Monitoring report form
(Version 03.1)

Monitoring report

Title of the project activity	Vaayu India Wind Power Project in Jaisalmer, Rajasthan
Reference number of the project activity	5186
Version number of the monitoring report	1
Completion date of the monitoring report	11/02/2013
Registration date of the project activity	20/09/2011
Monitoring period number and duration of this monitoring period	01/07/2012-31/12/2012(including both days) 2nd Monitoring Period
Project participant(s)	Vaayu (India) Power Corporation Private Limited
Host Party(ies)	India
Sectoral scope(s) and applied methodology(ies)	Energy industries (renewable/ non-renewable sources). Approved consolidated baseline methodology ACM0002 (Version 12.1.0, EB 58)
Estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD	43,937
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period	41,179

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

(a) Purpose of the project activity and the measures taken for GHG emission reductions or net anthropogenic GHG removals by sinks;

The purpose of the project activity is to utilize renewable wind energy for generation of electricity. The project activity replaces anthropogenic emissions of greenhouse gases (GHG's) into the atmosphere, which is estimated to be approximately 41,179 tCO2e for this monitoring period, by displacing the equivalent amount of electricity generation through the operation of existing fuel mix in the grid comprising mainly fossil fuel based power plants and future capacity expansions connected to the grid. In the absence of the project activity the equivalent amount of electricity would have been generated from the connected/ new power plants in the NEWNE grid, which are/ will be predominantly based on fossil fuels. Whereas the electricity generation from operation of Wind Energy Convertors (WEC's) is emission free.

(b) Brief description of the installed technology and equipment;

The project activity involves supply, erection, commissioning and operation of 63 machines of rated capacity 800 KW each. The machines are Enercon E-53 make. Enercon (India) Ltd (EIL) is the turbine supplier and is the operations and maintenance contractor.

(c) Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.);

The WECs under the project activity were commissioned between 14/05/2011 and 14/07/2011. The expected operational lifetime of the project is for 20 years. The project activity was registered as CDM project on 20/09/2011. The second monitoring period is from 01/07/2012 to 31/12/2012.

(d) Total GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period.

The total emission reductions achieved under this monitoring period (01/07/2012 to 31/12/2012) is 41,179 tCO_2.

A.2. Location of project activity

(a) Host Party(ies);

India

(b) Region/State/Province, etc.;

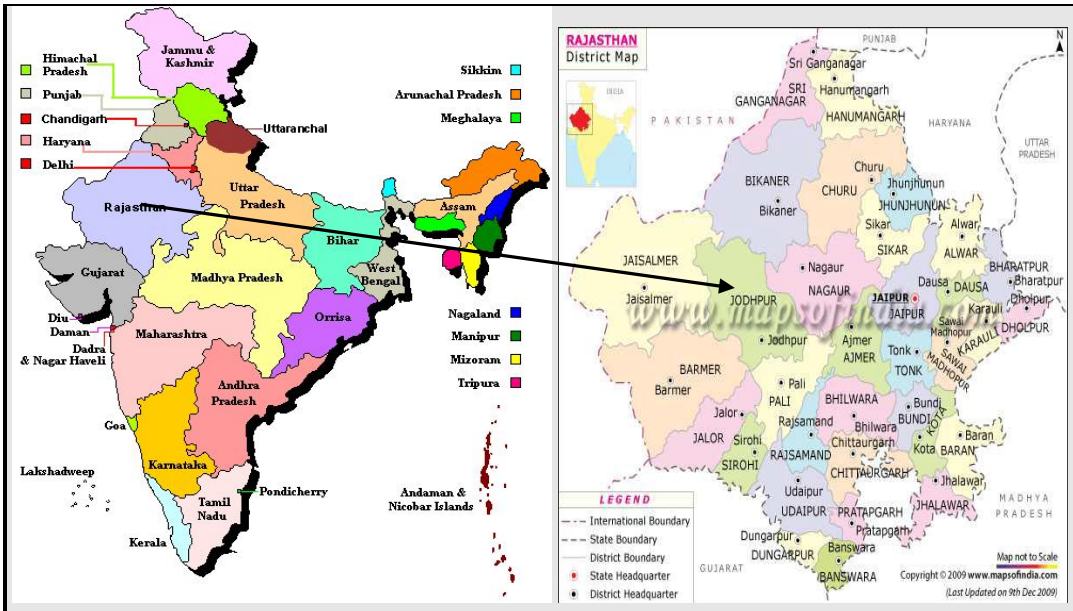
Northern Region/Rajasthan State

(c) City/Town/Community, etc.;

The Project is spread across Sipla, Pithla, Kotri, Senag, Barna and Khuri villages of Jaisalmer District of Rajasthan state in India.

