**PROJECT DESIGN DOCUMENT FORM
FOR SMALL-SCALE CDM PROJECT ACTIVITIES (F-CDM-SSC-PDD)
Version 04.1**

PROJECT DESIGN DOCUMENT (PDD)

Title of the project activity	2.5 MW Wind Project by Gokul Refoils & Solvent Limited
Version number of the PDD	03
Completion date of the PDD	16/07/2013
Project participant(s)	Gokul Refoils and Solvent Limited
Host Party(ies)	India
Sectoral scope(s) and selected methodology(ies)	**Energy Industries (Renewable/Non renewable sources) [01], AMS I.D. version-17**
Estimated amount of annual average GHG emission reductions	4256

SECTION A. Description of project activity
A.1. Purpose and general description of project activity

Project activity:

Gokul Refoils and Solvent Limited (GRSL) is one of the leading FMCG Companies of India with international presence, dealing in edible oils such as Soya bean oil, Cottonseed oil, Palm oil (Palmolein), Sunflower oil, Mustard oil, Groundnut oil, Vanaspati and Industrial oils such as Castor Oil. It is an ISO 22000:2005 company. Being a leading organization, GRSL decided to install wind power project and hence help in reduction of green house gas emissions.

The project activity involves installation of two Wind Turbine Generators (WTGs) of 1250 kW capacity each by Gokul Refoils and Solvent Limited The WTGs are located at Adodar site in Porbandar district in the state of Gujarat. The project will generate energy through renewable source i.e. wind. The kinetic energy of wind is converted into mechanical energy and subsequently into electrical energy. WTG converts the kinetic energy which is carried by wind when passes through the blades of the WTG to mechanical energy which rotates the connected generator and which in turn produces the electricity. Then the electricity is wheeled to industrial premise of GRSL at Meghpar(Borichi) in Kutch District.

The electricity thus produced will be displacing the grid electricity which would have otherwise been generated through sources dominated by fossil fuel based power plants. The project activity thereby reduces the emission of green house gases which would have been generated from such fossil fuel based power plants.

Prior to the project activity, there was no power generation at the site of the project activity hence the project activity is a greenfield project activity.

Baseline scenario for this project activity will be the electricity from the grid. Estimated GHG reduction through this project activity is 4,256 tCO_2e annually and 42,560 tCO_2e accumulated over a crediting period of 10 years.

Project Activity's contribution to sustainable developments:

The National CDM Authority (NCDMA), which is the Designated National Authority (DNA) for the Government of India (GOI) in the Ministry of Environment and Forests (MoEF), has mentioned four indicators for the sustainable development in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India[1].

Thus the project's contribution towards sustainable development has been addressed based on the following sustainable development aspects:

1. Social well being: The project activity causes the development of new infrastructure such as roads. Apart from this, project activity also generates employment which in turn raises the standard of living.

2. Environmental well being: Generation of power through wind energy instead of fossil fuel combustion causes no pollution as fossil fuel based power plant emits liquid and/or solid effluent wastes.

[1] http://www.cdmindia.in/approval_process.php

3. Economic well being: At the time of land development and erection phase, project activity contributed towards the local development. Local electrical contractor also obtained good business due to the project activity. Apart from this, local people are also employed in the transportation, security, infrastructure development.

4. Technological well being: The project activity will act as an example of an environmental friendly technology and hence will instigate others to follow the suit.

A.2. Location of project activity
A.2.1. Host Party(ies)

India

A.2.2. Region/State/Province etc.

Gujarat

A.2.3. City/Town/Community etc.

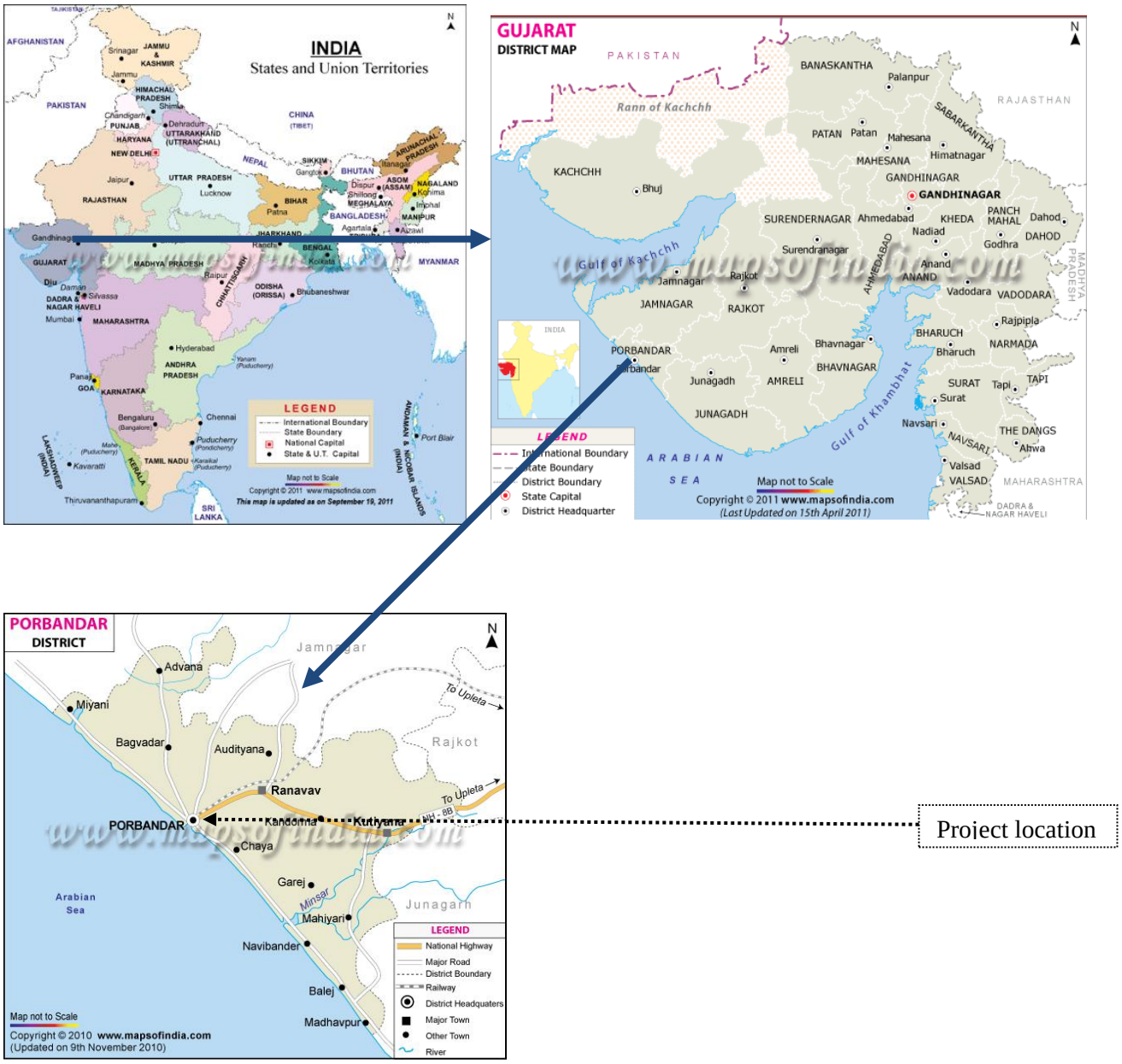
Porbandar

A.2.4. Physical/ Geographical location

Co-ordinates of the wind-mill locations are:

WTGs	Latitude	Longitude
WTG-1	N $21^0$35’28.8”	E $69^0$39’27.6”
WTG-2	N $21^0$35’44.8”	E $69^0$38’57.7”

The project is located at Adodar village in the Porbandar district. The figure representation of the project activity is shown in the figure below.



