Component project activity design document form
(Version 10.0)

BASIC INFORMATION	
Title of the CPA	Jamb Wind Power Project, Maharashtra
Scale of the CPA	☒ Large-scale ☐ Small-scale
Version number of the CPA-DD	06
Completion date of the CPA-DD	01/12/2021
Title and UNFCCC reference number of the registered CDM PoA	Title: Promotion of renewable energy generation in India Programme of Activities Reference No.: PoA 9416
Title and reference number of the corresponding generic CPA	Title: Jamb Wind Power Project, Maharashtra Reference No.: :9416-P1-0002-CP1
Coordinating/managing entity	General Carbon Advisory Services Pvt. Ltd
Host Party	India
Applied methodologies and standardized baselines	ACM0002- Grid-connected electricity generation from renewable sources, version 20[1] Standardized baselines: Not Applicable
Sectoral scopes	Sectoral scope 01: Energy industries (renewable - / non-renewable sources)
Estimated amount of annual average GHG emission reductions	46,076 tCO_2e

[1] https://cdm.unfccc.int/UserManagement/FileStorage/AG07ZJQ3EXD42LT5YV9HR16M8KINPO

SECTION A. Description of component project activity (CPA)

A.1. Purpose and general description of CPA

The project activity is a 28 MW (2MW x 14 no. of WTG), Greenfield renewable wind energy project in Satara district in the state of Maharashtra. The purpose of the project activity is generation of clean power utilising wind energy and to sell it to the Indian grid through a long term Power Purchase Agreement (PPA).

The details of the project activity is provided in the table below

Sr. No.	Location No	Village	Site	Date of Commissioning
1	JMF 01	Rameshwar	Ambheri	25/04/2013
2	JMF 02	Rameshwar	Ambheri	
3	JMF 03	Rameshwar	Ambheri	
4	JMF 04	Rameshwar	Ambheri	
5	JMF 05	Rameshwar	Ambheri	
6	JMF 06	Rameshwar	Ambheri	
7	JMF 07	Rameshwar	Ambheri	
8	JMF 08	Rameshwar	Ambheri	
9	JMP 01	Jamb	Ambheri	21/06/2013
10	JMP 02	Jamb	Ambheri	
11	JMP 03	Jamb	Ambheri	
12	JMP 04	Jamb	Ambheri	
13	JMP 05	Jamb	Ambheri	
14	JMP 06	Jamb	Ambheri	

Contribution of the project activity to sustainable development:

Ministry of Environment Forest and Climate Change, Government of India has suggested social well-being, economic wellbeing, environmental well-being and technological well-being as the four indicators for sustainable development in the host country approval eligibility criteria for Clean Development Mechanism (CDM) projects.

The project contributes to the general well-being of the region and is in line with the sustainable development policies of Government of India, as described below:

Social well-being:

The project has resulted in the investment in the rural sector of India thereby creating employment opportunities to local population (skilled and unskilled manpower) available in and around project facility for building infrastructure, installation and maintenance and managing the wind farm thus enabling improvement in the quality of life of the people.

Economic well-being:

The land prices in the neighbouring area have gone up thereby benefiting the villagers. It helps to improve the availability of electricity as the electricity generated is fed into the grid thereby curtailing the supply demand gap. This provides new opportunities for industries and economic activities to be setup in the area thereby increasing employment opportunities.

Environmental well-being:

The project activity is a cleaner means for power generation which avoids fossil fuel based thermal power generation. Therefore, it positively contributes towards the reduction in demand for India's carbon intensive energy resources thereby conserving the non-renewable natural resources like

coal, gas, oil. By substituting and hence decreasing the need for fossil fuel based power generation in the grid, the project activity reduces GHG emissions from the country's electricity sector. Moreover wind power projects produce no end products in the form of solid and liquid wastes. Power generation from renewable energy sources in the project activity creates global as well as local environmental benefits.

Technological well-being:

The project activity is an energy diversification measure where renewable energy is harnessed for generation of power in order to meet the increasing energy demand of the state. The associated technology for power generation does not have any associated GHG emission. These turbines deploy the advanced technology for generation as well as for grid interaction. Hence, the project utilizes environmentally safe and sound technologies in wind power sector. Further, the project demonstrates harnessing wind potential and encourages others for setting up more such projects in future.

Thus, from the above discussion it is evident that the CPA satisfies the Sustainable Development criteria of the host country.

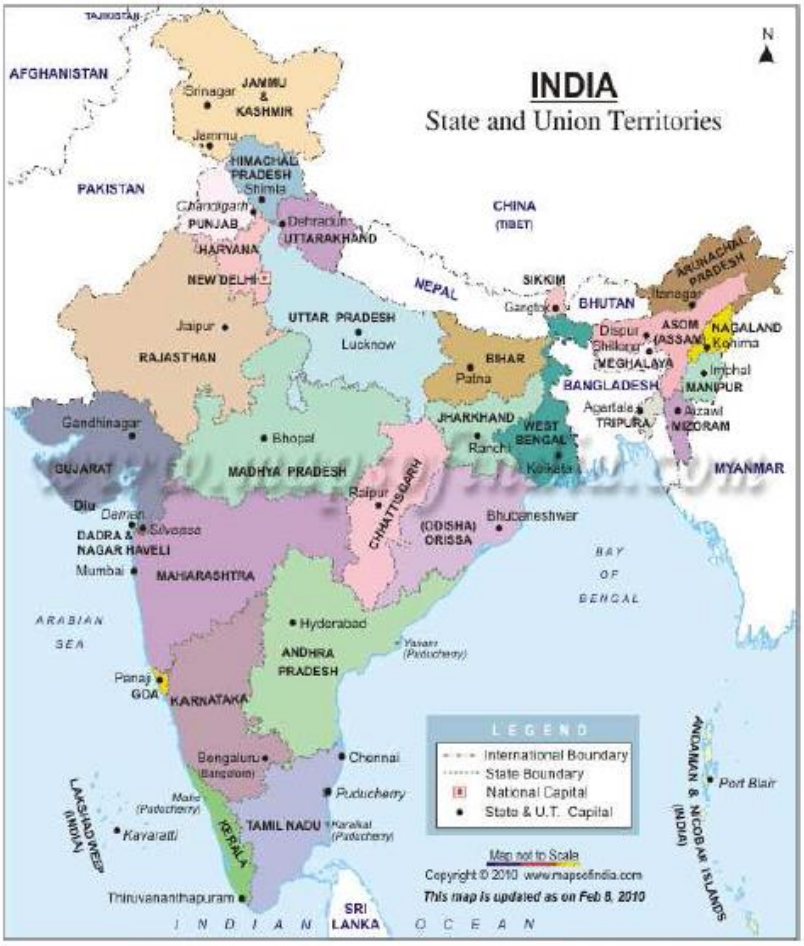
A.2. Location of CPA

The CPA is located in villages Jamb and Rameshwar in Satara district of Maharashtra state, India. Nearest Airport: Pune, ~290 km; Nearest Railway Station: Karad, 75 km; Nearest Seaport: Mumbai, 440 km

The unique geographical coordinates of the individual power units in CPA are as follows

Sr. No.	Location No	Village	Geographical Coordinates	
			Latitude	Longitude
1	JMF 01	Rameshwar	17° 38' 18.2726" N	74° 16' 1.0187" E
2	JMF 02	Rameshwar	17° 38' 11.6828" N	74° 15' 56.4302" E
3	JMF 03	Rameshwar	17° 38' 4.1546" N	74° 15' 53.2368" E
4	JMF 04	Rameshwar	17° 37' 57.1381" N	74° 15' 47.6661" E
5	JMF 05	Rameshwar	17° 37' 51.9292" N	74° 16' 4.3829" E
6	JMF 06	Rameshwar	17° 37' 44.4244" N	74° 16' 7.5012" E
7	JMF 07	Rameshwar	17° 37' 35.1282" N	74° 16' 10.1176" E
8	JMF 08	Rameshwar	17° 37' 25.6876" N	74° 16' 8.9001" E
9	JMP 01	Jamb	17° 37' 20.8964" N	74° 16' 15.5023" E
10	JMP 02	Jamb	17° 37' 15.3555" N	74° 16' 21.7681" E
11	JMP 03	Jamb	17° 37' 10.2057" N	74° 16' 28.2358" E
12	JMP 04	Jamb	17° 37' 1.0080" N	74° 16' 40.0129" E
13	JMP 05	Jamb	17° 36' 55.3673" N	74° 16' 45.7358" E
14	JMP 06	Jamb	17° 36' 50.5439" N	74° 16' 52.5412" E

Location map of the project activity in India and Satara district



A.3. Technologies/measures

The CPA consists of grid connected renewable wind power generation unit using following technology Wind turbine generators based power units

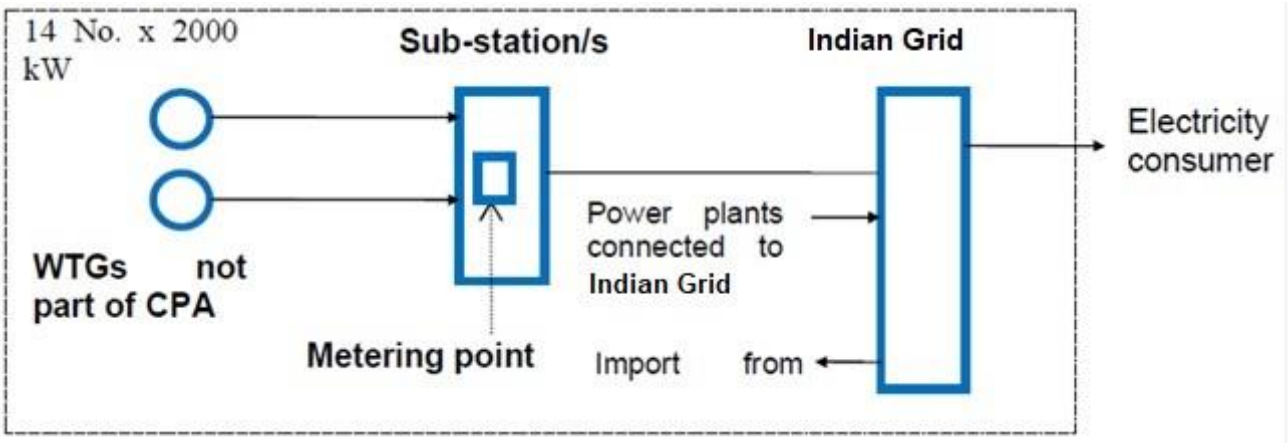
Typical specifications of the wind turbine model/s used – Kenersys India Private Limited make, K82/2.0 MW model.

