ghodawat Energy Pvt Ltd	Wwil	0.8	01-12-2006	Temdarai	Rajasthan	26.72624579	71.00615538
Ghodawat Energy Pvt Ltd	Wwil	0.8	01-12-2006	Temdarai	Rajasthan	26.7275178	71.00508267
Ghodawat Energy Pvt Ltd	Wwil	0.8	01-12-2006	Temdarai	Rajasthan	26.72878979	71.00400993
Ghodawat Energy Pvt Ltd	Wwil	0.6	01-03-2003	Temdarai	Rajasthan	26.72000446	70.89594944
Ghodawat Energy Pvt Ltd	Wwil	0.6	01-03-2003	Temdarai	Rajasthan	26.7198182	70.89674707
Ghodawat Energy Pvt Ltd	Wwil	0.6	01-03-2003	Temdarai	Rajasthan	26.72123536	70.89470251
Ghodawat Energy Pvt Ltd	Wwil	0.6	01-03-2003	Temdarai	Rajasthan	26.72160759	70.89390505
Ghodawat Energy Pvt Ltd	Wwil	0.6	01-03-2003	Temdarai	Rajasthan	26.72342313	70.89505476
Ghodawat Energy Pvt Ltd	Wwil	0.6	01-03-2003	Temdarai	Rajasthan	26.7198174	70.89490506
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-03-2007	Maleta	Gujarat	21.99602501	69.30320448
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-03-2007	Maleta	Gujarat	21.99847856	69.29540135
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-03-2007	Maleta	Gujarat	21.99954684	69.29417321
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-01-2008	Jamvadi	Gujarat	21.99847856	69.29540135
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-01-2008	Jamvadi	Gujarat	21.99954684	69.29417321

Ghodawat Realty Pvt Ltd	Wwil	0.8	01-01-2008	Jamvadi	Gujarat	22.14184872	70.30326834
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-03-2007	Hadmatiya	Gujarat	22.00689677	69.28630206
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-03-2007	Hadmatiya	Gujarat	22.00105819	69.29272313
Ghodawat Realty Pvt Ltd	Wwil	0.6	01-03-2003	Gorera	Rajasthan	26.72526602	70.89047656
Ghodawat Realty Pvt Ltd	Wwil	0.6	01-03-2003	Gorera	Rajasthan	26.72451768	70.89084253
Ghodawat Realty Pvt Ltd	Wwil	0.6	01-03-2003	Gorera	Rajasthan	26.72391436	70.89135875
Ghodawat Realty Pvt Ltd	Wwil	0.6	01-03-2003	Gorera	Rajasthan	26.71818507	70.89288527
Ghodawat Realty Pvt Ltd	Wwil	0.6	01-03-2003	Gorera	Rajasthan	26.7191322	70.89383653
Ghodawat Realty Pvt Ltd	Wwil	0.6	01-03-2003	Gorera	Rajasthan	26.7258554	70.88994581
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-05-2007	Hadmatiya	Gujarat	22.00479045	69.28703413
Ghodawat Realty Pvt Ltd	Wwil	0.8	01-05-2007	Hadmatiya	Gujarat	22.00776675	69.28476335
Star Flexipacks Industries	Wwil	0.8	01-03-2007	Jodhpar	Gujarat	22.00494299	69.28243254
Sanjay D Ghodawat	Wwil	0.8	01-03-2007	Maleta	Gujarat	21.99371843	69.29481994
Sanjay D Ghodawat	Wwil	0.8	01-03-2007	Maleta	Gujarat	21.99213305	69.29722881

GUJARAT

RAJASTHAN

PROJECT ACTIVITY



GUJARAT **RAJASTHAN**

A.4. Technologies/measures >>

The project activity involves 32 numbers of wind energy converters (WECs) of (800 KW, E-53) with internal electrical lines connecting the project activity with local evacuation facility. The WECs generate 3-phase power at 400V, which is stepped up to 33 KV. The project activity can operate in the frequency range of 47.5–51.5 Hz and in the voltage range of 400 V ± 12.5%. The average lifetime of the WEC is around 20 years as per the equipment supplier specifications. The WECs are manufactured by WWIL.