A.3. Technologies and/or measures

The project activity incorporates installation of two numbers of 1250 kW S-66 wind turbine generator of Suzlon Energy Limited and then wheeling this power via NEWNE grid to industrial unit at Meghpar Borichi in Kutch district. As per methodology AMS I.D., 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. Hence the scenario existing prior to the start of the implementation of the project activity is same as the baseline scenario and similar quantity of electricity (same types and level of services) would have been generated through fossil fuel fired power plant that dominates the NEWNE grid and emit GHG gases and levels of services provided by the project activity would have been provided by the grid in the baseline scenario.
In wind energy based power generation, the kinetic energy of the wind is being converted to mechanical energy and subsequently to electric energy. The technical specification of the wind turbine is depicted below:

Specification of S – 66/1250 KW WTG[2]:	
Model	S66-1250kW
Operating Data	
Cut-in wind speed	3 m/s
Rated wind speed	14 m/s
Cut-off wind speed	22 m/s
Survival wind speed	52.5 m/s
Rotor	
Type	3 blades, Upwind/Horizontal Axis
Diameter	66 m
Rotational speed at rated power	13.5 to 20.3 rpm
Rotor blade material	Epoxy bonded fiber glass
Swept area	3421 m^2
Power regulation	Active pitch regulated
Gearbox	
Type	1 planetary stage/2 helical stage
Ratio	1:74.9
Nominal Load	1390 kW
Type of cooling	Forced oil cooling lubrication system
Generator	
Type	Induction generator (asynchronous), air cooled
Speed at rated power	1000/1500 rpm
Rated power	300kW/1250 kW
Rated voltage	600 V AC (phase to phase)
Frequency	50 Hz
Insulation	Class H
Enclosure	IP 56
Cooling system	Air cooled
Tower	
Type	Tubular Tower with welded steel pipes
Tower height	72 m
Hub height	74.5 m
Braking system	
Aerodynamic braking	3 independent system with bkade pitching
Mechanical braking	Hydraulic fail safe disc brake system
Yaw System	
Type	Active electrical yaw motor
Bearing	Polyamide slide bearing with gear ring and automatic greasing system
Protection	Cable twist sensor
Pitch system	
Type	3 independent blade pitch control
Operating range	-5^0 to $+90^0$
Resolution	0.1^0 to 10^0
Estimated Life	
Average Lifetime	20 years

[2] http://www.suzlon.com/pdf/S64-S66-1-25MW-Suzlon-Product-Brochure.pdf

Trivector meters of accuracy class 0.2 S will be used to monitor the electricity imported from and exported to grid. This meter will be located at the pooling substation.

The project activity is deployed taking into consideration all aspects of environmentally safe and sound technology. Moreover there has been no technology transfer involved in the project activity.

A.4. Parties and project participants

Party involved (host) indicates a host Party	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
India (Host Party)	Gokul Refoils and Solvent Limited(Private)	No

A.5. Public funding of project activity

There is no public funding to the project activity

A.6. Debundling for project activity

In accordance with paragraph 2 of "GUIDELINES ON ASSESSMENT OF DEBUNDLING FOR SSC PROJECT ACTIVITIES version 03.[3]" A proposed small-scale project activity shall be deemed to be a debundled component of a large project activity if there is a registered small scale CDM project activity or an application to register another small-scale CDM project:

1. The same project participants.
2. In the same project category and technology and measure.
3. Registered within the previous 2 years.
4. Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point.

There is one registered project with the same project participant with following details:
1. Title - 5 MW Wind Power Project by Gokul Refoils and Solvent Ltd. (UNFCCC Reference no. 4062
2. Date of registration - 07/02/2011 , which is within the previous two years
3. Distance from the boundary of the proposed project activity is 98.1 km[4] at the closest point.

The previous project is registered within previous two years by the same project participant and in the same project category and technology and measure. However, the project boundary of the registered project is not within 1 km of the project boundary of the proposed small-scale activity at the closest point. And hence as per the "GUIDELINES ON ASSESSMENT OF DEBUNDLING FOR SSC PROJECT ACTIVITIES version 03", the proposed 2.5 MW project is not a debundled component of a large-scale project activity.

[3] http://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid17.pdf
[4] Distance is calculated using http://www.chemical-ecology.net/java/lat-long.htm. Calculation sheet is submitted to DOE for validation.

SECTION B. Application of selected approved baseline and monitoring methodology
B.1. Reference of methodology

Methodology: AMS I.D. Grid connected renewable electricity generation (version 17)
(http://cdm.unfccc.int/methodologies/DB/RSCTZ8SKT4F7N1CFDXCSA7BDQ7FU1X)

Tools: Tool to calculate the Emission Factor for an electricity system version-02.2.1
(http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v2.2.1.pdf)

B.2. Project activity eligibility

The project activity to be considered under Type I (Renewable energy project activities with a maximum output capacity of 15 MW (or an appropriate equivalent) and category I.D. (Grid connected renewable electricity generation) of small scale project activity should fulfil certain criteria as depicted under modalities and procedure of small scale project activity and the concerned methodology.

For this particular project activity approved methodology AMS I.D. version 17 is used. The applicability of the choice of the project activity under AMS I.D. can be justified as follows:

<table>
<tr><th>Applicability Criteria</th><th>Justification of choice</th></tr>
<tr><td>This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:
(a)Supplying electricity to a national or a regional grid; or
(b)Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.</td><td>The methodology comprises of renewable energy generation units i.e. wind-mills. And the project activity supplies electricity to an identified consumer facility via NEWNE grid through wheeling and hence confirms the applicability of the option (b). This can be confirmed with the wheeling agreement between project participant and state utility.
Hence this criterion is fulfilled.</td></tr>
<tr><td>Illustration of respective situations under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2</td><td>Following is the Table 2:
<table>
<tr><th></th><th>Project type</th><th>AMS -I.A</th><th>AMS-I.D</th><th>AMS-I.F</th></tr>
<tr><td>1</td><td>Project supplies electricity to a national/regional grid</td><td></td><td>√</td><td></td></tr>
<tr><td>2</td><td>Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)</td><td></td><td></td><td>√</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Applicability Criteria</th><th>Justification of choice</th></tr>
<tr><td></td><td>
<table>
<tr><td>3</td><td>Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)</td><td></td><td>√</td><td></td></tr>
<tr><td>4</td><td>Project supplies electricity to a mini grid[5] system where in the baseline all generators use exclusively fuel oil and/or diesel fuel</td><td></td><td></td><td>√</td></tr>
<tr><td>5</td><td>Project supplies electricity to household users (included in the project boundary) located in off grid areas</td><td>√</td><td></td><td></td></tr>
</table>

Since, project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling) which is confirmed with wheeling agreement. Hence as per the Table 2, the project activity satisfies all the requirements of AMS I.D.