S.N.	Parameter	Specification/ Value with unit
1	Rated power	2000 kW
2	Rotor diameter	82 m
3	Hub height	80 m
4	Turbine type	Direct drive horizontal axis wind turbine with variable rotor speed
5	Power regulation	Pitch control
6	Cut in wind speed	3.5 m/s
X`7	Rated wind speed	22 m/s
8	Cut out wind speed	25 m/s
9	Operational range of rot. Speed	1440 rpm
10	Orientation	Variable speed
11	No. of blades	3
12	Blade material	GFRP
13	Gear box type	Planetary/Spur comb.
14	Generator type	Full conversion, electrically excited synchronous Generator
15	Braking	Hydraulic callipers with brake disk
16	Output voltage	600 V
17	Tower	80 m
18	Useful life	20 years

Environmentally safe technology:

CPA has implemented Wind power plant which is a renewable energy source of energy and reduces greenhouse gas emissions by displacing fossil fuel based electricity generation. The technology used in the project, which has been used worldwide, is environmentally safe as it is free from any gas and liquid effluents like conventional power generation. The usage of this technology for power generation has no negative impacts on the ecosystem.

For CPAs with common metering point (at substation)



Flow diagram of generic wind CPA including Indian grid

List of metering points:
The CPA is implemented at a single wind farm and the individual WTGs have controller meters and also connected to CMS. This data is monitored along with the bulk/ revenue meters at the connected substations and apportioning of import and losses is applied to get net export by the project activity WTGs.

The project activity is estimated to export annually 49,301 MWh to Indian grid.

The above estimated electricity is supplied to the Indian grid and avoids generation of equivalent electricity in the carbon intensive grid.

The CPA does not involve technology transfer from Annex I countries to the host country

A.4. Coordinating/managing entity

General Carbon Advisory Services Pvt. Ltd

A.5. Parties and CPA implementers

Parties involved	CPA implementers	Indicate if the Party involved wishes to be considered as CPA implementer (Yes/No)
India (host Party)	ReNew Wind Energy Delhi Private Limited (a private entity)	No

A.6. Public funding of CPA

CPA does not involve public funding, diversion of ODA from Annex 1 countries.

Confirmation from CME that the CPA is implemented by CPA implementer by equity and debt funding and no public funding / ODA from Annex 1 countries is involved.

A.7. History of CPA

The respective PoA was registered on 31/12/2012.

Subsequent to this, PoA has successfully undergone renewal of its crediting period on 27/10/2020.

This particular CPA inclusion date is 04/08/2014.

The CPA is neither registered as a CDM project activity nor included in another registered CDM PoA;

The CPA is not a project activity that has been deregistered.

A.8. Debundling

Not applicable as project activity is a large-scale CPA.

SECTION B. Application of methodologies and standardized baselines

B.1. References to methodologies and standardized baselines

The CPA involves renewable electricity generation projects connected to grid. Thus, applicable methodology is
ACM0002 “Grid-connected electricity generation from renewable sources” Version 20 (EB 105)[2]

Standardized baselines: Not Applicable

This methodology also refers to the latest approved versions of the following tools:

Tool to calculate the emission factor for an electricity system, version 7.0[3]

[2] https://cdm.unfccc.int/UserManagement/FileStorage/AG07ZJQ3EXD42LT5YV9HR16M8KINPO

Tool for the demonstration and assessment of additionality, version 7.0.0[4]
Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion, version 03[5]
Combined tool to identify the baseline scenario and demonstrate additionality, version 7.0[6]

Each Large Scale CPA under PoA will meet the applicability conditions of the approved consolidated baseline and monitoring methodology ACM0002, Version 20.0, Sectoral Scope 1, EB 105 as described below

Applicability	Project activity vis-à-vis applicability Conditions
This methodology is applicable to grid-connected renewable energy power generation project activities that: • Install a Greenfield power plant; • Involve a capacity addition to (an) existing plant(s); • Involve a retrofit of (an) existing operating plants/units; • Involve a rehabilitation of (an) existing plant(s)/unit(s) or • Involve a replacement of (an) existing plant(s)/unit(s).	The CPA 02 under PoA is installation of a new grid connected renewable energy power plant (Wind power) at a site where no renewable power plant was operated prior to the implementation of the project activity (Greenfield plant) and hence this criterion is applicable.
The methodology is applicable under the following conditions: a) The project activity may include renewable energy power plant/unit of one of the following types: 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.	The CPA 02 under PoA will be an installation of a new grid connected renewable energy power plant (wind power) and hence this first condition is met. The CPA 02 under PoA does not involve any capacity additions, retrofits or replacements and therefore this second condition is not applicable.
In case of hydro power plants, one of the following conditions shall apply:[7]	The proposed CPA 02 under PoA is installation of new wind based electricity

[3] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf
[4] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf
[5] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-03-v3.pdf
[6] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-02-v7.0.pdf

Applicability	Project activity vis-à-vis applicability Conditions
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 calculated using equation (3), is greater than 4 W/m^2; or c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m^2; or d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (3), is lower than or equal to 4 W/m^2, all of the following conditions shall apply: i. The power density calculated using the total installed capacity of the integrated project, as per equation (4), is greater than 4 W/m^2; 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/m^2 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.	generation plants (not a hydro power plant). Hence, this criteria is not applicable.
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	The proposed CPA 02 under PoA is a grid connected renewable energy project (Wind power). This condition is applicable only for hydro power plants and not applicable for wind power projects. Hence, this criteria is not applicable.

[7] Project participants wishing to undertake a hydroelectric project activity that result in a new reservoir or an increase in the volume of an existing reservoir, in particular where reservoirs have no significant vegetative biomass in the catchments area, may request a revision to the approved consolidated methodology.

Applicability	Project activity vis-à-vis applicability Conditions
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 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) 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/units.	The CPA 02 under PoA is the installation of a new grid connected renewable energy project (wind power) and does not involve switching from fossil fuel to renewable energy and hence this criterion is not relevant to the PoA. This PoA does not involve any biomass based power plants and hence this criterion is not applicable to the project activity.
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 CPA 02 under PoA is a new grid connected renewable energy plant (wind power) and not a retrofits, replacement or capacity additions and therefore this criterion is not applicable to the project activity.
Applicability conditions of "Tool to calculate the emission factor for an electricity system"	
This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	This condition is applicable. OM, BM and CM are estimated using the tool for calculating baseline emissions.
Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off- grid power plants. In the latter case, the conditions specified in "Appendix 2: Procedures related to off- grid power generation" should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the	Since CPA 02 under PoA activity is grid connected (wind power), this condition is applicable and the emission factor has been calculated accordingly.

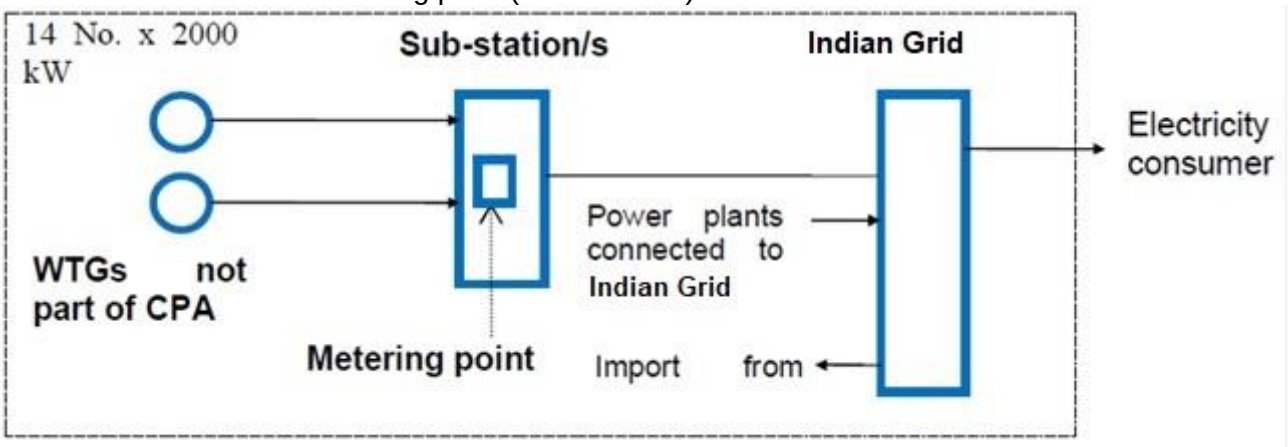
Applicability	Project activity vis-à-vis applicability Conditions
total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	
In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	CPA 02 under PoA is located in India, a non-Annex I country. Therefore, this criterion is not applicable for the project activity.
Under this tool, the value applied to the CO_2 emission factor of biofuels is zero.	CPA 02 under PoA is grid connected renewable energy project (wind power) and CO_2 emission factor is not considered for biofuels.

