

PROJECT CONCEPT NOTE

CARBON OFFSET UNIT (CoU) PROJECT



Title: 76 MW Wind Power Project by Uttar Urja Projects Private Limited

Version 1.0 Date: 17/03/2023

First CoU Issuance Period: 7 Years, 3Months 8 Days

Date: 24.09.2015 to 31.12.2022



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

BASIC INFORMATION			
Title of the project activity	76 MW Wind Power Project by Uttar Urja Projects Private Limited		
Scale of the project activity	Large Scale		
Completion date of the PCN	17/03/2023		
Project participants	M/s.Uttar Urja Projects Private Limited, 7B, Mohini Road, Dalanwala, Dehradun - 248001.		
Host Party	INDIA		
Applied methodologies and standardized baselines	ACM0002: "Grid connected electricity. generation from renewable sources", version 20.0 (Large scale Consolidated Methodology)		
Sectoral scopes	01 Energy industries (Renewable/Non Renewable Sources)		
Estimated amount of total GHG emission reductions	1023849.504 CoUs (1023849.504 tCO _{2eq})		

SECTION A. Description of project activity

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

The project titled "76 MW Wind Power Project by Uttar Urja Projects Private Limited." is a grid connected wind power project located in various village in the state of Madhya Pradesh (India). The purpose of this plant installation and power generation to Madhya Pradesh Power Management Company Limited. M/s Uttar Urja Projects Pvt. Ltd. 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).

The project activity harnesses kinetic energy of wind (renewable source) to generate electricity. The project activity which incorporates installation and operation of 38 Wind Turbine Generators (WTGs) having individual capacity of 2 MW. Thus, the total aggregated installed capacity is 76 MW is operational in Piploda and Daloada Tehsil of Ratlam and Mandsaur Districts in the state of Madhya Pradesh (India). Thus, the project activity contributes to emission reductions which would have otherwise caused due to the consumption of grid electricity which is predominantly fossil fuel based.

The Owner of the project is Ms. Uttar Urja Projects Private limited. The details along with commissioning period are as follows:

S.No	WTG No	COD	CAPACITY
1	UUP 01	16.10.2015	2MW
2	UUP 02	15.10.2015	2MW
3	UUP 03	15.10.2015	2MW
4	UUP 04	18.10.2015	2MW
5	UUP 05	22.10.2015	2MW
6	UUP 06	12.10.2015	2MW
7	UUP 07	19.10.2015	2MW
8	UUP 08	11.10.2015	2MW
9	UUP 09	30.09.2015	2MW
10	UUP 10	30.09.2015	2MW
11	UUP 11	26.09.2015	2MW
12	UUP 12	26.09.2015	2MW
13	UUP 13	08.11.2015	2MW
14	UUP 14	07.11.2015	2MW
15	UUP 15	29.09.2015	2MW
16	UUP 16	22.11.2015	2MW
17	UUP 17	22.11.2015	2MW
18	UUP 18	20.11.2015	2MW
19	UUP 19	08.11.2015	2MW
20	UUP 20	11.12.2015	2MW
21	UUP 21	27.09.2015	2MW
22	UUP 22	24.09.2015	2MW
23	UUP 23	25.12.2015	2MW

24	UUP 24	24.12.2015	2MW
25	UUP 25	25.12.2015	2MW
26	UUP 26	25.12.2015	2MW
27	UUP 27	24.12.2015	2MW
28	UUP 28	24.12.2015	2MW
29	UUP 29	25.12.2015	2MW
30	UUP 30	11.12.2015	2MW
31	UUP 31	25.10.2015	2MW
32	UUP 32	19.12.2015	2MW
33	UUP 33	19.12.2015	2MW
34	UUP 34	24.11.2015	2MW
35	UUP 35	24.11.2015	2MW
36	UUP 36	24.11.2015	2MW
37	UUP 37	07.11.2015	2MW
38	UUP 38	08.11.2015	2MW

The project activity was developed as a greenfield activity with no power generation facility existing at the project site in the pre project scenario. In the pre project scenario equivalent amount of electricity would have been generated and supplied from grid for the purpose of consumption, thus the power displaced by the project activity would have been otherwise generated from fossil fuel dominated thermal power plant and fed to the grid which is the current baseline for the project.