Hence this criterion is fulfilled.</td></tr>
<tr><td>This methodology is applicable to project activities that:

(a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant);

(b) Involve a capacity addition

(c) Involve a retrofit of (an) existing plant(s);

or (d) Involve a replacement of (an) existing plant(s).</td><td>The project activity includes installation of two new wind mills (as confirmed with purchase orders) at a site where there was no renewable energy power plant operating prior to the implementation of the project activity.

Hence his criterion is also satisfied.</td></tr>
<tr><td>Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:

• The project activity is implemented in an existing reservoir with no change in the volume of reservoir;

• The project activity is implemented in an existing reservoir, where the volume</td><td>The project activity does not involve installation of any hydro power plant hence this criterion is not applicable.</td></tr>
</table>

[5] The sum of installed capacities of all generators connected to the mini-grid is equal to or less than 15 MW.

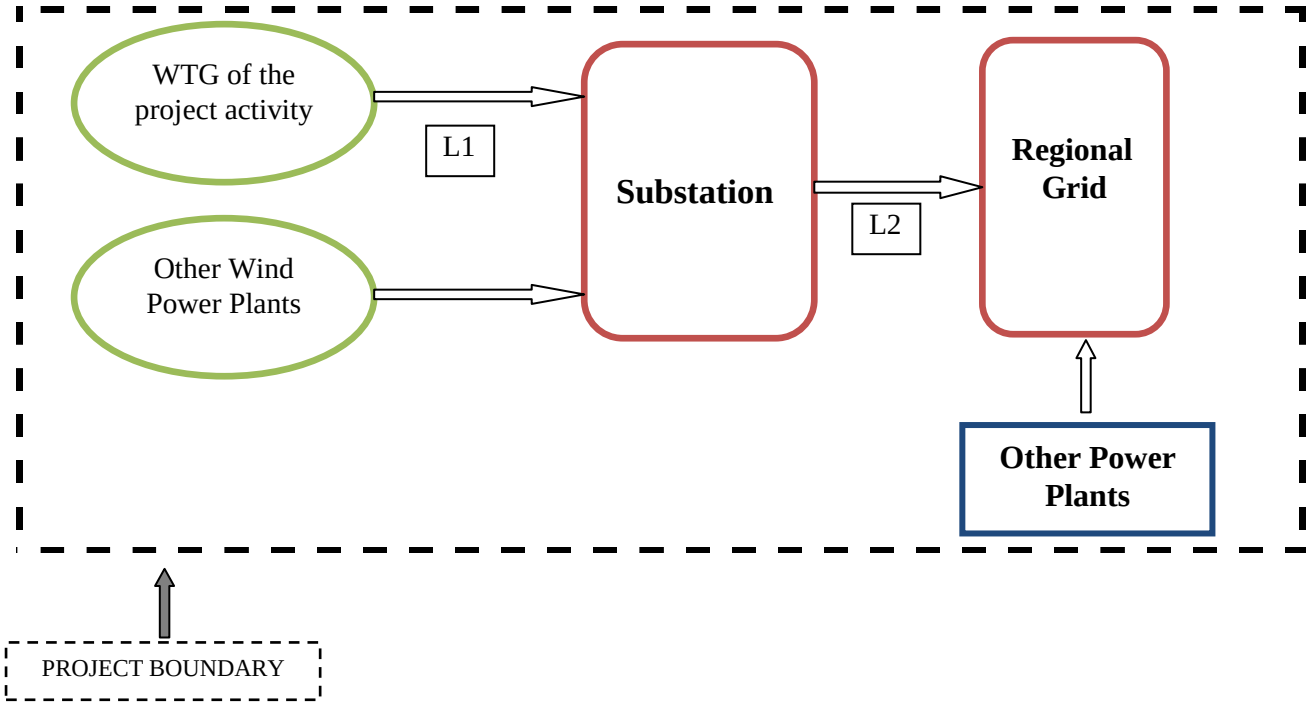
Applicability Criteria	Justification of choice
of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m^2; • The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m^2.	
If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	The project activity is the installation of 2.5 wind power plant MW (which is confirmed with purchase orders) which is certainly less than 15 MW. Hence this criterion is also satisfied.
Combined heat and power (co-generation) systems are not eligible under this category.	The project activity does not involve installation of combined heat and power (co-generation) systems.
In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	The project activity does not involve the addition of renewable energy generation units at an existing renewable power generation facility. Hence this criterion is not applicable.
In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	Project activity does not involve any retrofit or replacement. Hence, this criterion is not applicable.

Apart from above, it is evident that the total capacity of the project activity is 2.5 MW which will always remain below 15 MW over the entire crediting period of the project activity.It is therefore evident, the proposed CDM project activity meets all the applicability criteria set out under the selected small-scale methodology and hence the project category is applicable to this project.

B.3. Project boundary

According to the approved methodology AMS I.D- version-17, project boundary includes *"The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to.*"

In accordance to the above, following picture depicts the project boundary.



L1 and L2 are the monitoring locations where measurement and metering will be conducted for the purpose of the monitoring the proposed CDM project activity.

Following emission sources and GHGs are included in the project boundary:

Source	GHGs	Included	Justification / explanation
(BASELINE) Electricity Generation at NEWNE Grid	CO_2	Yes	Major emission sources
	CH_4	No	Excluded for simplification. This is conservative
	N_2O	No	Excluded for simplification. This is conservative
(PROJECT ACTIVITY) Electricity Generation by WTGs	CO_2	No	As renewable wind power project, hence not applicable
	CH_4	No	The proposed project is wind power project, hence not applicable
	N_2O	No	The proposed project is wind power project, hence not applicable

B.4. Establishment and description of baseline scenario

The project category applicable to the proposed CDM project activity is AMS- I.D (Version 17). Accordingly, the baseline scenario being considered is as directed in paragraph 10 of AMS- I.D. (Version 17). The proposed CDM project activity is the installation of a new grid-connected renewable power plant/unit and hence the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.

The project activity is located in the state of Gujarat and connected to NEWNE grid. Actually, the Indian electricity system is divided into two grids, the Integrated Northern, Eastern, Western, and North-Eastern regional grids (NEWNE) and the Southern Grid.

Baseline Emissions:

As per para-11 of the methodology AMS- I.D. Version 17, the baseline emissions are the product of electrical energy baseline $EG_{BL,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor.