B.2. Project boundary, sources and greenhouse gases (GHGs)

Project boundary has ascertained using para 20 of ACM0002 (Version 20.0, EB 105, Annex 3) - "The spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that the CDM project power plant is connected to".

Hence both the project boundary includes the Wind Power Project activity, sub-station, grid and all power plants connected to grid. The project activity evacuates power to the Indian grid.

For CPAs with common metering point (at substation)



Schematic of the project boundary

	Source	GHG	Included?	Justification/Explanation
Baseline	CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity	CO_2	Yes	Main emission source
		CH_4	No	Main emission source
		N_2O	No	Main emission source
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Project activity	Wind energy project	CO_2	No	Wind energy projects do not emit GHGs and need not consider project emissions
		CH_4	No	Wind energy projects do not emit GHGs.
		N_2O	No	Wind energy projects do not emit GHGs.
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B.3. Establishment and description of baseline scenario

Baseline scenario for the second crediting period in line with the "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period." Version 03.0.1[8].

The tool stipulates the following steps to be carried out.

Step 1: Assess the validity of the current baseline for the next crediting period

Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or Sectoral policies

The baseline scenario remains unchanged and is in compliance with all the relevant mandatory national and/or Sectoral policies.

Step 1.2: Assess the impact of circumstances

The baseline scenario identified at the validation of the project activity was 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. Thus this project activity was a voluntary investment which intends to replace equivalent amount of electricity at grid from renewable source. PP was not bound to incur this investment; hence absence of project activity (i.e. the investment) does not lead to any continued baseline practice for PP within their scope whereas the continued operation of the project activity would continue to replace equivalent amount of electricity at grid. Hence, the same baseline as identified in the previous crediting period is still valid for the project. Therefore, the assessment of the changes in market characteristics is not required for the renewal of the project's crediting period under CPA.

Nevertheless, there is an impressive growth attained by the Indian Power Sector within the recent years, the installed capacity has grown from mere 1,713 MW in 1950 to 370,047.97 MW as on 31.03.2020, consisting of 230,809.57 MW Thermal, 86,759.19 MW Renew and 6,780 MW Nuclear. Sector-wise details of installed capacity are shown in Table 1. However, it is evident from Table 1[9] that the installed capacity is predominantly coal based and therefore, is a major source of carbon dioxide emissions in India. Hence, there exists scope for reducing the CO_2 emissions in the country by increased use of renewable energy sources.

[8] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-11-v3.0.1.pdf
[9] https://cea.nic.in/wp-content/uploads/baseline/2021/06/User_Guide_ver_16_2021-1.pdf

Furthermore, project participant has considered the latest available CO_2 Baseline Database (CEA database, version 15) at the time of requesting renewal of the crediting period for establishing the baseline emission factor, which itself considered all the new circumstances. Hence, the new circumstances do not have an impact on the baseline emission. As per below table, the fossil fuel based thermal power generation is dominant over the renewable based power generation, thus baseline scenario remains same as original.

Table 1: Sector- wise installed capacity (MW) as on 31/03/2020 (CEA Database version 16)

Sector	Thermal					Nuclear	Hydro	RES	Total
	Coal	Lignite	Gas	Diesel	Total				
State	65571.50	1290.00	7118.71	236.01	74216.21	0.00	26958.50	2357.03	103531.74
Central	58990.00	3490.00	7237.91	0.00	69717.91	6780.00	15346.72	1632.30	93476.93
Private	74173.00	1830.00	10598.74	273.70	86875.45	0.00	3394.00	82769.86	173039.30
All India	198734.50	6610.00	24955.36	509.71	230809.57	6780.00	45699.22	86759.19	370047.97

It is evident from Table 1 that the installed capacity is predominantly coal based and therefore, is a major source of carbon dioxide emissions in India. Hence, there exists scope for reducing the CO_2 emissions in the country by way of fuel substitution, increased use of renewable energy sources, and also by improving the thermal efficiency of power generation.

Thus, current baseline remain same and there is no impact if circumstances, existing at the time of requesting renewal of crediting period.

Step 1.3: Assess whether the continuation of the use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested

As explained in step 1.2, the baseline scenario was the electricity import/generation from the power plants connected to the electricity grid. The project activity in green field project and there is no any baseline equipment or investment involved in project activity. Therefore this condition is not applicable to the project activity.

Step 1.4: Assessment of the validity of the data and parameters

This step stipulates that “Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, they should be updated, except if the emission factors, values or emission benchmarks are based on the historical situation at the site of the project activity prior to the implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CPA project activity.”

In the context of the present project activity the emission factor has been updated along with the approach used to calculate the emission factor.

Step 2: Update the current baseline and the data and parameters

As evident from the explanation provided above the baseline scenario remains unchanged. Only the approach used to calculate the baseline emission factor is updated as per the latest version of CEA database available at the time of PDD submission for renewal.

In line with the project standard version 03.0, the impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant EB guidance with regard

to renewal of the crediting period at the time of requesting renewal of crediting period; and the correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period

Impact of the national and/or sectoral policies and circumstances upon the baseline scenario of the project activity

The Government of India enacted the Electricity Act in the year 2003 to harmonize and rationalize the provisions in the existing laws. The Act consolidated the laws relating to generation, transmission, distribution, trading and use of electricity. With the Enactment of the act, the then existing laws viz, The Indian Electricity Act 1910, The Electricity Supply Act, 1948 and The Electricity Regulatory Commissions Act, 1998 were repealed. The Electricity Act 2003 was in force at the time of the completion of the baseline study for the registered PDD.

Section 3 of the said act required the Central Government to prepare the national electricity policy and tariff policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy. In accordance with the section 3 of the Electricity Act 2003, the Central Government notified the National Electricity Policy[10] on 12th February 2005 which was in force at the time of completion of the baseline study as stated in the registered PDD of the project activity. This policy has not been revised since then and is currently in force as well.

In addition to the above policies, State Electricity Regulatory Commissions (SERCs) have announced preferential tariffs and Indian Renewable Energy Development Agency (IREDA) provides term loan assistance towards establishing biomass power projects. All these fiscal and financial incentives were in force at the time of completion of the baseline study for the registered PDD of the project activity and still continue to exist.

The state electricity regulatory commission issues tariff order in respect of procurement of power generated wind generators and there is no mandatory national and/or sectoral policies have come into effect that would affect the compliance of the current baseline. Hence, it can be concluded the current baseline complies with all relevant mandatory national and/or sectoral policies that have come into effect after the submission of the project activity for validation and are applicable at the time of requesting renewal of the crediting period.

However, in spite of the financial incentives given by the government to renewable power projects in India the generation from the low cost must run resources connected to the Southern Grid has not increased to such an extent that this would lead to more than 50% contribution from the low cost must run resources towards the total generation from the Indian Grid.

The approved consolidated baseline methodology, ACM0002 (Version 20.0), has been used to determine the baseline and the estimation of emission reductions for the applicable crediting period. As referred in the methodology “Tool to calculate the emission factor for an electricity system” (version 07.0) has been used to determine continued validity of the baseline based on combined margin (CM) calculations.

As per CEA database version 16, the fossil fuel dominated electricity is more than renewable sector and is continuing with same pattern. In light of the above discussion it is to be concluded that in accordance with relevant guidelines stipulated in the Project Standard version 03.0, national and/or sectoral policies and circumstances had been considered towards formulating the OM & BM baseline scenario. Hence the baseline scenario as applied for the present project activity remains justified.

[10] http://www.cercind.gov.in/Act-with-amendment.pdf

As per the approved consolidated Methodology ACM0002 (Version 20.0) para 22: "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, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system".

The project activity involves setting up of wind power project to produce electricity and supply to the grid. 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.

In the absence of the project activity, the equivalent amount of power would have been drawn from the Indian grid. Hence, the baseline for the project activity is the equivalent amount of power from the Indian grid.

The combined margin ($EF_{grid,CM,y}$) is the result of a weighted average of two emission factor pertaining to the electricity system: the operating margin (OM) and build margin (BM). Calculations for this combined margin must be based on data from an official source (where available) and made publically available. The CEA database version 16 is the latest available data at the time of PD submission to DOE for validation, hence same is considered for emission factor calculations.

The combined margin of the Indian grid used for the project activity is as follows:

Parameter	Value	Nomenclature	Source
$EF_{grid,CM,y}$	0.9346 tCO_2/MWh	Combined margin CO_2 emission factor for the project electricity system in year y	Calculated as the weighted average of the operating margin (0.25) & build margin (0.75) values, sourced from Baseline CO_2 Emission Database, Version 16.0, March 202 [11] published by Central Electricity Authority (CEA), Government of India
$EF_{grid,OM,y}$	0.9568 tCO_2/MWh	Operating margin CO_2 emission factor for the project electricity system in year y	Calculated as the last 3 year (2017-18, 2018-19, 2019-20) generation-weighted average, sourced from Baseline CO_2 Emission Database, Version 16.0, March 2021 published by Central Electricity Authority (CEA), Government of India
$EF_{grid,BM,y}$	0.8682 tCO_2/MWh	Build margin CO_2 emission factor for the project electricity system in year y	Baseline CO_2 Emission Database, Version 16.0, March 2021 published by Central Electricity Authority (CEA), Government of India

B.4. Estimation of emission reductions

B.4.1. Explanation of methodological choices

As per the approved consolidated Methodology ACM0002 (Version 20.0) para 39:

Baseline emissions include only CO_2 emissions from electricity generation in fossil fuel fired 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-

[11] https://cea.nic.in/wp-content/uploads/baseline/2021/06/2019_20_CO2_database.zip

connected power plants and the addition of new grid- connected power plants. The baseline emissions are to be calculated as follows:

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

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)
$EF_{grid,CM,y}$	=	Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh)

As per methodology, combined grid emission factor as per the "Tool to calculate the emission factor for an electricity system" version 07 is calculated as below.