Hence, project activity is displacing the estimated annual net electricity generation i.e., 156454 MWh from the grid (currently part of Unified Indian National Grid system), which otherwise, would have been generated from fossil fuel based thermal power plant and exported to the national grid.

The project activity doesn't involve any GHG emission sources. The expected emission reduction by the project activity is expected to be 1023849.504 tCO₂, whereas actual emission reduction achieved during the first CoU period shall be submitted as a of first monitoring and verification of first monitoring and verification.

Since the project activity will generate 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.

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:

- 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.

• Environmental benefits:

- 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 plant will reduce 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.

• Economic benefits:

- Wind energy projects provide many economic benefits to neighbouring communities: jobs, a new source of revenue for farmers and ranchers in the form of land lease payments, and an increased local tax base.
- Wind projects can also attract tourists who want to see wind farms in person. Locally owned community wind projects create even more of an economic opportunity for those involved. The following sections describe some of the potential economic impacts of wind development.

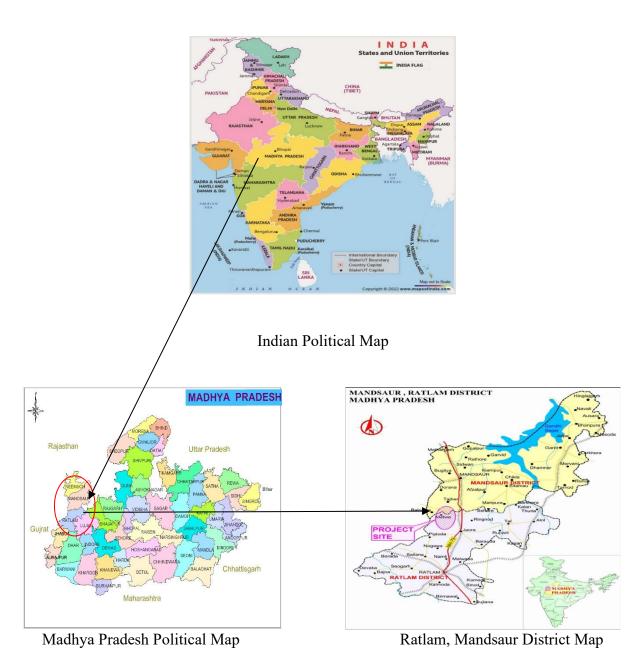
• Technological benefits

• Project being a wind energy projects the technology itself is a clean and green; it has helped promoting clean technology drive in the state and contributing to the national clean energy and thus addressing the concern of energy security in the country.