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y} \quad \textbf{(1)}$$

Where:

Parameters	Description	Source
BE_y	Baseline emissions in year *y* (t CO_2)	Calculated
$EG_{BL,y}$	Quantity of net electricity displaced as a result of the implementation of the CDM project activity in year *y* (MWh)	Certificate of share of electricity
$EF_{CO2,grid,y}$	CO_2 emission factor of the grid in year *y* (t CO_2/MWh)	Calculated as per "Tool to calculate the Emission Factor for an electricity system version-02.2.1" by using publicly available CEA database version-7

Here emission factor of a grid, $EF_{CO2,grid,y}$ shall be calculated as per the procedures provided in AMS I.D. As per paragraph 12 of the AMS- I.D. (Version 17), the Emission Factor $(EF_{CO2,grid,y})$ can be calculated in a transparent and conservative manner as follows:

(a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the
OR

(b) The weighted average emissions (in t CO_2/MWh) of the current generation mix. The data of the year in which project generation occurs must be used.

According to paragraph 12 the AMS- I.D. version 17, calculations shall be based on data from an official source (where available) and made publicly available. The baseline emission factor has been worked out by Central Electricity Authority (CEA) based on detailed authenticated information obtained from all the

operating Power Stations in the country. The database is an official publication of the Government of India for the purpose of CDM baselines.

Project participant chose option (a) of the para-12 of AMS I.D. version-17. And to calculate the emission factor in accordance to option (a) of the para-12, *CO_2 Baseline Database for the Indian Power Sector, Version 7.0* has been used. "*CO2 Baseline Database for the Indian Power Sector, Version 7.0, Jan 2012"* has been published by the Government of India with the purpose of providing a ready reference for the emission factors to be used in CDM projects.

B.5. Demonstration of additionality

The project is 2.5 MW and hence may come under the "**GUIDELINES FOR DEMONSTRATING ADDITIONALITY OF MICROSCALE PROJECT ACTIVITIES verson 4.0, EB-68, Annex-26**". Applicability of this guideline is investigated below as per the applicability conditions mentioned in the guideline

Applicability Condition	**Reason**
(a) The geographic location of the project activity is in one of the least developed countries or the small island developing States (LDCs/SIDS) or in a special underdeveloped zone (SUZ)of the host country.	The project activity is located in India which is not an LDC. Also, the project activity is not located in a SUZ of the country. Hence, project does not meet this criterion.
(b) The project activity is an off-grid activity supplying energy to households/communities (less than 12 hours grid availability per 24 hrs is also considered "off-grid" for this assessment).	The project activity is not an off-grid activity. Hence, project does not meet this criterion.
(c) The project activity is designed for distributed energy generation (not connected to a national or regional grid) with both conditions (i) and (ii) satisfied; i. Each of the independent subsystems/measures in the project activity is smaller than or equal to 1500kW electrical installed capacity; ii. End users of the subsystems or measures are households/communities/small and medium enterprises (SMEs).	This project activity is not designed for distributed energy generation but connected to a national/regional grid. Hence, project does not meet this criterion.
(d) The project activity employs specific renewable energy technologies/measures recommended by the host country designated national authority (DNA) and approved by the Board to be additional in the host country. The following conditions shall apply for DNA recommendations: (i) "Specific renewable energy technologies/measures" refers to grid connected renewable energy technologies[11] of installed capacity equal to or smaller than 5 MW;	This kind of project i.e Wind Power project is not recommened by the Indian DNA. Hence, project does not meet this criterion.

(ii) The ratio of installed capacity of the specific grid connected renewable energy technology in the total installed grid connected power generation capacity in the host country shall be equal to or less than 3 per cent; (iii) Most recent available data on the percentage of contributions of specific renewable energy technologies shall be provided to demonstrate compliance with the 3 per cent threshold. In no case shall data older than three years from the date of submission be used; (iv) Technologies/measures recommended by DNAs and approved by the Board to be additional in the host country remain valid for three years from the date of approval. However, additionality of eligible project activities applying the guidelines remains valid for the entire crediting period; (v) DNA submissions shall include the specific grid connected renewable electricity generation technologies that are being recommended and provide the required data as indicated above (e.g. wind power, biomass power, geothermal power, hydropower).	

The table above hence exhibits that the project activity does not qualify under the the "**GUIDELINES FOR DEMONSTRATING ADDITIONALITY OF MICROSCALE PROJECT ACTIVITIES verson 4.0, EB-68, Annex-26**".

National policies and circumstances relevant to the baseline:
1) "Baseline CO2 database" Version 07 – Central Electricity Authority
2) Gujarat Electricity Regulatory Commission (GERC Tariff Order - 2010)
3) Electricity Act 2003

The Electricity Act, 2003 provides an enabling framework for accelerated and more efficient development of the power sector. The Act seeks to encourage competition with appropriate regulatory intervention. Competition is expected to yield efficiency gains and in turn result in availability of quality supply of electricity to consumers at competitive rates.

The Section 3 (1) of the Electricity Act 2003 requires the Central Government to formulate, inter alia, the National Electricity Policy in consultation with Central Electricity Authority (CEA) and State Governments. The provision is quoted below:

"The Central Government shall, from time to time, 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".

Further, as per section 5.2.12 of the National Electricity Plan:

Even with full development of the feasible hydro potential in the country, coal would necessarily continue to remain the primary fuel for meeting future electricity demand.

The National Electricity Plan also emphasizes the use of other fossil fuel like gas, LNG, Lignite, other imported fossil fuels in meeting the future electricity need. It further emphasize on the Renovation and Modernization (R&M) of the low performing thermal power stations in the country. This will enable to achieve improved PLF of the thermal power plant.

In the absence of this project activity, electricity would have been generated from the present fossil fuel mix in the NEWNE grid. The NEWNE grid is dominated by fossil fuel fired power plants and thus this project reduce the anthropogenic emissions of greenhouse gases (GHGs) in to the atmosphere associated with the equivalent amount of electricity generation. Wind power development in India has been promoted since July 1995 (Source: http://www.mnre.gov.in/prog-wind.htm) but there are no national or local laws or regulations that mandate this investment i.e. setting up of wind power projects. Setting up of wind power projects is a voluntary activity.

As per EB-68, Annex-9, *GUIDELINES ON THE DEMONSTRATION OF ADDITIONALITY OF SMALL-SCALE PROJECT ACTIVITIES*, project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers:

(a) Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;

(b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;

c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;

d) Other barriers: Without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.

The project participant selected **Investment barrier** to demonstrate in a conservative and transparent manner that the proposed CDM project activity is financial unattractive. In line with the guidelines stipulated under Annex -34 of EB 35 ("Non-binding best practice examples to demonstrate additionality for SSC project activities"), a benchmark analysis is used in the project case under investment barrier.

The benchmark for the equity IRR is considered in accordance to the Appendix in *Guidelines on the Assessment of Investment Analysis, EB-62, Annex-5*. Accoding to para-7 of Appendix," *In situations where an investment analysis is carried out in nominal terms, project participantscan convert the real term values provided in the table below to nominal values by adding the inflation rate. The inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period. If this information is not available, the target inflation rate of the central bank shall be used. If this information is also not available, then the average forecasted inflation rate for the host country published by the IMF (International Monetary Fund World Economic Outlook) or the World Bank for the next five years after the start of the project activity shall be used".*

As per the above guideline, project activity falls in Group-I and for India, the default value for the expected return on equity is **11.75%** .