(d) Physical/ Geographical location.

The Project is located in Jaisalmer district in the Indian State of Rajasthan. The wind turbines extend between Latitude N 26°40'25.4'' to Latitude N 26°44'48.7'' and Longitude E 70°42'13.8'' to Longitude E 70°49'23.5''. The longitude and latitude details of WECs are provided Appendix 2.



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A.3. Parties and project participant(s)

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)	Vaayu (India) Power Corporation Private Limited	No

A.4. Reference of applied methodology

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(a) ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (Version 12.1.0, EB 58)

(b) ACM0002 draws upon the following tools which have been used in the PDD:
Tool to calculate the emission factor for an electricity system – Version 02
Tool for the demonstration and assessment of additionality – Version 5.2

Further information with regards to the methodology / tools can be obtained at

http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html

A.5. Crediting period of project activity

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The length of the Crediting period of the project activity as per registered PDD is 10 years (Fixed). The crediting period start date is 01/10/2011 (from 01/10/2011 to 30/09/2021).

SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity

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The starting date of operation of the project activity is 14/05/2011. For project activities that consist of more than one site, the report shall clearly describe the status of implementation and starting date of operation for each site. For CDM project activities with phased implementation, the report shall indicate the progress of the proposed CDM project activity achieved in each phase.

The commissioning date for all the WECs included in the project activity is given in the table below:

S. No.	WEG S.C. NO	No. & Capacity	Commissioning Date (dd/mm/yyyy)
1	2	1 X 800 kW	30/06/2011
2	3	1 X 800 kW	14/05/2011
3	4	1 X 800 kW	14/05/2011
4	5	1 X 800 kW	14/05/2011
5	6	1 X 800 kW	14/05/2011
6	7	1 X 800 kW	14/05/2011
7	8	1 X 800 kW	14/05/2011
8	9	1 X 800 kW	14/05/2011
9	10	1 X 800 kW	30/06/2011
10	13	1 X 800 kW	14/05/2011
11	14	1 X 800 kW	14/05/2011
12	15	1 X 800 kW	14/05/2011
13	16	1 X 800 kW	14/05/2011
14	17	1 X 800 kW	14/05/2011
15	23	1 X 800 kW	14/05/2011
16	24	1 X 800 kW	14/05/2011
17	25	1 X 800 kW	14/05/2011
18	29	1 X 800 kW	14/05/2011
19	30	1 X 800 kW	14/05/2011
20	32	1 X 800 kW	14/05/2011
21	33	1 X 800 kW	14/05/2011
22	38	1 X 800 kW	14/07/2011
23	39	1 X 800 kW	14/07/2011
24	40	1 X 800 kW	14/07/2011
25	72	1 X 800 kW	14/07/2011
26	79	1 X 800 kW	14/05/2011
27	80	1 X 800 kW	14/05/2011

28	87	1 X 800 kW	14/05/2011
29	88	1 X 800 kW	14/05/2011
30	93	1 X 800 kW	30/06/2011
31	99	1 X 800 kW	15/05/2011
32	101	1 X 800 kW	14/07/2011
33	102	1 X 800 kW	14/07/2011
34	103	1 X 800 kW	15/05/2011
35	106	1 X 800 kW	15/05/2011
36	107	1 X 800 kW	15/05/2011
37	110	1 X 800 kW	15/05/2011
38	114	1 X 800 kW	15/05/2011
39	115	1 X 800 kW	15/05/2011
40	117	1 X 800 kW	15/05/2011
41	118	1 X 800 kW	15/05/2011
42	123	1 X 800 kW	15/05/2011
43	124	1 X 800 kW	15/05/2011
44	125	1 X 800 kW	15/05/2011
45	144	1 X 800 kW	14/05/2011
46	148	1 X 800 kW	14/05/2011
47	150	1 X 800 kW	14/05/2011
48	151	1 X 800 kW	30/06/2011
49	152	1 X 800 kW	14/05/2011
50	157	1 X 800 kW	14/07/2011
51	158	1 X 800 kW	30/06/2011
52	159	1 X 800 kW	30/06/2011
53	503	1 X 800 kW	15/05/2011
54	504	1 X 800 kW	15/05/2011
55	505	1 X 800 kW	15/05/2011
56	507	1 X 800 kW	14/05/2011
57	508	1 X 800 kW	14/05/2011
58	512	1 X 800 kW	30/06/2011
59	513	1 X 800 kW	30/06/2011
60	514	1 X 800 kW	14/07/2011
61	520	1 X 800 kW	15/05/2011
62	521	1 X 800 kW	15/05/2011
63	525	1 X 800 kW	15/05/2011