A.3. Location of project activity

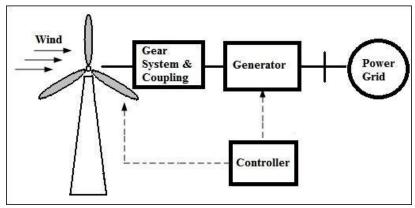
S.No	WTG No	COD	LATITUDE	LONGTITUDE	Village	Tehsil	District	State
1	UUP 01	16 10 2015	23.6996	75.0045	Jaliner	Dialada	Ratlam	Madhya Pradesh
2	00701	16.10.2015	22.7000	74.0071	T.1'	Piploda	Katiaiii	Madhya
2	UUP 02	15.10.2015	23.7000	74.9971	Jaliner	Piploda	Ratlam	Pradesh
3	UUP 03	15.10.2015	23.6970	75.0043	Jaliner	Piploda	Ratlam	Madhya Pradesh
4	001 03	13.10.2013	23.6762	75.0081	Jethana	Tipioda	Ratiani	Madhya
+	UUP 04	18.10.2015	23.0702	73.0081	Jemana	Piploda	Ratlam	Pradesh
5	UUP 05	22.10.2015	23.6797	75.0115	Jethana	Piploda	Ratlam	Madhya Pradesh
6			23.6823	75.0155	Jethana			Madhya
	UUP 06	12.10.2015	2010020	70.0100	· · · · · · · · · · · · · · · · · · ·	Piploda	Ratlam	Pradesh Madhya
7	UUP 07	19.10.2015	23.6862	75.0332	Jethana	Piploda	Ratlam	Pradesh
8	11110 00	11 10 2015	23.6423	75.0088	Naulakha	D: 1 1	D 1	Madhya
	UUP 08	11.10.2015				Piploda	Ratlam	Pradesh Madhya
9	UUP 09	30.09.2015	23.6524	75.0057	Naulakha	Piploda	Ratlam	Pradesh
10	1 H ID 10	20.00.2015	23.6501	75.0076	Naulakha	D: 1 1	D d	Madhya
	UUP 10	30.09.2015				Piploda	Ratlam	Pradesh Madhya
11	UUP 11	26.09.2015	23.6527	74.9985	Dhamedi	Piploda	Ratlam	Pradesh
12	LILID 12	26 00 2015	23.6528	74.9938	Dhamedi	D:1 d-	D = 41 =	Madhya
	UUP 12	26.09.2015	20.50/2			Piploda	Ratlam	Pradesh Madhya
13	UUP 13	08.11.2015	23.7342	75.0224	Kanser	Piploda	Ratlam	Pradesh
14	UUP 14	07.11.2015	23.7366	75.0255	Kanser	Piploda	Ratlam	Madhya Pradesh
1.5	001 14	07.11.2013	22.7600	75.0210	Bhat	Tipioda	Katiaiii	Madhya
15	UUP 15	29.09.2015	23.7699	75.0319	Kheda	Piploda	Ratlam	Pradesh
16	UUP 16	22.11.2015	23.7767	75.0148	Naveli	Piploda	Ratlam	Madhya Pradesh
17	001 10	22.11.2013	23.77332	75.0065	Naveli	Прюши	Ratiani	Madhya
17	UUP 17	22.11.2015	23.11332	73.0003	Naven	Piploda	Ratlam	Pradesh
18	UUP 18	20.11.2015	23.7685	75.0114	Naveli	Piploda	Ratlam	Madhya Pradesh
19			23.8081	75.0356	Khodana	Daloda		Madhya
1)	UUP 19	08.11.2015	23.8081	73.0330	Kilodalia	Daloua	Mandsaur	Pradesh
20	UUP 20	11.12.2015	23.7865	75.0728	Barkhedi	Daloda	Mandsaur	Madhya Pradesh
21			23.7961	75.0641	Pingrala			Madhya
	UUP 21	27.09.2015	23.7701	73.0011		Piploda	Ratlam	Pradesh Madhya
22	UUP 22	24.09.2015	23.7987	75.0625	Pingrala	Piploda	Ratlam	Pradesh
23			23.8528	75.0990	Sarsod			Madhya
	UUP 23	25.12.2015				Daloda	Mandsaur	Pradesh Madhya
24	UUP 24	24.12.2015	23.8556	75.0988	Sarsod	Daloda	Mandsaur	Pradesh
25	LILID 25	25 12 2015	23.8492	75.0892	Lasudia ila	D 1 1	3.6	Madhya
	UUP 25	25.12.2015				Daloda	Mandsaur	Pradesh Madhya
26	UUP 26	25.12.2015	23.8539	75.0923	Sarsod	Daloda	Mandsaur	Pradesh
27	LILID 27	24 12 2015	23.8601	75.0917	Sarsod	Dala da	Monde	Madhya
	UUP 27	24.12.2015				Daloda	Mandsaur	Pradesh Madhya
28	UUP 28	24.12.2015	23.8701	75.0931	Sarsod	Daloda	Mandsaur	Pradesh
29	THID 20	25 12 2015	23.8488	75.0728	Sarsod	Dolodo	Mondagu	Madhya
	UUP 29	25.12.2015				Daloda	Mandsaur	Pradesh

30	UUP 30	11.12.2015	23.6685	75.0665	Akyadeh	Piploda	Ratlam	Madhya Pradesh
31	LILID 21		23.684	75.0370	Jethana		D. 41	Madhya
	UUP 31	25.10.2015				Piploda	Ratlam	Pradesh
32	UUP 32	19.12.2015	23.7169	75.0307	Kanser	Piploda	Ratlam	Madhya Pradesh
33			23.7147	75.0327	Bilandpur			Madhya
33	UUP 33	19.12.2015	23./14/	13.0321	Бпапариг	Piploda	Ratlam	Pradesh
34			23.7735	75.0035	Mawta			Madhya
34	UUP 34	24.11.2015	23.1133	73.0033	Mawta	Piploda	Ratlam	Pradesh
35			23.7759	75.0002	Mawta			Madhya
33	UUP 35	24.11.2015	23.1137	75.0002	Mawta	Piploda	Ratlam	Pradesh
36			23.7796	75.0012	Mawta			Madhya
30	UUP 36	24.11.2015	23.7790	73.0012	Mawta	Piploda	Ratlam	Pradesh
27			22 (772	75.0705	Mamat			Madhya
37	UUP 37	07.11.2015	23.6773	75.0795	Kheda	Piploda	Ratlam	Pradesh
20			22 (905	75.0000	Mamat			Madhya
38	UUP 38	08.11.2015	23.6805	75.0809	Kheda	Piploda	Ratlam	Pradesh