Hence the benchmark comes out to be (1+11.75%)x(1+5.4%[6]) -1 = 17.78%

Assumption for financial analysis

Installed Capacity of the WTG	2x1.25MW	Purchase order
PLF	20.40%	PLF report prepared by third party
Capex (mn INR)	140.0	Offer from Suzlon
Opex (mn INR)	2.30	Offer from Suzlon
Wheeling charge	10%	Wind Power policy 2009
Income tax	32.45%	Inxome Tax Rules(FY 2011-2012
MAT	20.01%	Inxome Tax Rules(FY 2011-2012)
Insurance Charges @ % of project cost	0.15%	Sheet no. 31 under Risk code 70 , Rate code 05 of http://iib.gov.in/IRDA/tac/tariffs/AIFT2001.pdf
Operation & Maintanance Cost for 2nd year (Million INR)	2.30	Offer from Suzlon
Escalation in Operation & Maintanance Cost per year from 2nd year to 5th year	5%	Offer from Suzlon
Escalation in Operation & Maintanance Cost per year sixth year onwards	5%	GERC order 2010
Tariff for power consumption (INR/unit)	4.20	Electricity bill of April-2012
Ecalation in tariff	0.24%	Calculated from the PGVCL tariff orders
Depreciation(as per IT act)	80%	As per Indian Income Tax Rule
Depreciation rate (as per Companies act)	4.75%	Company's act, Schedule XIV
Salvage value (% of the project cost)	10%	CERC order dated 26/04/2010 http://www.cercind.gov.in/2010/ORDER/April10/Final_RE_Tariff_Order_FY2010-11(53-2010_Suo-motu).pdf

Internal Rate of Return (IRR) is the most common financial indicator used by bankers as well as investors to identify the financial viability of the project. The Equity IRR has been computed by taking into account the cash outflows (capital investment in the project) and cash inflows comprising profit after tax, depreciation, interest on term loan and salvage value (in the terminal year).

With the above assumptions, post-tax equity IRR for the project activity is:

Without CDM revenue	10.96%
With CDM revenue	12.90%

[6] As per 'Guidelines on the Assessment of Investment Analysis', Version 05, EB 62, Annex 5, point 7, "inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period". The crediting period for the project activity is 10 years and the mean WPI inflation rate is 5.4% (expected inflation rate for 10 years) as published by Reserve Bank of India. PP has used this value (5.4%) and the default value of the expected Return on Equity as 11.75% to estimate the benchmark for the project activity. *(Source: http://rbi.org.in/scripts/PublicationsView.aspx?id=13050)*

The equity IRR (without CDM revenue) is lower than the benchmark value of 17.78% which demonstrates the additionality of the project. Also, it is evident that the CDM revenue alleviates the investment barrier.

Sensitivity analysis:

As per the para-20 of *Guidance on the Assessment of Investment Analysis, version-05 (EB-62, Annex-5)* , only variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation.

Hence the parameters chosen for sensitivity analysis are:

- Electricity Generation
- O&M cost
- Project cost
- Tariff

Following table depicts equity IRRs without CDM revenue when these parameters are given reasonable variations (+10 and -10%):

Variation in parameter	**-10%**	**10%**
Electricity generation	9.48%	12.37%
O&M cost	11.19%	10.73%
Project Cost	12.28%	9.84%
Tariff	9.45%	12.40%

This is evident that even after varying important parameters, post tax equity IRR doesn't cross the benchmark. Therefore the sensitivity analysis also confirms that project activity is additional.

Following table depicts the variation in parameter (cross over points) where equity IRR reaches benchmark.

Parameters	**Cross over points**
Electricity generation	51.61%
O&M cost	-377.40%
Project Cost	-37.57%
Tariff	50.40%

It is evident from the above table that the variations are unlikely to attain such values.

CDM Consideration:

As per *"Guidelines on the demonstration and assessment of prior consideration of the CDM, version-04" (EB-62, Annex13),* PP must inform the Host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status. PP has intimated UNFCCC board and NCDMA of India. Chronology of the events has been tabulated as following:

Board decision	10 Aug 2011
Purchase order	18 Aug 2011
CDM intimation sent to UNFCCC	16 Jan 2012

Public notice for local stakeholders' consultation meeting	11 Jul 2012
Local stakeholders' consultation meeting	14 Jul 2012

The table above shows that notification to seek CDM status has been sent to UNFCCC and Host Party DNA within the six months of start date (i.e. purchase order date). Hence, as per para-2 of EB-62, Annex-13, it is confirmed that CDM was seriously considered in the project activity.

B.6. Emission reductions

B.6.1. Explanation of methodological choices

As per para 23 of the methodology AMS I.D. version-17, emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

ER_y	Emission reductions in year *y* (t CO_2e/y)
BE_y	Baseline Emissions in year *y* (t CO_2/y)
PE_y	Project emissions in year *y* (t CO_2/y)
LE_y	Leakage emissions in year *y* (t CO_2/y)

Baseline Emissions:

As per para-11 of the methodology AMS- I.D. Version 17, the baseline emissions are the product of electrical energy baseline $EG_{BL,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor.

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y}$$

Where:

BE_y	Baseline Emissions in year *y* (t $CO_{2)}$
$EG_{BL,y}$	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year *y* (MWh)
$EF_{CO2,grid,y}$	CO_2 emission factor of the grid in year *y* (t CO_2/MWh)

Here emission factor of a grid, $EF_{CO2,grid,y}$ shall be calculated as per the procedures provided in AMS I.D. As per paragraph 12 of the AMS- I.D. (Version 17), the Emission Factor $(EF_{CO2,grid,y})$ can be calculated in a transparent and conservative manner as follows:

(a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the
OR

(b) The weighted average emissions (in t CO_2/MWh) of the current generation mix. The data of the year in which project generation occurs must be used.

Calculations shall be based on data from an official source (where available) and made publicly available.

Project participant has chosen to calculate emission factor as per option (a)

Calculation of the CO_2 emission factor of the grid

As per "Tool to calculate the Emission Factor for an electricity system version-02.2.1", following steps has to be applied

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

"CO2 Baseline Database for the Indian Power Sector, Version 7.0, February 2012" has been published by the Government of India with the purpose of providing a ready reference for the emission factors to be used in CDM projects. This database is an official publication of the Government of India for the purpose of CDM baselines. It is based on the most recent data available with the Central Electricity Authority (CEA), Government of India.

STEP 1. Identify the relevant electricity systems

The Indian electricity system is divided into two regional grids, viz. (1) Northern, Eastern, Western, North-Eastern and (2) Southern grid. Each grid covers several states. As the regional grids are interconnected, there is inter-state and inter-regional exchange. A small power exchange also takes place with neighboring countries like Bhutan and Nepal.