CO_2 Baseline Database for the Indian Power Sector, Version 16, March 2021[12] published by Central Electricity Authority (CEA), Government of India has been used for the calculation of emission reduction.

As per Methodological tool: Tool to calculate the emission factor for an electricity system (Version 07.0, EB 100, Annex 4), following six steps have been followed:

(a) Step 1: Identify the relevant electricity systems;
(b) Step 2: Choose whether to include off-grid power plants in the project electricity system (optional);
(c) Step 3: Select a method to determine the operating margin (OM);
(d) Step 4: Calculate the operating margin emission factor according to the selected method;
(e) Step 5: Calculate the build margin (BM) emission factor;
(f) Step 6: Calculate the combined margin (CM) emission factor.

Step 1: Identify the relevant electricity systems

As described in tool "For determining the electricity emission factors, identify the relevant project electricity system. Similarly, identify any connected electricity systems". It also states that "If the DNA of the host country has published a delineation of the project electricity system and connected electricity systems, these delineations should be used". Keeping this into consideration, the Central Electricity Authority (CEA), Government of India has divided the Indian Power Sector into five regional grids viz. Northern, Eastern, Western, North-eastern and Southern.

Since August 2006, however, all regional grids except the Southern Grid had been integrated and were operating in synchronous mode, i.e. at same frequency. Consequently, the Northern, Eastern, Western and North-Eastern grids were treated as a single grid named as Indian grid from FY 2007-08 onwards for the purpose of this CO_2 Baseline Database. As of 31 December 2013, the Southern grid has also been synchronised with the Indian grid, hence forming one unified Indian Grid. Since the project supplies electricity to the Indian grid, emissions generated due to the electricity generated by the Indian grid as per CM calculations will serve as the baseline for this project.

Table: Geographical Scope of Indian Electricity Grid

Indian Grid				
Northern	**Eastern**	**Western**	**North-Eastern**	**Southern**
Chandigarh	Bihar	Chhattisgarh	Arunachal Pradesh	Andhra Pradesh

[12] https://cea.nic.in/wp-content/uploads/baseline/2021/06/2019_20_CO2_database.zip

Delhi	Jharkhand	Gujarat	Assam	Karnataka
Haryana	Orissa	Daman & Diu	Manipur	Kerala
Himachal Pradesh	West Bengal	Dadar & Nagar Haveli	Meghalaya	Tamil Nadu
Jammu & Kashmir	Sikkim	Madhya Pradesh	Mizoram	Telangana
Punjab	Andaman & Nicobar	Maharashtra	Nagaland	Puducherry
Rajasthan		Goa	Tripura	Lakshadweep
Uttar Pradesh				
Uttarakhand				

Step 2: Choose whether to include off-grid power plants in the project electricity system (optional)

Project participants may choose between the following two options to calculate the operating margin and build margin emission factor:

Option I: Only grid power plants are included in the calculation.
Option II: Both grid power plants and off-grid power plants are included in the calculation.

The Project Participant has chosen **Option I:** only grid power plants in the calculation.

Step 3: Select a method to determine the operating margin (OM)

The calculation of the operating margin emission factor ($EF_{grid,OM,y}$) is based on one of the following methods, which are described under Step 4:

(a) Simple OM; or
(b) Simple adjusted OM; or
(c) Dispatch data analysis OM; or
(d) Average OM.

The data required to calculate Simple adjusted OM and Dispatch data analysis OM is not possible due to lack of availability of data to project developers. The choice of other two options for calculating operating margin emission factor depends on generation of electricity from low-cost/ must-run sources. In the context of the methodology low cost/must run resources typically include hydro, geothermal, wind, low cost biomass, nuclear and solar generation.

Share of Must-Run (Hydro/Nuclear) (% of Net Generation)

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
India	16.8%	15.1%	14.6%	14.3%	14.5%	17.0%

Data Source: Central Electricity Authority (CEA) database Version 16, March 2021[13]

The above data clearly shows that the percentage of total grid generation by low-cost/ must-run plants (on the basis of average of five most recent years) for the Indian grid is less than 50 % of the total generation. Thus the Average OM method cannot be applied, as low cost/must run resources constitute less than 50% of total grid generation.

The simple OM emission factor is calculated as the generation-weighted average CO_2 emissions per unit net electricity generation (tCO_2/MWh) of all generating power plants serving the system, not including low-cost/must-run power plants/units.

[13] https://cea.nic.in/wp-content/uploads/baseline/2021/06/2019_20_CO2_database.zip

For the simple OM, the simple adjusted OM and the average OM, the emissions factor can be calculated using either of the two following data vintages:

(a) **Ex-ante option:** if the ex-ante option is chosen, the emission factor is determined once at the validation stage, thus no monitoring and recalculation of the emissions factor during the crediting period is required.

OR

(b) **Ex-post option:** if the ex-post option is chosen, the emission factor is determined for the year in which the project activity displaces grid electricity, requiring the emissions factor to be updated annually during monitoring.

PP has chosen ex-ante option for calculation of Simple OM emission factor using a 3-year generation-weighted average, based on the most recent data available at the time of submission of the PD to the DOE for validation.

OM determined at validation stage will be the same throughout the crediting period. There will be no requirement to monitor & recalculate the emission factor during the crediting period.

Step 4: Calculate the operating margin emission factor ($EF_{grid,OMSimple,y}$) according to the selected method

The operating margin emission factor has been calculated using a 3 year data vintage:

Net Generation in Operating Margin (GWh) (excl. Imports)			
	2017-18	2018-19	2019-20
INDIAN Grid	960,693	995,957	965,009
Simple Operating Margin (tCO_2/MWh) (incl. Imports)			
	2017-18	2018-19	2019-20
INDIAN Grid	0.9543	0.9603	0.9555

Weighted Generation Operating Margin	
INDIAN Grid	**0.9568**

Step 5: Calculate the build margin (BM) emission factor ($EF_{grid,BM,y}$)

As per Methodological tool: “Tool to calculate the emission factor for an electricity system” (Version 07.0, EB 100, Annex 4) para 72:

In terms of vintage of data, project participants can choose between one of the following two options:

(a) **Option 1** - for the first crediting period, calculate the build margin emission factor ex ante based on the most recent information available on units already built for sample group m at the time of PD submission to the DOE for validation. For the second crediting period, the build margin emission factor should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used. This option does not require monitoring the emission factor during the crediting period.

(b) **Option 2** - For the first crediting period, the build margin emission factor shall be updated annually, ex post, including those units built up to the year of registration of the project activity or, if information up to the year of registration is not yet available, including those units built up to the latest year for which information is available. For the second crediting period, the build margin emissions factor shall be calculated ex ante, as described in Option

Option 1 as described above is chosen by PP to calculate the build margin emission factor for the project activity. BM is calculated ex-ante based on the most recent information available at the time of submission of PD and is fixed for the entire crediting period.

Build Margin (tCO_2/MWh) (not adjusted for imports)	
	2019-20
INDIAN Grid	0.8682

Step 6: Calculate the combined margin (CM) emission factor ($EF_{grid,CM,y}$)

As per Methodological tool: "Tool to calculate the emission factor for an electricity system" (Version 07.0, EB 100, Annex 4) para 81:

The calculation of the combined margin (CM) emission factor ($EF_{grid,CM,y}$) is based on one of the following methods:

(a) Weighted average CM; or
(b) Simplified CM.

PP has chosen option (a) i.e. weighted average CM to calculate the combined margin emission factor for the project activity.

The combined margin emissions factor is calculated as follows:

$$\mathbf{EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}}$$

Where:

$EF_{grid,BM,y}$	=	Build margin CO_2 emission factor in year y (t CO_2/MWh)
$EF_{grid,OM,y}$	=	Operating margin CO_2 emission factor in year y (t CO_2/MWh)
W_{OM}	=	Weighting of operating margin emissions factor (per cent)
W_{BM}	=	Weighting of build margin emissions factor (per cent)

The following default values should be used for W_{OM} and W_{BM}:

Wind and solar power generation project activities: W_{OM}= 0.75 and W_{BM}= 0.25 (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods. Since project activity is of wind power generation, the above weightage has been considered for OM and BM.