Turbine model	E-53
Rated power	800 KW
Rotor diameter	52.9 m
Hub height	75 m (Concrete)
Turbine Type	Direct driven, horizontal axis wind turbine with variable rotor speed
Power regulation	Independent pitch system for each blade.
Cut in wind speed	2.5 *m/s*
Rated wind speed	12 *m/s*
Cutout Wind speed	28-34 m/s
Extreme Wind Speed	59.5 *m/s*
Rated rotational speed	29 rpm
Operating	12-29 rpm

Orientation	Upwind
No of Blades	3
Blade Material	Glass Fiber Epoxy reinforced
Gear box type	Gear less
Generator type	Synchronous generator
Braking	Aerodynamic
Output Voltage	400 V
Yaw System	Active yawing with 4 electric yaw drives with brake motor
Tower	74 m (concrete)

A.5. Parties and project participants >>

Party (Host)	Participants
INDIA	**Project Proponent**: - Ghodawat Energy Pvt Ltd, Ghodawat Reality Pvt Ltd, Star Flexipacks Industries & Sanjay D Ghodawat

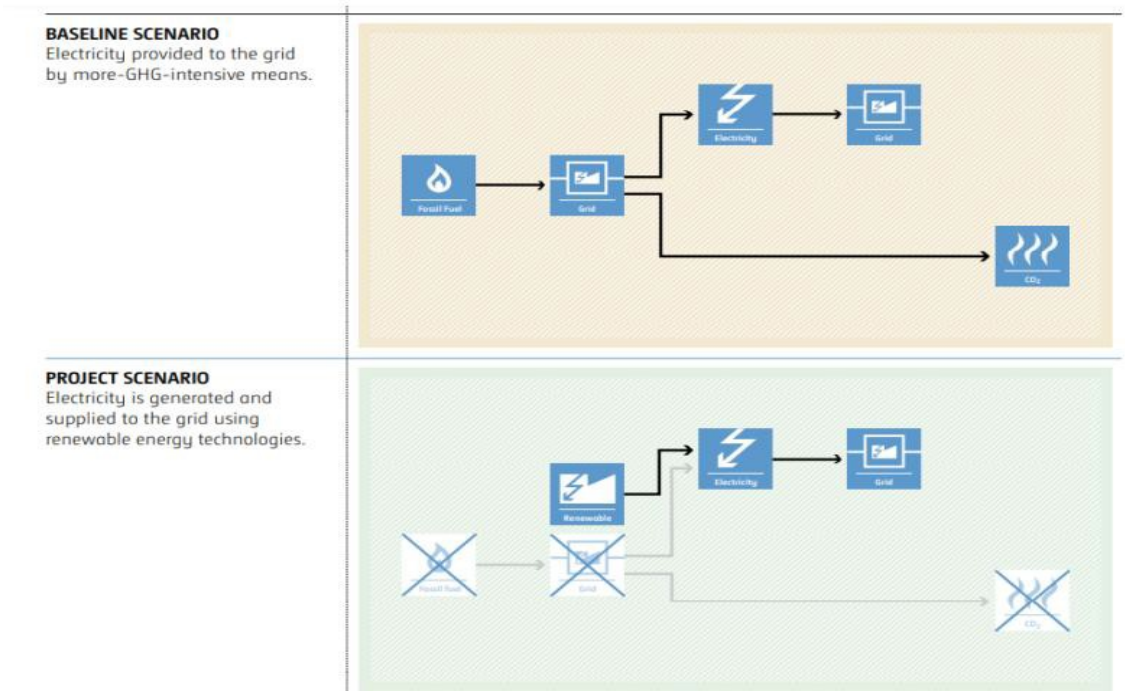
A.6. Baseline Emissions>>

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

The scenario existing prior to the implementation of the project activity, is electricity delivered to the facility by the project activity that would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources. This is a green field project activity. There was no activity at the site of the project participant prior to the implementation of this project activity. Hence pre-project scenario and baseline scenario are the same.

As per the approved consolidated methodology ACM0002 Version 22, if the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following: "If the project activity is the installation of a Greenfield power plant, the baseline scenario is 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 to the grid".

The Schematic diagram showing the baseline scenario:



A.7. Debundling>>

This Project is not a debundled component of a larger project activity.