Power generation and supply within the regional grid is managed by Regional Load Dispatch Centre (RLDC). The Regional Power Committees (RPCs) provide a common platform for discussion and solution to the regional problems relating to the grid. Each state in a regional grid meets its demand with its own generation facilities and also with allocation from power plants owned by the Central Sector such as NTPC and NHPC etc. Specific quotas are allocated to each state from the Central Sector power plants. Depending on the demand and generation, there are electricity exports and imports between states in the regional grid. The regional grid thus represents the largest electricity grid where power plants can be dispatched without significant constraints and thus, represents the "project electricity system" for the project activity. As the project activity is connected to the western regional electricity grid, the NEWNE grid is the "project electricity system".

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

Option I is opted for the project activity i.e. only grid power plants are included in the calculation as the project is displacing the grid electricity only.

Though **STEP 1** and **STEP 2** have been considered already in the data published in "*CO2 Baseline Database for the Indian Power Sector, Version 7.0, Jan 2012*[7]*"*.

[7] http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

STEP 3. Select a method to determine the operating margin (OM):
As per the various alternatives given in "Tool to calculate the Emission Factor for an electricity system version-02.2.1", Simple OM is chosen and emission factor is calculated as per *ex ante* option which says: "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. For grid power plants, use a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation."

STEP 4. Calculate the operating margin emission factor according to the selected method;
Following tables shows the simple OM and Net generation[8] respectively for the recent three years:

Simple Operating Margin (tCO2/MWh) (incl. Imports) (1) (2)			
	2008-09	2009-10	2010-11
NEWNE	1.01	0.98	0.97
South	0.97	0.94	0.94
India	1.00	0.97	0.96

Net Generation in Operating Margin (GWh)			
	2008-09	2009-10	2010-11
NEWNE	4,21,803	4,58,043	4,76,987
South	1,21,471	1,34,717	1,37,387
India	5,43,274	5,92,760	6,14,374

Therefore the 3 years net generation weighted OM average for NEWNE grid comes out to be 0.9842 tCO_2/MWh
i.e. $\mathbf{EF_{grid,OM,y} = 0.9842\ tCO_2/MWh}$

STEP 5. Calculate the build margin (BM) emission factor;
Build margin emission factor is calculated, ex-ante as per the most recent data available. So, build margin emission factor for NEWNE grid for 20010-2011 is 0.8588 tCO2/MWh
i.e. $\mathbf{EF_{grid,BM,y} = 0.8588\ tCO_2/MWh}$

STEP 6. Calculate the combined margin (CM) emissions factor.
Combined Margin is calculated using following formula
$\mathbf{EF_{CO2,grid,y} = W_{OM} \times EF_{grid,OM,y} + W_{BM} \times EF_{grid,BM,y}}$
where:
$\mathbf{EF_{CO2,\ grid,y}}$: Combined Margin (CM) Emission Factor in tCO2/MWh
$\mathbf{EF_{grid,OM,y}}$: Operating Margin Emission Factor for NEWNE grid in year y
$\mathbf{EF_{grid,BM,y}}$: Build Margin Emission Factor for NEWNE grid in year y

$\mathbf{W_{OM}}$: Weight of Operating Margin Emission Factor in the emission factor used for the proposed CDM project activity
$\mathbf{W_{BM}}$: Weight of Build Margin Emission Factor in the emission factor used for the proposed CDM project activity

[8] CO_2 Baseline Database for the Indian Power Sector, Verson 7.0, February 2011

The "Tool to calculate the emission factor for an electricity system, version 02.2.1" requires that for intermittent sources for power generation like wind as in the case of proposed CDM project activity the following weights to be used for calculating the emission factor for Combined Margin.

W_{OM} = 75%

W_{BM} = 25%

Hence, using above formula,

$EF_{CO2, grid,y}$ = 0.9528 tCO_2/MWh = $EF_{CO2, y}$

Baseline emissions:

Baseline emission is calculated using following equation as per para-11 of AMS I.D. version-17:

$$BE_y = EG_{BL,y} * EF_{CO_2,y}$$

Project Emissions:

As per para-20 of AMS I.D. version-17, project emissions from of the project activity is zero.

PE_y = 0

Leakage:

Since the energy generating equipment is not transferred from another activity, hence in accordance to para-22 of the methodology AMS I.D. version-17 leakage is also zero for the project activity.

LE_y = 0

B.6.2. Data and parameters fixed ex ante

(Copy this table for each piece of data and parameter.)

Data / Parameter	**$EF_{grid,OM,y}$**
Unit	tCO_2/MWh
Description	The 3 years net generation weighted OM average for NEWNE grid
Source of data	CO2 Baseline Database for the Indian Power Sector, Version 7.0, Jan 2012
Value(s) applied	0.9842
Choice of data or Measurement methods and procedures	The value has been calculated as per the 3-year net generation-weighted average Simple Operating Margin (tCO2/MWh)
Purpose of data	Calculation of baseline emissions
Additional comment	This database is an official publication of Government of India for the purpose of CDM baseline. It is based on most recent data available to the Central Electricity Authority and hence considered authentic. As the calculation of baseline emission has been done *ex ante* its value will remain fixed for the entire crediting period.

Data / Parameter	**$EF_{grid,BM,y}$**
Unit	tCO_2/MWh
Description	Build margin emission factor
Source of data	CO2 Baseline Database for the Indian Power Sector, Version 7.0, Jan 2012
Value(s) applied	0.8588
Choice of data or Measurement methods and procedures	The most recent value available for build margin i.e. for 2009-2010 is applied.
Purpose of data	Calculation of baseline emissions
Additional comment	This database is an official publication of Government of India for the purpose of CDM baseline. It is based on most recent data available to the Central Electricity Authority and hence considered authentic. As the calculation of baseline emission has been done *ex ante* its value will remain fixed for the entire crediting period.

Data / Parameter	**$EF_{CO2, grid,y}$**
Unit	tCO_2/MWh
Description	Grid emission factor (or combined margin for wind project)
Source of data	Calculated
Value(s) applied	0.9528
Choice of data or Measurement methods and procedures	Calculated as following: $EF_{CO2, grid,y} = 0.75* \mathbf{EF_{grid,BM,y}} + 0.25* \mathbf{EF_{grid,BM,y}}$ The calculation was done in accordance to "Tool to calculate the emission factor for an electricity system version-02.2.1"
Purpose of data	Calculation of baseline emissions
Additional comment	This database is an official publication of Government of India for the purpose of CDM baseline. It is based on most recent data available to the Central Electricity Authority and hence considered authentic. As the calculation of baseline emission has been done *ex ante* its value will remain fixed for the entire crediting period.

B.6.3. Ex-ante calculation of emission reductions

As per the equations defined in section B.6.1, emission reductions are calculated as described below.