Therefore, $EF_{grid,CM,y}$ = 0.9568 * 0.75 + 0.8682 * 0.25
= 0.9346 t CO_2/MWh

Project Emissions: For most renewable power generation projects activities. **Hence, PE_y =0.**

Leakage Emissions: No Leakage emissions are considered. **Hence, LE_y= 0**

Emission reduction (ER_y):

Emission reductions are calculated as follows:

$$\mathbf{ER_y = BE_y – PE_y}$$

Where

ER_y	=	Emission reductions in year y (t CO_2e/yr)
BE_y	=	Baseline emissions in year y (t CO_2/yr)

PE_y = Project emissions in year y (t CO_2e/yr)

B.4.2. Data and parameters fixed ex ante

Data/Parameter	$EF_{grid\ BM,y}$
Data unit	tCO_2/MWh
Description	The Build Margin emission factor of Indian grid
Source of data	CEA CO_2 Baseline Database, version 16
Value(s) applied	0.8682
Choice of data or measurement methods and procedures	The values are taken from the database developed by Central Electricity Authority (CO_2 Baseline database for the Indian power sector, Version 16). The database is Government of India's official publication based on the 'Tool to calculate the emission factor for an electricity system'.
Purpose of data	Calculation of baseline emissions
Additional comment	Parameter was determined ex-ante and would not be monitored during the crediting period.

Data/Parameter	$EF_{grid\ OM,y}$
Data unit	tCO_2/MWh
Description	The Operating Margin emission factor of Indian grid
Source of data	CEA CO_2 Baseline Database, version 16
Value(s) applied	0.9568
Choice of data or measurement methods and procedures	The values are taken from the database developed by Central Electricity Authority (CO_2 Baseline database for the Indian power sector, Version 16). The database is Government of India's official publication based on the 'Tool to calculate the emission factor for an electricity system'.
Purpose of data	Calculation of baseline emissions
Additional comment	Parameter was determined ex-ante and would not be monitored during the crediting period.

Data/Parameter	$EF_{grid\ CM,y}$
Data unit	tCO_2/MWh
Description	Combined margin CO_2 emission factor in year y
Source of data	CEA CO2 Baseline Database, version 16
Value(s) applied	0.9346
Choice of data or measurement methods and procedures	The combined margin emissions factor is calculated as follows: $EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,\ BM,y} * W_{BM}$ Where: $EF_{grid,BM,y}$= Build margin CO_2 emission factor in year y (tCO_2/MWh) $EF_{grid,OM,y}$= Operating margin CO_2 emission factor in year y (tCO_2/MWh) W_{OM} = Weighting of operating margin emissions factor (%) = 75% W_{BM}= Weighting of build margin emissions factor (%) = 25%
Purpose of data	Calculation of baseline emissions
Additional comment	Parameter was determined ex-ante and would not be monitored during the crediting period.

B.4.3. Ex ante calculation of emission reductions

Formula used to calculate the net emission reduction for the CPA is

$ER_y = BE_y - PE_y$

Where,

ER_y = Emission reductions in year y (t CO_2e/yr)

BE_y = Baseline emissions in year y (t CO_2/yr)
PE_y = Project emissions in year y (t CO_2e/yr)

Baseline Emission (BE_y)

The baseline emissions are the product of electrical energy baseline EGfacility,y expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

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

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)
$EF_{grid,CM,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh)

As per para 41 of methodology, project activity is the installation of a Greenfield power plant, hence

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

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 CDM project activity in year y (MWh/yr)
$EG_{PJ,facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

Annual electricity supplied to the grid by the Project (EG_y) = 49,301 MWh

Annual Baseline Emissions Reduction:

$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$
= 49,301 MWh * 0.9346 tCO_2e/MWh
= 46,076 tCO_2e/year

B.4.4. Summary of ex ante estimates of emission reductions

Year	Baseline emissions (t CO_2e)	Project emissions (t CO_2e)	Leakage (t CO_2e)	Emission reductions (t CO_2e)
04/08/2021 to 03/08/2022	46,076	0	0	46,076
04/08/2022 to 03/08/2023	46,076	0	0	46,076
04/08/2023 to 03/08/2024	46,076	0	0	46,076
04/03/2024 to 03/08/2025	46,076	0	0	46,076
04/08/2025 to 03/08/2026	46,076	0	0	46,076
04/08/2026 to 03/08/2027	46,076	0	0	46,076
04/08/2027 to 03/08/2028	46,076	0	0	46,076
Total	**322,532**	**0**	**0**	**322,532**
Total number of crediting years	**7**			
Annual average over the crediting period	**46,076**	**0**	**0**	**46,076**

B.5. Monitoring plan

B.5.1. Data and parameters to be monitored

Data/Parameter	$EG_{facility,y}$
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data	Joint meter reading OR Credit Note provided by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL)
Value(s) applied	49,301
Measurement methods and procedures	The JMR is usually taken once in month for the bulk/ revenue meter at the common substation. Also with the individual WTG controller electricity meters (both import and export) or CMS data, the JMR also gives (where applicable – apportioned) electricity import of each WTG and losses till metering point. By using these data, net export by the WTGs in the CPA will be calculated (as in some case net export is not explicitly reported in JMR). Measurement by: electricity meters (bulk, WTG controller/ CMS) Recording: Electronic and paper Recording Frequency: Continuous monitoring and monthly recording Responsibility: The operators/ O&M team will be responsible for measurement Calibration Testing Frequency: Annually Accuracy class of meters: 0.2s/ 0.5s (as per state regulation) Archiving: Crediting Period + 2 years
Monitoring frequency	Continuous measurement and at least monthly recording
QA/QC procedures	Cross check measurement results with records for sold electricity – where electricity sale is applicable
Purpose of data	Baseline emissions calculation
Additional comment	Data will be archived for more than two years after end of crediting period or last issuance, whichever later

B.5.2. Sampling plan

Not Applicable

B.5.3. Other elements of monitoring plan

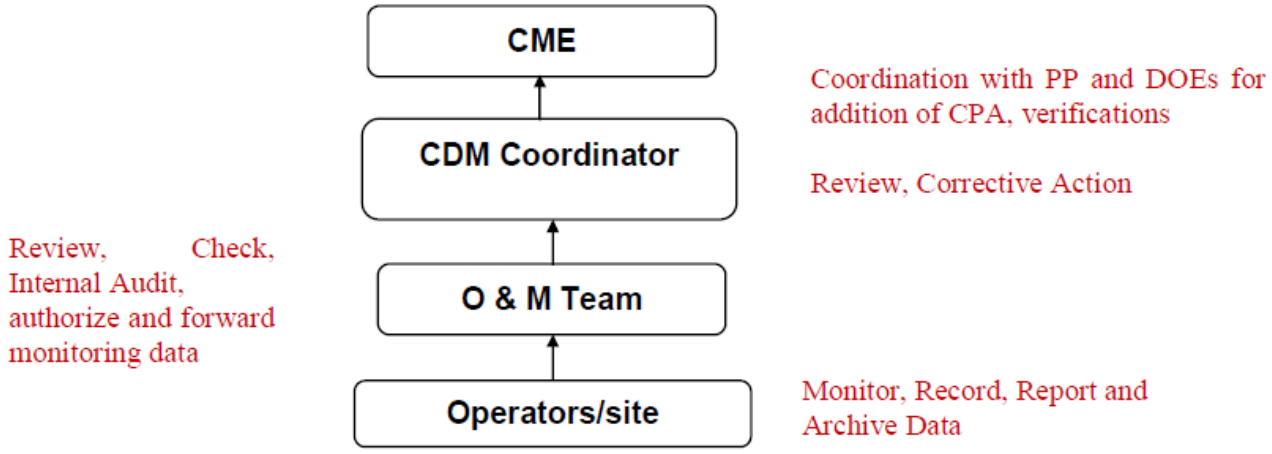
The monitoring team includes PP's employees and O&M contractor's representatives. Meter readings are taken jointly at the appointed date by PP's representative, Kenersys India Pvt. Ltd. official and Maharashtra State Electricity Distribution Company Limited (MSEDCL) official. The same is reported as Joint Meter Reports (JMR). The same is reported to the O&M team and the complied reports will be generated in the form of Credit Notes.

Net electricity supplied by the project activity to the grid is cross-checked with records for sold electricity by invoices raised for the payment purpose.

One metering system is there at the substation and another at the WTG site. If the variation between the two meter readings is significant for the monthly recording of data, the meters would be reset and calibrated. The measurement is taken from the MSEDCL energy meter which is located in the substation. Meter reading is carried out in every calendar month.

The accuracy of monitoring parameter is ensured by adhering to the calibration and testing procedure as set in the power purchase agreement. The project adheres to all mandatory regulatory and statutory requirements at the state as well as national level. The energy meters installed are tri-vector meters of 0.2% accuracy class.

The operational and management structure implemented by PP and O&M contractor is as follows:



In some cases, if a particular feeder/ substation has other WTGs not part of this CPA connected through same electricity meter, apportioning is used. Even otherwise, to get WTG/ project owner wise electricity supplied to grid, apportioning is required and is carried out as below.

Apportioning of net electricity supplied is done with reference to the electricity generated from individual WTGs. The MSEDCL issues a monthly Joint Energy Meter Readings sheet for actual power exported from the wind farm to the grid. Apportioning of net electricity supplied, as per the Joint Energy Meter Readings sheet, by each project owner is done based on the individual meter readings of each wind turbine. The apportioning is done by electricity purchaser (representative of MSEDCL) in cases jointly with the PP. The Credit Notes with electricity buyer is used to calculate actual net electricity supplied to the grid and on the basis of that GHG emission reductions by the proposed project activity will be calculated.

The net electricity exported to the grid by project activity is referred from monthly credit note readings. The main billing meter at substation records total export, and total import by all the connected WTGs to the substation through a feeder. The electricity export and import by a WTG of the PP is then calculated by using the following formulae as given below. This is the billable reading against which the PP raises invoice to the state electricity board.