SECTION B. Application of methodologies and standardized baselines

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

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

TYPE - **Renewable Energy Projects.**

CATEGORY- ACM0002., Consolidated baseline methodology for grid-connected electricity generation from renewable sources -Version 22.0

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

Applicability Criteria.	**Applicability status**
1)This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plant(s)/unit(s); (d) Involve a rehabilitation of (an) existing plant(s)/unit(s), or (e) Involve a replacement of (an) existing plant(s)/unit(s). (f) Install a Greenfield power plant together with a grid-connected Greenfield pumped storage power plant. The greenfield power plant may be directly connected to the PSP or connected to the PSP through the grid.	The proposed project involves establishing a new grid-connected renewable wind power plant, confirming to the specified criteria.
2) In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that: (a)Integrate BESS with a Greenfield power plant; (b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic1 or wind power plant(s)/unit(s); (c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s); (d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s). (e) Integrate a BESS together with a Greenfield power plant that is operating in coordination with a PSP. The BESS is located at site of the greenfield renewable power plant.	The project entails installing a new grid-connected renewable wind power project without the integration of a Battery Energy Storage System (BESS). Therefore, this condition does not apply to the project activity.
3)The methodology is applicable under the following conditions: (a) Hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit; (b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power	The proposed project involves installing new wind power plants without integrating a Battery Energy Storage System (BESS). Thus, the mentioned criterion does not apply

capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity; (c) In case of Greenfield project activities applicable under paragraph 7(a) above, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g., by referring to feasibility studies or investment decision documents); (d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies2 may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions following the requirements under section 5.4.4 below. The charging using the grid or using fossil fuel electricity generator should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. During the time periods (e.g., week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period. (e) In case the project activity involves PSP, the PSP shall utilize the electricity generated from the renewable energy power plant(s) that is operating in coordination with the PSP during pumping mode	
4)In case of hydro power plants, one of the following conditions shall apply: a)The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of reservoirs; or b)The project activity is implemented in an existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density calculated using equation (7) is greater than 4 W/m2; or c)The project activity results in new single or multiple reservoirs and the power density calculate equation (7), is greater than 4 W/m2. d)The project activity is an integrated hydro power project involving multiple reservoirs, where the power density of any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m2, all of the following conditions shall apply. (i)The power density calculated using the total installed	The proposed project involves the installation of wind power plants/units. Hence, the mentioned criterion is not applicable.

capacity of the integrated project, as per equation (8), is greater than 4 W/m2; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii)Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m2 are: a) Lower than or equal to 15 MW; and b) Less than 10 per cent of the total installed capacity of integrated hydro power project.	
5)In the case of integrated hydro power projects, project proponent shall: a)Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or b)Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability indifferent seasons to optimize the water flow at the inlet of power units. Therefore this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity.	The proposed project activity involves the installation of wind power plants/units. Therefore, the mentioned criteria are not applicable.
6) In the case of PSP, the project participants shall demonstrate in the PDD that the project is not using water which would have been used to generate electricity in the baseline.	The proposed project activity involves installing wind power plants/units. Therefore, the specified criteria are not applicable.
7)The methodology is not applicable to: a)Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; b) Biomass-fired power plants;	The proposed project activity involves installing wind power plants/units. Therefore, the specified criteria are not applicable.
8)In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance	The proposed project activity involves installing wind power plants/units. Therefore, the specified criteria are not applicable.

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

There is no double counting 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.

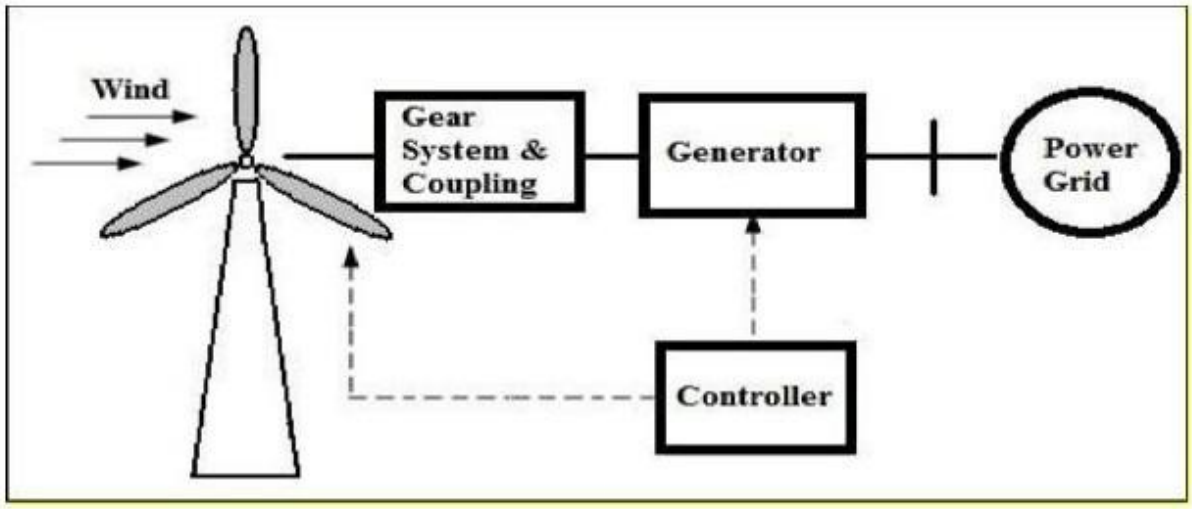
B.4. Project boundary, sources and greenhouse gases (GHGs)>>