A.4. Technologies/measures

All the machines are INOX make and have been developed using state of the art technology. In wind energy generation, kinetic energy of wind is converted into mechanical energy and subsequently into electrical energy. Wind has considerable amount of kinetic energy when blowing at high speeds. This kinetic energy when passes through the blades of the WEG is converted into mechanical energy and rotates the wind blades. When the wind blades rotate, the connected generator also rotates, thereby producing electricity. The technology is a clean technology since there are no GHG emissions associated with the electricity generation.



Process Flow

Technical Specifications

	Model	
1	Turbine Model	Inox WT 2000- DF 100
	Operating Data	
2	Rated power	2000 kW
3	Cut in wind speed	3.0 m/s
4	Rated wind speed	11.0 m/s
5	Cut-out Wind speed	20.0 m/s
6	Hub Height	92 m
7	Class	III B
	Rotor	
8	Rotor Diameter	100 m
9	Rotor Area	7894 m²
10	No of Rotor blade	3
11	Blade length	48.8 m
	Generator	
12	Туре	Doubly fed induction generator (DFIG)
13	Rated power	2000 kW
	Tower	
14	Type	Conical tubular steel tower
15	Hub height	90 m
	Braking system	
16	Operational brake	full span blade pitching
17	Type of construction	gear / servomotor

A.5. Parties and project participants

Party (Host)	Participants
India	Ms. Uttar Urja Projects Private Limited 7B, Mohini Road, Dalanwala, Dehradun - 248001.

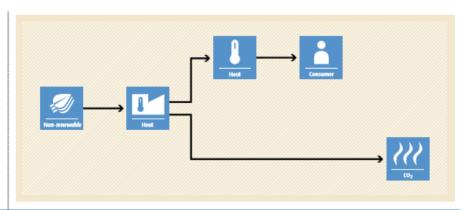
A.6. Baseline Emissions

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 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.

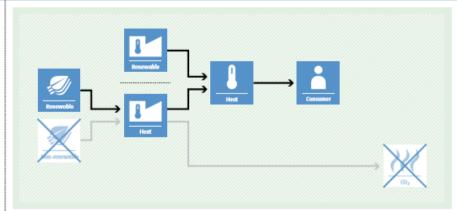
BASELINE SCENARIO

Thermal energy would be produced by more-GHG-intensive means based on the use of non-renewable biomass.



PROJECT SCENARIO

Use of renewable energy technologies for thermal energy generation, displacing nonrenewable biomass use.



A.7. Debundling

This 76 MW Wind power Project by Uttar Urja Projects Private Limited 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 - I - Renewable Energy Projects

Category

ACM0002: "Grid connected electricity. generation from renewable sources", version 20.0 (Large scale Consolidated Methodology)

B.2. Applicability of methodologies and standardized baselines

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).	The project activity is a Greenfield plant. Hence the project activity satisfies the point (a) of the applicability criterion.
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 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 5 (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	The project activity is the installation of 76 MW wind power plant. Hence the project falls under point (a) and applicable under these criteria.

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 exigencies 2 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 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 plantduring 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.

Not Applicable as the Project Activity is wind energy generation Project.

In case of hydro power plants, one of the following conditions shall apply:

- (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or
- (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, is greater than 4 W/m2; or (c) The project activity results in new single
- or multiple reservoirs and the power density is greater than 4 W/m2; or
- (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, 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 capacity of the integrated project, 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 shall be: 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.	
In the case of integrated hydro power	Not Applicable as the Project Activity is wind
projects, project participants shall:	energy generation Project.
(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 must be carried out in the	
specific scenario of water availability in	
different 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 of five years prior to the	
implementation of the CDM project activity.	
The methodology is not applicable to: (a)	Not Applicable as the Project Activity is green field
Project activities that involve switching from	project.
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/units	
In the case of retrofits, rehabilitations,	Not Applicable as the Project Activity is wind
replacements, or capacity additions, this	energy generation Project.
methodology is only applicable if the most	<i>— 6, 6</i>
plausible baseline scenario, because 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	
as usual mannenance	