Formula:

Net Generation of a WTG @ for credit:

$$\frac{\text{kWh individual generation at WTG Controller X Total (Export kWh – Import kWh) @ EB at cumulative meter at feeder}}{\text{Total Controller Generation of WTGs connected on a feeder}}$$

Procedures for handling data uncertainty:

a) In case main meter is faulty: In the event that the main metering system is not in the service as result of maintenance, repairs or testing, then the back metering system shall be used during the period the main metering system is not in service and the provisions above shall apply to the reading of the backup metering system.
b) In case both the meters are faulty: When the Main Metering System and/or Backup Metering System and/or any component thereof is found to be outside the acceptable limit of accuracy or otherwise not functioning properly, it shall be repaired, recalibrated or replaced as soon as possible by the MSEDCL. The error observed during this calibration will be applied to all readings from last correct JMR / last meter calibration. MSEDCL will ensure that metering system is tested for accuracy at least once in year and report furnished along with joint meter reading.

Any meter seal(s) shall be broken only by the authorised officer of MSEDCL in the presence of representative of Power Producers/ Developers, whenever the Main Metering System or the backup metering system is to be inspected, tested, adjusted, repaired or replaced.

In case, the monitoring period starts mid-month, the reading for that month will be apportioned based on the daily electricity export data give by the O&M contractor. This will be also checked with the average daily export arrived from that month's JMR and the conservative of the two will be used for the emission reduction calculation.

Apportioning Procedure:

Procedure for apportioning of electricity:

1) In case the start/end dates of monitoring period do not match with the start/end dates of Joint Meter Reading Sheets / Generation reports issued by MSEDCL, following apportioning procedure will be applied for the first and the last monitoring period within a particular crediting period:

   Apportioning will be carried out based on ratio of generation data recorded using LCS installed at the each WTG. The emission reductions of that particular period (between the start/end date of monitoring period and the end/start of the billing period) will be calculated based on percentage generation of that particular period at WTG using LCS data multiplied with the total units generated in the month as per the Joint Meter Reading Sheets / Generation report issued by MSEDCL. The calculation formula has been furnished below:

   Generation from all project WTGs for the period y1= $EG_{WTGcontroller,i,y1}$
   Generation from all project WTGs for the period y2 = $EG_{WTGcontroller,i,y2}$

   Net energy supplied used for calculation of emission reduction for the monitoring period y1, i.e $EG_{facility, y1}$=

$$\sum_{i=1}^{N} ((EG_{export,i,y2} - EG_{import,I,y2}) * (EG_{WTGcontroller,i,y1} / EG_{WTGcontroller,i,y2}))$$

   Where:

   y1 = No. of days within a billing period up to which generation is considered for emission reduction calculation
   y2 = No. of days in the billing period
   N = No. of feeders to which project WTGs are connected to.

2) In case if there are project and non-project WTGs connected to a particular feeder i, the quantity of net electricity supplied by project WTGs to the grid connected to that particular feeder will be calculated based on the formula specified below:

   Total generation from all project WTG(s) connected to the feeder i in period y = $EG_{WTG\_controller,i,y}$
   Total generation from all project and non-project WTGs connected to the feeder i in period y = $EG_{All\_controller,i,y}$
   Quantity of net electricity exported by all (project and non-project) WTGs connected to feeder i to the grid in period y = $EG_{export,i,y}$
   Quantity of net electricity imported by all (project and non-project) WTGs connected to feeder i to the grid in period y = $EG_{import,i,y}$

   Net electricity supplied by the project WTGs connected to feeder i to the grid in period y = $EG_{facility,y}$ =

$$\sum_{i=1}^{N} ((EG_{export,i,y} - EG_{import,I,y}) * (EG_{WTGcontroller,i,y} / EG_{All\_controller,i,y}))$$

Where N = No. of feeders to which project WTGs are connected to.

3) In cases where both scenarios mentioned above exist at the same time (i.e. both project and non- project WTGs connected to the same feeder(s) and the start/end date of the monitoring periods do not match with those of the JMR readings), firstly the apportioning as per point # 2 above will be applied for the billing period y2 to estimate the Net electricity supplied by the project WTGs connected to feeder Z to the grid in period y2. Then this value would replace ($EG_{export,y2} - EG_{import,y2}$) in the formula specified under point # 1 above to arrive at the Net energy export used for calculation of emission reduction for the monitoring period y1.

SECTION C. Start date, crediting period type and duration

C.1. Start date of CPA

18/10/2012
This is the date of supply contact with Kenersys India Private Limited for the supply of wind turbine generators, part of the CPA. (This date is selected as start date as real action on project activity started from this date only).

Confirmation from CME that the start date is after the start date of the PoA.

C.2. Expected operational lifetime of CPA

20 years and 00 months

C.3. Crediting period of CPA

C.3.1. Type of crediting period

7 years and 0 months
Renewable crediting period is chosen

The crediting period can be renewed twice (7 + 7 years) after the end of first crediting period. The crediting periods even after second renewal will not exceed the life of project WTGs and the end of duration of the PoA i.e. 22/05/2040.

C.3.2. Start date of crediting period

04/08/2021 is the start date of the crediting period. This is the second crediting period of the CPA.

C.3.3. Duration of crediting period

The length of the 2nd crediting period is 7 years and 0 months.

• As per the registered PoA, the PoA start date is 31/12/2012. PoA validity period is 28 years, i.e., up to 20/12/2040.

• Operational lifetime of the CPA is 20 years

SECTION D. Environmental impacts

D.1. Analysis of environmental impacts

The present CPA includes wind energy projects and these renewable power projects are excluded from conducting detailed EIA as per the EIA Notification 2006. Thus, environmental impact assessment has not been required for the CPA.

D.2. Environmental impact assessment

This CPA is not envisaged to have environmental impacts as seen in section above.

SECTION E. Local stakeholder consultation

E.1. Modalities for local stakeholder consultation

The CPA implementer identified local population leaving near CPA power plants, employees, elected representatives of nearby areas etc. as potential stakeholders. A local stakeholders' meeting was held on 18/12/2013 and invitation was published in Punyanagari newspaper in advance as well as few personal invitations (local language). The meeting was held at Venue – Sevagiri Function Hall, Pusegaon

The meeting was attended by total 29 people and started by welcome address from Mr. C.R. Vishwanathan (Kenersys - WTG supplier and O&M contractor) and introductions. Mr. M.R. Sakurve, a local representative was unanimously chosen as chairperson of the meeting. Mr. Rohit Joshi, representative of CPA implementer introduced objectives of project, its benefits and role in reduing GHG emissions. He also discussed issue of global warming and role of CDM of the Kyoto Protocol. Mr. Sanjiv Mehatre, another representative of CPA implementer discussed benefits of project to the local communities.

The Chairperson then summarised comments and gave his view, thanked CPA implementer for the social benefits. Then attendees were requested to give comments and raise concerns if any. These are summarised in following Section.

E.2. Summary of comments received

Sr. No.	Query / comments from stakeholders	Response from PP
1	Mr. Baban Kumbhar Can the electricity generation from this project be directly supplied to the local community?	The generated electricity is supplied to the state electricity distribution company which distributes it as per the state policy. PP can not supply electricity directly to the local community.
2	M. Satish Sutar How wind farms help mitigate climate change?	Wind farms generate clean renewable electricity without any GHG emissions or waste by products. This electricity displaces electricity generation in fossil fuel dominated grid resulting in savings of coal. Thus, lower GHG emissions help mitigate climate change.
3	Mr. Vijay Patil Can local communities get work related to project?	Yes, local communities will be given opportunities (employment and contracts) with proper selection process.
4	Mr. M. R. Salunke Is it true that wind mills move away rain clouds?	The clouds are much higher than the height of wind mills and hence it is not likely to have any impact on rain. Further reference was made to studies from Indian Institute of Tropical Meteorology and Center of Wind Energy Technology on same conclusion.
5	Mr. Sampat Mohite Is it true that noise of wind mills affects milk production from	Noise level of wind mills will be around 46 db. This is with noise level limit of 50 db as per the Indian Industrial Act and will not impact cattle in any way.

	cattles?	

E.3. Consideration of comments received

The organisers gave vote of thanks to the stakeholders and requested to contact PP in case of any further queries.

SECTION F. Eligibility for inclusion

Confirmation of additionality of CPA

The POA requires each CPA to demonstrate additionality using applicable CDM guidelines. The CPA has chosen to demonstrate additionality using 'Tool for the demonstration and assessment of additionality' (Ver. 07.0.0, EB 70, Annex 08). Accordingly step wise analysis is presented below.

Step 1: Identification of alternatives to the project activity consistent with current laws and regulations

Sub-step 1a: Define alternatives to the project activity:

1) Identify realistic and credible alternative(s) available to the project participants or similar project developers that provide outputs or services comparable with the proposed CDM project activity.

a) The proposed project activity undertaken without being registered as CDM project activity.

   This alternative is in compliance with all applicable legal and regulatory requirements and may be a part of the baseline. However, in the absence of the CDM revenue it would have been difficult for the project proponent to implement the project activity on account financial unviability (please refer to Step 2: Investment Analysis in the following section for details).

b) Continuation of existing situation

   In this alternative, the project activity would not be implemented and an equivalent amount of energy (power) would have been produced by the project grid electricity system through its currently running power plants and by new capacity addition to the grid. i.e. continuation of current situation

Outcome of Sub-step 1a: The following are the possible alternatives for the project activity:

1) The proposed project activity undertaken without being registered as CDM project activity.
2) Continuation of existing situation

Sub-step 1b: Consistency with mandatory laws and regulations:

Both the alternatives are in compliance with all applicable legal and regulatory requirements as

- The implementation of the project activity is a voluntary initiative as taken by the project proponent and is not mandatory or a legal requirement;
- The Electricity Act, 2003, does not restrict or allow any authority to restrict the fuel choice for power generation; and
- The applicable Environmental Regulations do not restrict the use of wind energy and there is no legal requirement on the selection of a particular technology.