Project boundary:

According to the methodology ACM0002, version 22.0.0 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.

The project boundary includes the WECs of the project activity, transformer, individual meters, substation & Indian which is final consumer of generated electricity.

A schematic of project boundary diagram is shown below.



The baseline study of the Indian grid shows that the main sources of GHG emissions under the baseline scenario are CO_2 emissions from the conventional power generating systems. Other emissions are that of CH_4 and N_2O but both emissions have been excluded for simplification.

The project activity generates.

Source		GHGs	Included?	Justification/Explanation
Baseline scenario	Grid connected electricity generation	CO_2	Yes	In the baseline scenario, the electricity would have been sourced from the Indian grid which in turn would be connected to fossil fuel fired power plants which emit CO_2.
		CH_4	No	No methane is expected to be emitted.
		N_2O	No	No nitrous oxide is expected to be emitted.
Project Scenario	Greenfield wind energy conversion system	CO_2	No	The project activity does not emit any emissions.
		CH_4	No	No methane is expected to be emitted.
		N_2O	No	No nitrous oxide is expected to be emitted.

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

As per the approved consolidated methodology ACM0002. version - 22, 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 grid connected wind power plant to harness the green power from wind energy. In the absence of the project activity, the equivalent amount of power would have been supplied by the Indian grid, which is fed mainly by fossil fuel fired plants. The power produced at grid from the other conventional sources which are predominantly fossil fuel based. Hence, the baseline for the project activity is the equivalent amount of power produced at the Indian grid.

As per approved consolidated methodology ACM0002, version 22.0, emission reduction is estimated as difference between the baseline emission and project emission after factoring into leakage

Emission reductions are calculated as per methodology ACM0002, Version 22.0 Equation 17:

$$ER_y = BE_y - PE_y \qquad \textbf{(Eq. 1)}$$

Where,

ER_y = Emissions reductions in year y (t CO2)

BE_y = Baseline emissions in year y (t CO2)

PE_y = Project emissions in year y (t CO2)

Baseline Emissions

The baseline emissions as per methodology ACM0002, Version 22.0, para 57; encompass solely the CO2 emissions stemming from electricity generation in power plants displaced by the project activity. The methodology operates on the assumption that any electricity generation exceeding baseline levels would have originated from established grid-connected power plants and the integration of new grid-connected power plants.

The Baseline emissions as per methodology ACM0002, Version 22.0 Equation 11 in year y can be calculated as follows:

$BE_y = EG_{PJ,y} * EF_{grid,y}$

Where:

BE_y= Baseline emissions in year *y* (tCO_2/yr)

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

$EF_{grid,y}$= Grid Emission factor in year y (tCO_2/MWh)

Since the project activity is the installation of a new grid connected renewable power plant (green field project), hence, $EG_{PJ,y}$ has been calculated as :

$EG_{PJ,y} = EG_{facility,y}$

Where:

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

EGfacility,y = Quantity of net electricity generation supplied by the project plant/unit to the grid in year *y* (MWh/yr)

A "grid emission factor" denotes the CO2 emission factor (measured in tCO2/MWh) associated with each unit of electricity supplied by an electricity system. The UCR suggests employing an emission factor of 0.9[1] from 2013 to 2023 and Emission Factor of 0.757 tCO2/MWh for 2024 as a cautious estimate for Indian projects. The same emission factor is utilized for computing emission reductions for the Project Activity.