Emission reduction is calculated according to following formula,

$$\mathbf{ER_y = BE_y – PE_y - LE_y}$$

where
ER_y : Emisson reduction in a year y
BE_y : Baseline emission in a year y
PE_y : Project emission in a year y
LE_y : Leakage emission in a year y

Estimation of baseline emissions:

Baseline emission is calculated using following equation as per para-11 of AMS I.D. version-17:

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y}$$

$EB_{BL,y}$ = Installed Capacity (MW) x Plant Load factor[9] x Annual operating hours
= 2.5 x 20.40% x (365x24)
= 4468 MWh/annum

Hence BEy = 4468 MWh/anuum * 0.9528 tCO_2/MWh

BE_y = 4256

Project Emissions:

[9] As per the PLF report prepared by third party.

Project emissions from of the project activity is zero.

$$\mathbf{PE_y = 0}$$

Leakage:

Leakage is also zero for the project activity, $LE_y = 0$

$$\mathbf{LE_y = 0}$$

Emission Reduction:

$$\mathbf{ER_y = BE_y – PE_y - LE_y = 4256\text{-}0\text{-}0 = 4256}$$

B.6.4. Summary of ex-ante estimates of emission reductions

Year	Baseline emissions (tCO_2 e)	Project emissions (tCO_2 e)	Leakage (tCO_2 e)	Emission reductions (tCO_2 e)
2013-2014	4256	0	0	4256
2014-2015	4256	0	0	4256
2015-2016	4256	0	0	4256
2016-2017	4256	0	0	4256
2017-2010	4256	0	0	4256
2018-2019	4256	0	0	4256
2019-2020	4256	0	0	4256
2020-2021	4256	0	0	4256
2021-2022	4256	0	0	4256
2022-2023	4256	0	0	4256
Total	42560	0	**0**	42560
Total number of crediting years	10			
Annual average over the crediting period	4256	0	0	4256

B.7. Monitoring plan

B.7.1. Data and parameters to be monitored

(Copy this table for each data and parameter.)

Data / Parameter	**$EG_{BL,y}$**
Unit	MWh
Description	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year *y.*
Source of data	Certificate for share of electricity issued by SLDC (State Load Dispatch Center)
Value(s) applied	4468
Measurement methods and procedures	The net electricity exported to the grid by project activity WTGs will be ascertained by government agency GEDA (Gujarat Energy Development Agency) on the basis of monthly joint meter reading at substation (includes generation from project and non project WTGs) and meter readings at various transformer yard meters (near these WTGs). The The net electricity generated by the project activity is taken directly from the share certificate issued by state utility (currently SLDC) on monthly basis. The amount of energy supplied by the WTGs are continuously monitored and recorded once a month. Continuous monitoring, hourly measurement and monthly recording is carried out.
Monitoring frequency	Continuously, recorded every month
QA/QC procedures	The meter at the substation is of 0.2S accuracy class and is maintained by GETCO (Gujarat Energy Transmission Corporation Limited). Calibration of the substation meter is done by GETCO at least once in 3 years.
Purpose of data	Calculation of baseline emission
Additional comment	The data will be archived electronically for two years more than the crediting period or last issuance of CERs, whichever is later

Data / Parameter	$EG_{yard,y}$
Unit	MWh
Description	Quantity of net electricity supplied by project WTGs as recorded at the WTG transformer yard meter on 33kV side.
Source of data	Monthly generation report
Value(s) applied	Value will be measured ex post
Measurement methods and procedures	The electricity is monitored at the yard meter and recorded monthly by equipment supplier/O and M contractor i.e. Suzlon.
Monitoring frequency	Continuous monitoring, hourly measurement and monthly recording is carried out.
QA/QC procedures	Calibration of the yard meters will be carried out at least once in 3 years; these yard meters are of accuracy class 0.2s.
Purpose of data	Calculation of baseline emission

Additional comment	• The data will be archived electronically for two years more than the crediting period or last issuance of CERs, whichever is later. • These monthly readings would be compared with the certificate of share of electricity provided by SLDC and the most conservative estimates would be used for emission reduction calculation.

B.7.2. Sampling plan

Not Applicable

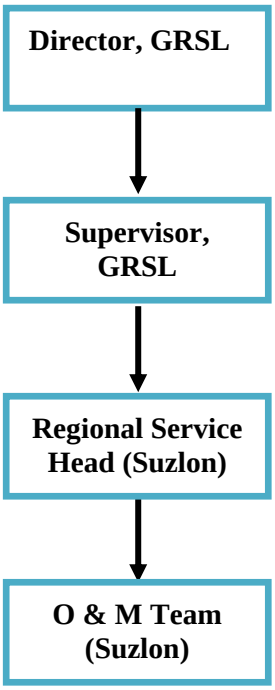
B.7.3. Other elements of monitoring plan

The monitoring plan of the project activity is formulated as per the approved methodology AMS I.D. version-17. As per the methodology, net electricity supplied to the grid is to be monitored.

The WTGs installed in the proposed CDM project activity have been supplied by Suzlon. The proposed CDM project activity is operated and managed by Suzlon only. Suzlon follows the documentation practices to ensure the reliability and availability of the data for all the activities as required from the identification of the site, wind resource assessment, logistics, finance, construction, commissioning and operation of the wind power project. Suzlon, would be responsible for the operation and maintenance of the project activity for the entire crediting period.

Structure of the monitoring team

Following diagram depicts the structure of the monitoring team.



Roles and reponsibilities of the monitoring team

Director, Gokul Refoils and Solvent Limited – He would be the ultimate authority for ensuring smooth and timely execution of all the monitoring and monitoring related activities for the project activity. He would be reported by Supervisor, Gokul Refoils and Solvent Limited

Supervisor, Gokul Refoils and Solvent Limited – He would ensure that all the required monitoring data is being monitored appropriately and being stored properly. He would also take any corrective actions (if required) at his level and co-ordinate with Regional Service head (Suzlon) and O & M team (Suzlon).

Regional Service Head (Suzlon) - He would ensure that the monitoring plan is adhered and operations are carried out as per standard procedures. He will also collect all the relevant data from O&M Team (Suzlon) and submit them to the supervisor, Gokul Refoils and Solvent Limited.

O&M Team - The monitoring data related to the project activity would be collected, reported, maintained and archived by O&M Team of Suzlon. The calibration of the meters associated to the project activity will be done by GETCO for which O&M Team of Suzlon would co-ordinate with them. The corrective actions (if required) would be taken by O&M Team of Suzlon to maintain the quality of data. The team would further submit the monitoring data to Regional Service Head (Suzlon).

Metering System

The procedures for the metering of electricity is as discussed here. The net electricity exported to the grid by project activity WTGs will be ascertained by government agency, GEDA (Gujarat Energy Development Agency) on the basis of substation meter reading (includes generation from project and non project WTGs) and meter readings at various transformer yard meters (near each WTG) based upon an apportioning method. The ABT meters installed at the sub-stations continuously monitor the electricity generated. Continuous monitoring, hourly measurement and monthly recording is carried out by Apportioning of net electricity supplied to grid by WTGs of project activity is being carried out by GEDA. Apportioning is being carried out based on reading of meters at substation and yard meter at each WTG. Apportioning is not under the control of PP and data is not shared with PP. State Load Dispatch Centre (SLDC) issues certificate of share of electricity generated which provides net electricity exported to grid by WTGs of PP and this forms basis of emission reduction calculations.