Outcome of Step 1b: The identified alternatives in sub step 1 a are in compliance with all applicable legal and regulatory requirements.

Step 2 Investment analysis OR Step 3 Barrier analysis

Investment Analysis

CPA implementer has chosen Investment analysis to prove the Additionality

Sub-step 2a Determine appropriate analysis method

Option 1 Simple Cost Analysis would not be an appropriate analysis method as the project incurs revenue from sale of electricity (export of power to grid). As per guidance 19 of Annex 5 of EB 62, Project is grid connected power plant and is selling electricity. Thus,

Investment Comparison Analysis is not applicable as the investment in the alternative number 1 (identified in sub-step 1 b) is not in control of PP. As the project is supplied power to the grid, benchmark analysis is suitable to the project activity as per guidance 19 of Annex 5 of EB 62.

As the project is supplied power to the grid, benchmark analysis is suitable to the project activity as per guidance 19 of Annex 5 of EB 62.

Outcome of Sub-step 2a – The benchmark analysis option has been chosen.

Sub-step 2b: Option III. Apply benchmark analysis

Selection of financial indicator

The project activity involves considerable amount of capital investment. The project activity aims to supply electricity to Indian grid and thus generating revenue from sale of electricity. The Internal Rate of Return is a rate of return used in capital budgeting and compare the profitability statements and is found to be suitable indicator in capital intensive projects. PP had used equity IRR at the time of investment decision time. Thus in the context of the project activity, Equity IRR is deemed to be the suitable indicator for assessing the financial attractiveness of the project activity.

Now, here PP has evaluated post-tax equity IRR to assess the financial viability of the project activity.

Chosen financial indicator: Equity IRR

Selection of benchmark

Selection of benchmark and use following example if financial indicator chosen is equity IRR, delete if not applicable

Choice of Benchmark: Expected/ required return on equity (as per EB 62, Annex 5, Appendix)

As per Para 12 of Annex 5 of EB 62,
Required/expected returns on equity are appropriate benchmarks for an equity IRR.

Thus, as per the above guidance CPA implementer has chosen required rate of return (ROE) as a benchmark.

As per guidance 13 of Annex 5 of EB 62,
In the cases of projects which could be developed by an entity other than the project participant the **benchmark** should be based on parameters that are standard in the market.
Since the project activity can be developed by any other entity, ROE is calculated based on the standard parameters in the market.

As per guidance 15 of Annex 5 of EB 62,

If the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in Appendix A; or by (b) calculating the cost of equity using best financial practices, based on data sources which can be clearly validated by the DOE, while properly justifying all underlying factors.

As per the above guidance PP has used option (a) i.e. default values as provided in the Appendix A. The project 1 projects of India is 11.75%. As per guidance 7 of Appendix A, the nominal value can be converted to real term value by adding target inflation rate provided by central bank. Therefore, the real term value of ROE has been converted to the nominal term by adding inflation rate forecasted by RBI for year 2012-13 by taking activity belongs to sectoral scope 1 i.e. Energy Industries and thus falls under Group 1. The real term value of ROE for group average for 4 consecutive quarters which is 7.18%[14]. Thus, the benchmark ROE comes to 18.93%.

The key assumptions applied for the calculation of equity IRR are provided in the table below:

Table B.5.1: Assumptions made for the calculation

Parameter	Unit	Value	Reference / Remarks
No. of wind turbines	Nos	14	Extracts of Project Appraisal Committee Meeting Dated 9 October 2012
Capacity of each wind turbine	MW	2	Extracts of Project Appraisal Committee Meeting Dated 9 October 2012
Plant load factor	%	20.10	Wind Assessment Study by third party, (Pg.23), 7 Sept 2012
Total capacity of CPA	MW	28	Extracts of Project Appraisal Committee Meeting Dated 9 October 2012
Total project cost	Rs. Million	1,659	Calculated as per the Term Sheet
Total estimated annual electricity generation	MWh	49,301	calculated from project capacity and PLF
O&M cost	%	0.768 million/MW	Pg 40, MERC RE tariff order_March 2012
Tariff for sale to grid (till 13th years)	Rs./kWh	5.67	Pg 41, MERC RE tariff order_30 March 2012
Income tax rate of depreciation on plant and machinery	%	7.69	Appendix IA of IT Rules
Income tax rate of depreciation on civil work	%	10	
Total income Tax	%	32.45[15]	Indian IT Act FY 2012-13
Income tax	%	30	Indian IT Act FY 2012-13
Surcharge	%	5	Indian IT Act FY 2012-13
Cess	%	3	Indian IT Act FY 2012-13
Debt-Equity ratio	%	70:30	Pg 13, MERC RE tariff order_March 2012
Interest rate	%	14.49	Avg. lending rate of five banks
Repayment	Years	10	Pg 64, MERC RE tariff order_March 2012
Moratorium	Year	0	
Salvage Value	%	10[16]	Pg 64, MERC RE tariff order_March 2012
Tariff from 14th year	Unit	Cost +16% return on equity	CERC Tariff Guideline

[14] http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/01SPA281013.pdf
[15] http://www.incometaxindiapr.gov.in/incometaxindiacr/contents/taxrates/COMPANIES_2013_14.htm
[16] http://www.marshall-stevens.com/pdf/pub_ValueCurves.pdf

Parameter	Unit	Value	Reference / Remarks
GBI benefits	Rs./kWh	0.5	GBI notification[17] with cap of Rs. 6.2 million/ MW

The equity IRR has been worked out for this project based on the above assumptions. The assumptions made to calculate equity IRR are conservative and were applicable at the time of investment decision. The equity IRR comes to 12.24% and is below the benchmark used. Therefore, it can be concluded that project is not viable without CDM revenue.

Sensitivity analysis:

As per Para 20 of Annex 5 of EB 62, the variables that constitute more than 20% of the total project cost as well as total project revenue are:

1. O & M
2. PLF
3. Project cost
4. Tariff

Hence, all these parameters are subjected to ±10% of variation to confirm the robustness of the equity IRR.

Outcome of sensitivity analysis:

The result of the sensitivity analysis carried out for the parameters O&M, PLF and project cost are provided in the table B.5.2 below.

Table B.5.2: Results of sensitivity analysis

Parameter	Variation	Without CDM revenues (%)	Required variation in parameter to breach the benchmark	Benchmark (%)
O&M	+10%	12.04	It is not possible to meet benchmark even with -100% reduction in O&M charges	18.93%
	-10%	12.44		
PLF	+10%	15.44	+20.20%	
	-10%	9.19		
Tariff rate	+10%	15.36	+20.80%,	
	-10%	9.25		
Project Cost	+10%	9.26	-15.90%	
	-10%	16.09		

It is shown through the above analysis that the equity IRR without CDM revenue does not meet the benchmark.

Step 4: Common practice analysis

The 'Guidelines on common practice', version 02.0, EB 69, Annex 8 is used here.
Stepwise approach for common practice

Step 1: calculate applicable capacity or output range as +/-50% of the total design capacity or output of the proposed project activity.

The CPA project activity is 28 MW and hence the applicable capacity for this analysis is 14 - 42 MW.

[17] http://www.ireda.gov.in/forms/contentpage.aspx?lid=744

Step 2: identify similar projects (both CDM and non-CDM) which fulfil all of the following conditions:

(a) The projects are located in the applicable geographical area;

The default applicable geographic area as per the guidelines on common practice is host country i.e. India. Within Host Country India different States have different policies for renewable energy projects and the tariff varies from state to state. The tariff calculation depends on generation estimates of different states and different project sites. The PLF varies significantly based on the location (state) and so is the variation in tariff which is governed by the state electricity regulatory commission. In case of Maharashtra the tariff is determined by 'Maharashtra Electricity Regulatory Commission'[18]. Different PLF and tariff rate can impact investment decision in each state, hence state as the applicable area will give equal weightage to comparable projects hence selected for further analysis. Hence, for further analysis the 'Applicable geographical area' chosen is Maharashtra state.

(b) The projects apply the same measure as the proposed project activity;

As discussed at the start of analysis, the measure applied by the CPA project is 'power generation based on renewable energy generation'. Thus, all renewable energy generation projects are studied.

(c) The projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity;

This is not applicable as CPA project does not involve a feedstock. Hence renewable energy technologies that use fuel/feed stock like biomass will not be considered for analysis.

(d) The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant;

The CPA project is implemented to produce electricity and all project considered here are also electricity generation units.

(e) The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1;

As seen above, the applicable capacity range for this analysis is 14 - 42 MW.
(f) The projects started commercial operation before the project design document (CPA-DD in this case) is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity.

Here, the real case CPA-DD is part of PoA and hence will not be published for global stakeholder consultation. Thus, projects commissioned before the start date of CPA i.e. 18/10/2012 will be considered.

Based on the above explanation we have three renewable technologies for analysis which are wind, solar and hydro.

For solar projects the database published by Maharashtra Energy Development Agency (MEDA) is studied. For all other grid connected hydro power plants, an authentic public database published by CEA[19] is used here.

[18] https://www.merc.gov.in/
[19] http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm (Version 08, database, 'Data' worksheet)

Solar projects commissioned in Maharashtra:

A database published by Maharashtra Energy Development Agency (MEDA)[20] is used. Within this database, none of the projects are found to be in the range of 14 MW-42 MW.