[1]As per UCR CoU Standard Update: 2024 Vintage UCR Indian Grid Emission Factor Announced | by Universal Carbon Registry | Jan, 2025 | Medium

Project Emission:

Regarding project emissions, ACM0002 version 22.0 specifies that only emissions related to fossil fuel combustion, emissions from the operation of geothermal power plants due to the release of non-condensable gases, and emissions from water reservoirs of hydroelectric plants should be taken into account. Since the project involves a wind power project, emissions from renewable energy plants are negligible
Hence (PEy = 0).

Leakage Emission:

Leakage, as outlined in ACM0002 version 22.0, para 5.6, is considered to be zero as there is no transfer of energy-generating equipment in the project activity
Hence (LEy = 0).

Year	Net Generation	Baseline Emissions	Project Emissions	Leakage	Emission Reductions	EF
	MWh	(tCO_2e)	(tCO_2e)	(tCO_2e)	(tCO_2e)	(tCO2/MWh)
Year 1	4674336	4206902	0	0	4206902	0.9
Year 2	4674336	4206902	0	0	4206902	0.9
year 3	4674336	4206902	0	0	4206902	0.9
Year 4	4674336	4206902	0	0	4206902	0.900
Year 5	4674336	4206902	0	0	4206902	0.900
Year 6	4674336	4206902	0	0	4206902	0.900
Year 7	4674336	4206902	0	0	4206902	0.900
Year 8	4674336	4206902	0	0	4206902	0.900
Year 9	4674336	4206902	0	0	4206902	0.900
Year 10	4674336	3538472	0	0	3538472	0.757
Total Emission reduction	**46743360**	**41400593**	**0**	**0**	**41400593**	
Average Emission Reduction	4674336	4140059	0	0	41,40,059	

Estimated baseline emission reductions (BEy) = **41,40,059** CoUs (Total Emission Reduction)

B.6. Prior History>>

The project activity has not been registered or applied for voluntary carbon benefits under any other GHG program and hence there is no double counting issue of CoUs.

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

The start date of the crediting period under UCR is considered from 01/01/2014.

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: 11 years 0 months 0 days: 01/01/2014 to 31/12/2024

B.8. Monitoring plan>>

Data and Parameters available ex-post verification

Data/Parameter	$EG_{p,j,y}$
Data unit	MWh
Description	Net electricity supplied to the grid by the Project activity.
Measurement methods and procedures	Data Type: Measured Monitoring equipment: Energy Meters are used for monitoring Calibration frequency: once in five years (as per CEA Indian provision) Cross checking: Quantity of net electricity supplied to or consumed at PP's facility will be cross-checked from the monthly bills or invoices raised. The Net electricity supplied to the grid will be calculated by the values of electricity export to the grid. The Net electricity is recorded as follows: Thus, $EG_{PJ,y} = EG_{Net,Export}$
Value Applied	**4674336 MWh**
Monitoring frequency	The net energy exported to the grid is measured every month using calibrated energy meter by the State Electricity Board authorities in the presence of the project implementer or its representatives. The meter/s shall be jointly inspected and sealed by authorised representatives of the company and the state utility. Measuring procedure: Will be measured by an export-import energy meter. The net electricity exported by the project plant would either be directly sourced as a measured parameter or be calculated by deducting the amount of imported electricity from the total amount of exported electricity. Accuracy class of energy meter: 0.2s Calibration Frequency: As per the Central Electricity

	Authority the testing and calibration frequency should be once in five years[2].
Purpose of data	For baseline emission calculations

Data and Parameters available ex-ante verification

Data / Parameter:	*EF*Grid,y
Data unit:	tCO2 /MWh
Description:	A "grid emission factor" refers to a CO2 emission factor (tCO2/MWh) which will be associated with each unit of electricity provided by an electricity system. The UCR recommends an emission factor of 0.9 tCO2/MWh for the period 2013 - 2023 and 0.757 tCO2/MWh from 2024 as a fairly conservative estimate for Indian projects. Hence, the same emission factor has been considered to calculate the emission reduction under conservative approach.
Source of data:	UCR CoU Standard Update: 2024 Vintage UCR Indian Grid Emission Factor Announced | by Universal Carbon Registry | Jan, 2025 | Medium
Measurement procedures (if any):	-
Monitoring frequency:	Ex-ante fixed parameter
QA/QC procedures:	For the calculation of Emission Factor of the grid
Any comment:	-

[2] https://cea.nic.in/wp-content/uploads/2020/02/meter_reg.pdf