The project activity involves 63-wind energy convertors (WEC's) of Enercon make (800 kW, E-53) with internal electrical lines connecting the project activity with local evacuation facility. The WECs generates 3-phase power at 400V, which is stepped up to 33 KV. The Project can operate in the frequency range of 47.5–51.5 Hz and in the voltage range of 400 V ± 12.5%. The average life time of the WEC is around 20 years as per the industry standards. The other salient features of the state-of-art-technology are:

Turbine model	Enercon E – 53
Rated Power	800 kW
Rated diameter	53 m
Hub height	75 m
Turbine type	Gearless horizontal axis wind turbine with variable rotor speed
Power regulation	Independent electromechanical pitch system for each

	blade
Cut in wind speed	2.5 m/s
Rated wind speed	12 m/s
Cut out wind speed	28 - 34 m/s
Extreme wind speed	59.5 m/s
Rated rotational speed	32 rpm
Operating range rot. Speed	12 - 29 rpm
Orientation	Upwind
No. of blades	3
Blade material	Fibre glass Epoxy reinforced with integral lightning protection
Gear box type	Gearless
Generator type	Synchronous generator
Braking	Aerodynamic
Output voltage	400 V
Yaw system	Active yawing with 4 electric yaw drives with brake motor and friction bearing
Tower	74 m Concrete

B.2. Post registration changes

B.2.1. Temporary deviations from registered monitoring plan or applied methodology

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Not Applicable

B.2.2. Corrections

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Not Applicable

B.2.3. Permanent changes from registered monitoring plan or applied methodology

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Revision in monitoring plan has been proposed for the project activity and the description of revised monitoring plan has been provided in section C of the monitoring report.

B.2.4. Changes to project design of registered project activity

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Not Applicable

B.2.5. Changes to start date of crediting period

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Not Applicable

B.2.6. Types of changes specific to afforestation or reforestation project activity

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Not Applicable

SECTION C. Description of monitoring system

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Approved monitoring methodology ACM0002 Version 12.1.0 Sectoral Scope: 1, "Consolidated monitoring methodology for zero-emissions grid-connected electricity generation from renewable sources", by CDM - Meth Panel is proposed to be used to monitor the emission reductions. Enercon (India) Limited is EPC contractor for the project activity. Enercon (India) Limited will be responsible for the maintaining all the monitoring data on behalf of VIPCPL in respect of the project activity. Enercon (India) Limited has implemented the management structure for managing the monitored data.

This approved monitoring methodology requires monitoring of the following:

- Electricity generation from the project activity; and
- Operating Margin emission factor and build margin emission factor of the grid, where ex post determination of grid emission factor has been chosen

Since the baseline methodology is based on ex ante determination of the baseline, the monitoring of operating margin emission factor and build margin emission factor is not required. Further, wind based electricity generation is not associated with any kind of leakages. Hence, the sole parameter for monitoring is the electricity generated by the project and supplied to the grid.

The project is operated by Enercon (EPC contractor for the project activity) and managed by the PP. The operational and maintenance contract for the project is with Enercon. Enercon is an ISO 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.

The break-up sheet reflecting net electricity supplied by the project activity to the grid is prepared by EPC contractor based on the allocation procedure explained below. Based on this break-up sheet, tariff Invoice is raised by PP to DISCOM.

$E_{JMR,Export}$ = Electricity exported, as recorded by the main meter at the substation
$E_{JMR,Import}$ = Electricity imported, as recorded by the main meter at the substation
$E_{Controller,\ Export}$ = Electricity exported by a WEC, as measured at the controller
$\sum E_{Controller,\ Export}$ = Electricity exported by all the WECs (project activity & non project activity) connected to the main meter at the substation, measured at the controller of each WEC
$E_{Controller,\ Export}$ = Summation of electricity generated by the project activity WECs recorded at respective LCS meters.
$E_{WEG,Export}$ = Electricity exported by a WEC to the grid, calculated
$E_{WEG,Import}$ = Electrcity imported by a WEC from the grid, calculated.