The net electricity supplied by the project activity is taken directly from the certificate of share issued on monthly basis. If the crediting period starts from the middle of the month, since it would not be possible to determine the amount of energy generated from then on, following a conservative approach, the project participant would not be availing credits for that particular month; the same approach would be followed for the last monitoring period as well.

Net Electricity Exported to the Grid by the project activity as per apportioning procedure followed by state utility:

$EG_{BL,y} = EG_{SS,Net\ Export}\ X\ (EG_{yard,y} / EG_{yard,\ Project\ \&\ Non\ project\ WTGs})$

where:

$EG_{SS,Net\ Export}$	Net electricity exported by all WTGs connected to the substation (project activity WTGs and non-project activity WTGs), as recorded by the ABT meter at substation (MWh)

$EG_{yard,y}$	Net electricity exported by the project activity, as measured at yard meters (MWh)
$EG_{yard,\ Project\ \&\ Non\ project\ WTGs}$	Net electricity exported by all the project owners connected to the substation (MWh) measured at switchyard meters.

This is to be noted that total 16 WTGs (including 2 project WTGs) are connected to the same feeder.

QA/QC Procedures

Meter at substation and transformer yard meters is calibrated at least once in a three year by accredited external agency.

Data Management and Data Archiving

All data will be archived for a period of 2 years after crediting period or last issuance whichever is later.'

Procedures for Data Adjustments/Uncertainties

- In case meter at substation is faulty, it is immediately replaced by a new meter and meter reading from the replaced meter is used thereafter. Maintaining a conservative approach, CERs will not be counted for the duration when meter is under replacement.
- In case yard meters are faulty, immediate replacement is done.

SECTION C. Duration and crediting period
C.1. Duration of project activity
C.1.1. Start date of project activity

18/08/2011 (Date of Purchase Order)

C.1.2. Expected operational lifetime of project activity
20 years 0 months

C.2. Crediting period of project activity
C.2.1. Type of crediting period
Fixed

C.2.2. Start date of crediting period
01/08/2013 or the date that the DOE had submitted a complete request for registration, whichever is later.

C.2.3. Length of crediting period
10 years 0 months

SECTION D. Environmental impacts
D.1. Analysis of environmental impacts

As per the latest notification issued on 01/12/2009 for Environment Impact Analysis (EIA) by Ministry of Environment and Forests (MoEF), Government of India[10] the project activity does not need to carry out.

EIA study. No adverse impact on environment due to the installation of the wind turbine generators.

SECTION E. Local stakeholder consultation

E.1. Solicitation of comments from local stakeholders

Stakeholders' consultation meeting was conducted with the purpose to inform the stakeholders' about the project activity and to discuss their concerns regarding the project activity. Meeting was attended by various stakeholders identified by GRSL. The stakeholders identified for the project were: the usual occupants of the villages around, the local communities, governmental agencies, employees, contractors and consultants/advisors who they assumed would have an interest in the project activity. Public notice was published on 11th July 2012 in the newspaper "Aajkal" in order to inform the stakeholders.

Stakeholders meeting was held on 14th July 2012 at Adodar Village.

CDM consultant informed all the attendees about Gokul Refoils and Solvent Limited and the project activity. He explained them how the project activity will prevent the emissions of green house gases and how the CDM will be helpful in this.

Representative from Suzlon Energy Limited also discussed about the project activity and technology involved.
After explaining about the Wind power project, concept of CDM and relevant issues, all the attendees were requested to put forward their queries and comments. Some of the attendees with enthusiasm started putting their queries forward. All Queries were satisfactorily addressed by the CDM consultant and Suzlon representative.

E.2. Summary of comments received

Following are the queries raised by various stakeholders that were responded by representative from Suzlon and CDM consultant.

Queries	Responses
What will be the effect of wind-mills on rainfall pattern?This query was raised by Mr. Jayantilal	There is no relation between wind energy converters and rainfall. Rain is natural phenomenon and not affected.
How electricity produced by wind-mill helps in GHG reduction? This query was raised by Mr. Manda Gala	Wind creates pressure on the rotor blades forcing them to rotate and the rotor is connected to generator which produces electricity. Therefore, the electricity produced in this manner displaces the grid electricity which would have been otherwise generated from fossil fuel dominated power plants.
Where will the electricity generated go?	The electricity generated by this project is sold to state

[10] http://moef.nic.in/downloads/rules-and-regulations/3067.pdf

This query was raised by Mr. Ram	distribution utility. Thus, the project leads to reduce the fluctuation of power supply by bridging the demand supply gap in the state

In this way, meeting was concluded with the vote of thanks by Suzlon representative.

E.3. Report on consideration of comments received

All the participants of stakeholders' meeting appreciated such initiative taken by Gokul Refoils and Solvent Limited There were no negative comments received from the stakeholders.

SECTION F. Approval and authorization

Letter of Approval by Host Country is obtained for the project activity.

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Appendix 1: Contact information of project participants

Organization	Gokul Refoils and Solvent Limited
Street/P.O. Box	43- Shreemali Co.Op Housing Society Ltd, Opp Shikhar Building, Navrangpura
Building	Gokul House
City	Ahmedabad
State/Region	Gujarat
Postcode	390008
Country	India
Telephone	+91-79 66304555
Fax	+91-79 66304543
E-mail	hitesh@gokulgroup.com
Website	
Contact person	
Title	CEO
Salutation	Mr.
Last name	Hitesh
Middle name	
First name	Thakkar
Department	
Mobile	
Direct fax	+91-79 66304543
Direct tel.	+91-79 66304555
Personal e-mail	hitesh@gokulgroup.com

Appendix 2: Affirmation regarding public funding

No public funding is involved in this project activity

Appendix 3: Applicability of selected methodology

Explained in section B.2

Appendix 4: Further background information on ex ante calculation of emission reductions

Explained in section B.6.3

Appendix 5: Further background information on monitoring plan

Monitoring plan is discussed in detail in the section B.7

Appendix 6: Summary of post registration changes

Not Applicable

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History of the document

Version	Date	Nature of revision
04.1	11 April 2012	Editorial revision to change history box by adding EB meeting and annex numbers in the Date column.
04.0	EB 66 13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the project design document form for small-scale CDM project activities" (EB 66, Annex 9).
03	EB 28, Annex 34 15 December 2006	• The Board agreed to revise the CDM project design document for small-scale activities (CDM-SSC-PDD), taking into account CDM-PDD and CDM-NM.
02	EB 20, Annex 14 08 July 2005	• The Board agreed to revise the CDM SSC PDD to reflect guidance and clarifications provided by the Board since version 01 of this document. • As a consequence, the guidelines for completing CDM SSC PDD have been revised accordingly to version 2. The latest version can be found at <http://cdm.unfccc.int/Reference/Documents>.
01	EB 07, Annex 05 21 January 2003	Initial adoption.
Decision Class: Regulatory **Document Type:** Form **Business Function:** Registration		