Details of wind projects is provided in the separate excel sheet provided for validation.

By analysing these three databases, total projects observed were 37 (19 hydro, 0 solar and 18 wind).

Step 3: within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number N_{all}.

None of hydro projects in above analysis were in CDM. However, 17 out of above 18 wind projects were in CDM leaving only 1 for further analysis. Thus,

$N_{all} = 19 + 1 = 20$

Step 4: within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number N_{diff}.

Here, since hydro power plant have different technology (including working principle), these are considered as different. Thus,

$N_{diff} = 19$

Step 5: calculate factor $F=1-N_{diff}/N_{all}$ representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.

$F = 1 – (19/20) = 0.05$
$N_{all} - N_{diff} = 1$

As per the guidance, the proposed project activity is a “common practice” within a sector in the applicable geographical area if the factor F is greater than 0.2 and Nall - Ndiff is greater than 3. However, here, both these conditions are not fulfilled and hence project is not a common practice.

Outcome of Step 4:

CPA wind power project is not a common practice.

As can be seen from above, the project activity without the CDM revenue is not a financially viable option and it is additional.

Demonstration of eligibility for a CPA

The project activity is eligible to be renewed as no change in the project design and measure/technology considered in the CPA DD of first crediting period. Thus, no change in the additionality of the project activity from the first crediting period of CPA-dd. Further, it fulfils the following criteria defined for inclusion of a CPA in the PoA and requirement of project standard version 03.

[20] http://www.mahaurja.com/PDF/PG2_GridConnSPPCommissioned.pdf

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	Description of this CPA in relation to the criterion and supporting evidence
1	The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA	Yes	Commissioning Certificate, supply order/ purchase order/ MOU with supplier have been submitted for the evidence.	The below documents indicate that CPA is located in India • Commissioning Certificate • MOU with supplier • Supply Order/Purchase Order
2	Conditions to avoid double counting of GHG emission reductions or net anthropogenic GHG removals, such as unique identifications of product and end user locations (e.g. programme logo)	Yes-	•Unique identification numbers allocated to CPA. • Unique Geo-coordinates allocated for each CPA Declaration of no double counting of emission reductions. List of PoA project available at UNFCCC https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/H8ZL9NPDCF0B76JQM5XVTGKI1YU4AO/viewCPAs?s=10	Unique identification number based on locations has been allocated to each CPA to avoid double counting of emission reductions. Based on UNFCCC project cycle, the CPA is not a part of any other PoA or will not be registered as individual project activity. The same can be verified through Undertaking from the CPA implementing body confirming that project activity is not an individual CDM project or part of any other PoA. CPA provided with the unique geographical location in terms of latitude and longitude. The unique geographical location can be cross verified by any one document mentioned for geographical boundary confirm that the CPA has been located at a site where there was no renewable energy power plant operating prior to the implementation of the CPA (Greenfield plant).
3	The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications.	Yes	Details of technology used will be evident from following: • Product Brochure/ Manufacturer brochure of the equipment used • Detailed Project report/Feasibility Report Plant Load Factor can be evident from 3rd Party PLF report or 3rd party DPR.	CPA implementer has been provided description of the technologies including expected lifetime, capacity, plant load factor and provided technical specification evidences to confirm the same details..
4	Start date of the CPA	Yes	The start date of the CPA will be evident from:	Commissioning certificate has been provided to confirm the start date of the project.

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	Description of this CPA in relation to the criterion and supporting evidence
			• supply order/ purchase order placed with the supplier • start of construction of project plant • any other commitment to implement project	
5	Compliance with applicability conditions and other requirements of ACM0002	Yes	Applicability conditions of ACM0002 (Ver.20.0) Section B of CPA-DD	CPA has been satisfied the applicability conditions for simplified baseline and monitoring methodologies as specified in the ACM0002 (Ver. 20.0) in section B.1. of the CPA-DD
6	Demonstration of Additionality	Yes	The CPA will establish additionality using "Tool for the demonstration and assessment of additionality" (Ver. 07.0.0, EB 70, Annex 8). IRR calculation sheet along with all supporting documents for the financial parameters for demonstrating the additionality of the CPA shall be provided.	There is no change in the project design, capacity and monitoring measurement of the project, thus it can be confirmed that no impact on the additionality of the project from the CPA-DD included during renewal crediting period of the project activity.
7	Local Stakeholder Consultation and Environmental Impact Analysis.	Yes	For local stakeholder meeting, each CPA must provide the following: • Invitations evidences (public notice, letters, posters) • meeting photographs or video • list of attendees • feedback forms or evaluation forms • minutes of meeting For Environment Impact assessment, the EIA	Stakeholder consultation was carried out during inclusion of CPA-DD. No fresh stakeholder consultation is required during renewal crediting period. Hence, criteria is met.

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	Description of this CPA in relation to the criterion and supporting evidence
			study report must be provided for each CPA (if conducted).	
8	Public funding or ODA	Yes	Each CPA shall provide declaration of no public funding or no ODA from annex-1 party.	No ODA declaration was submitted during inclusion time of the CPA-DD. This criterion is fulfilled.
9	Target group	Yes	This can be checked from the PPA for each CPA.	Project activity is supplying power to the grid and it can be confirmed from the PPA.
10	Sampling	Yes	Not Applicable	Project is standalone project and no sampling method is applicable.
11	Other PoAs or projects	Yes	Declaration of double counting check, GPS coordinates, Analysis of projects in the CDM pipeline	Based on UNFCCC project cycle, the CPA is not a part of any other PoA or will not be registered as individual project activity. The same can be verified through Undertaking from the CPA implementing body confirming that project activity is not an individual CDM project or part of any other PoA. CPA provided with the unique geographical location in terms of latitude and longitude. The unique geographical location can be cross verified by any one document mentioned for geographical boundary confirm that the CPA has been located at a site where there was no renewable energy power plant operating prior to the implementation of the CPA (Greenfield plant).
12	Small-Scale Thresholds	Yes	Not applicable for the POA as Large Scale meth will be used and hence capacity of the CPA should be more than 15 MW.	Project activity size is more than 15 MW and same can be confirmed from commissioning certificate
13	De-bundling Check	Yes	Not applicable for the POA as Large Scale meth will be used and hence de-bundling creteria is not applicable for the POA.	Not applicable

Appendix 1. Contact information of CPA implementers

Organization name	ReNew Wind Energy Delhi Private Limited
Country	India
Address	Tower 4A, 6th Floor, DLF Corporate Park, MG Road, Gurgaon (NCR Delhi), Delhi-122002
Telephone	+91 124 4489 6670/80
Fax	+91 124 4489 6670
E-mail	info@renewpower.in
Website	http://renewpower.in/
Contact person	Mr. Parag Sharma, Chief Operating Officer

Appendix 2. Affirmation regarding public funding

The PoA does not involve diversion of ODA or public funding from Annex 1 countries.

Appendix 3. Further background information on ex ante calculation of emission reductions

Please refer section B of the CPA-DD for the same.

Appendix 4. Further background information on monitoring plan

Please refer to section B.4.2.of the CPA-DD for the same.

Appendix 5. Summary report of comments received from local stakeholders

Please refer to section E.2.of the CPA-DD for the same.

Appendix 6. Summary of post-registration changes

Not Applicable.

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Document information

Version	*Date*	*Description*
10.0	8 October 2021	Revision to: • Ensure consistency with version 03.0 of the "CDM project standard for programmes of activities" (CDM-EB93-A07-STAN).
09.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM project standard for programmes of activities" (CDM-EB93-A07-STAN); • Make editorial improvements.
08.1	20 October 2017	Editorial revision to remove appendix "Applicability of methodologies and standardized baselines" from the main part of the form which had been mistakenly kept in the previous version.
08.0	28 June 2017	Revision to: • Remove appendix "Applicability of methodologies and standardized baselines" as the appendix is not relevant at the CPA level; • Make editorial improvement.
07.0	7 June 2017	Revision to: • Improve consistency with the "CDM project standard for programmes of activities" and with the PDD and PoA-DD forms; • Make editorial improvement.
06.0	24 May 2017	Revision to: • Ensure consistency with the "Standard: CDM project standard for programme of activities" (CDM-EB93-A07-STAN) (version 01.0); • Incorporate the "Component project activity design document form for small-scale component project activities" (CDM-SSC-CPA-DD-FORM); • Make editorial improvement.
05.0	15 April 2016	Revision to ensure consistency with the "Standard: Applicability of sectoral scopes" (CDM-EB88-A04-STAN) (version 01.0).
04.0	9 March 2015	Revision to: • Include provisions related to statement on erroneous inclusion of a CPA; • Include provisions related to delayed submission of a monitoring plan; • Provisions related to local stakeholder consultation; • Provisions related to the Host Party; • Make editorial improvement.
03.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the component project activity design document form for CDM component project activities (these instructions supersede the "Guidelines for completing the component project activity design document

Version	Date	Description
		form" (Version 01.0)); • Include provisions related to standardized baselines; • Add contact information on a CPA implementer and/or responsible person/ entity for completing the CDM-CPA-DD-FORM in A.13. and Appendix 1; • Add general instructions on post-registration changes in paragraph 4 and 5 of general instructions and Appendix 6; • Change the reference number from F-CDM-CPA-DD to CDM-CPA-DD-FORM; • Make editorial improvement.
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the component project activity design document form" (EB 66, Annex 16).
01.0	27 July 2007	EB 33, Annex 42 Initial adoption.

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