B.3. Applicability of double counting emission reductions

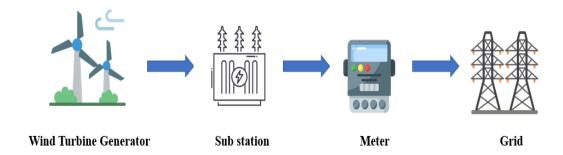
There is no double accounting of emission reductions in the project activity due to the following reasons:

- 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 ACM0002, version 20-, "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.



Sourc	е	Gas	Included?	Justification/Explanation
je je	Grid	CO2	Yes	Main emission source
Baseline	d	CH4	NO	Minor emission source
ш	electricity generation	N2O	NO	Minor emission source
	Greenfield	CO ₂	NO	No CO2 emissions are emitted from the project
Project	Wind Power	CH4	NO	Project activity does not emit CH4
	Project activity	N2O	NO	Project activity does not emit N2O

B.5. Establishment and description of baseline scenario

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

As per para 22 of the approved consolidated methodology ACM0002, version 20, 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 new wind farm to harness the green power from wind energy. 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 at grid from the other conventional sources which are predominantly fossil fuel based. Hence, the baseline for the project activity is the equivalent amount of power produced at the Indian grid.

A "grid emission factor" refers to a CO2emission 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 2014-2020 years as a conservative estimate for Indian projects not previously verified under any GHG program. Also, for the vintage 2021-22, the combined margin emission factor calculated from CEA database in India results into higher emission than the default value. Hence, the same emission factor has been considered to calculate the emission reduction under conservative approach.

Net GHG Emission Reductions and Removals

Thus, ERy = BEy - PEy - LEy

Where:

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

BEy = Baseline Emissions in year y (t CO_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 CO2emissions 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:

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

BEy = Baseline emissions in year y (t CO2)

EGBL,y = Quantity of net electricity generation that is produced

and fed into the grid because of the implementation of

the UCR project activity in year y (MWh)

EFgrid,y = UCR recommended emission factor of

0.90tCO2/MWh has been considered.

(Reference: General Project Eligibility Criteria and

Guidance, UCR Standard, page 4)

Project Emissions

As per paragraph 31, ACM0002, version 20 only emission associated with the fossil fuel combustion, emission from operation of geothermal power plants due to release of non-condensable gases, emission from water reservoir of wind 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, **PE** y = 0.

Leakage

As per paragraph 53 of ACM0002, version 20, '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, $\mathbf{LEy} = \mathbf{0}$

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

Estimated annual baseline emission reductions.

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(BE y = 156453.6/year * 0.9 \text{ tCO}_2 /MWh)
= 140808 \text{ tCO}_2 /year (i.e., 140808 \text{ CoUs})
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B.6. Prior History

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

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

Not applicable, this is the first submission of the PCN under UCR for initial registration.

The start date of crediting under UCR is considered as **24.09.2015** which is the commissioning date of the earliest commissioned wind turbine. However, if any change is considered the same will be addressed during the first verification.

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

Not Applicable

B.9. Monitoring period number and duration

First CoU Issuance Period: 7 years, 3 months, 8 days

Date: 24.09.2015 to 31.12.2022

B.8. Monitoring plan

Data and Parameters available at validation (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 2014 2020 years as a 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 Value(s) applied	Value – 0.90
Measurement methods and procedures	
Monitoring frequency	Ex antes fixed parameter
Purpose of data	For the calculation of Emission Factor of the grid

Data / Parameter:	$\mathbf{E}\mathbf{B}_{\mathbf{BL,Y}}$
Data unit:	MWh / year
Description:	Net electricity supplied to the grid by the project activity
Source of data:	Madhya Pradesh Electricity board Generation data
Measurement procedures (if any):	The net electricity generated by the project activity will be. calculated from net electricity supplied to grid from the share. certificate issued by state utility monthly basis for respective WTGs. The amount of energy supplied by the WTGs are continuously monitored and recorded once a month. The same can be cross-checked from the State utility website which is publicly available.
Monitoring frequency:	Monthly
QA/QC procedures:	
Any comment:	-