Electricity exported by each WEC is apportioned on the basis of electricity exported recorded at the controller of each WEC and the electricity exported at the main meter and mentioned in the JMR. The export multiplication factor is calculated as follows-

$$\text{Export Multiplication Factor} = \frac{E_{JMR,Export}}{\sum E_{Controller,\ Export}} \quad \text{..... (1)}$$

Thus the energy exported by a WEC to the grid is given by the equation-

$E_{WEC,Export}$ = Export Multiplication factor X $E_{Controller,\ Export}$ .....(2)

As the controller meter doesn't record import, the apportioning of energy imported by each WEC is also done on the basis of electricity exported recorded at the controller of each WEC and the electricity imported at the main meter and mentioned in the JMR. The import multiplication factor is calculated as follows-

$$\text{Import Multiplication Factor} = \frac{E_{JMR,Import}}{\sum E_{Controller,\ Export}} \quad \text{.......................(3)}$$

Thus the energy imported by a WEC to the grid is given by the equation-

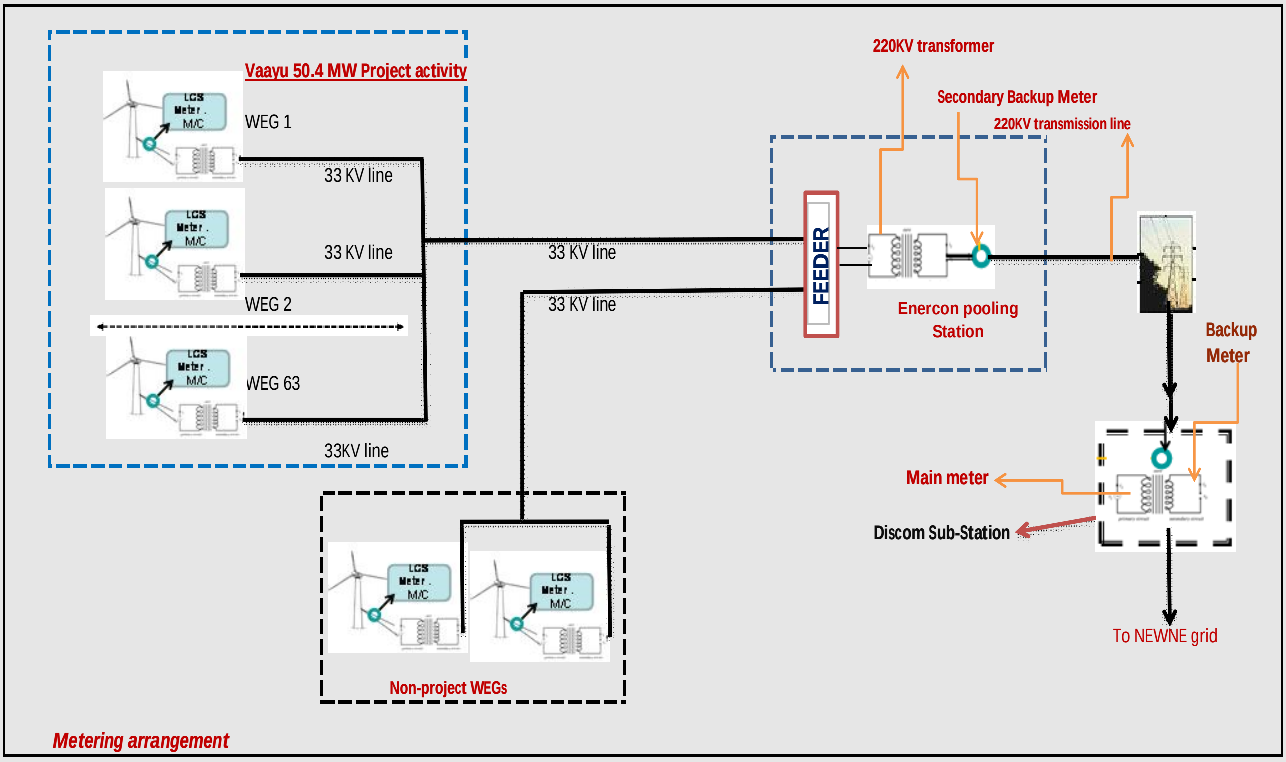
$$E_{WEC,Import} = \text{Import Multiplication factor} \times E_{Controller,\ Export} \quad \text{..(4)}$$

The net electricity exported by the WECs of the project is given by the equation-

$$EG_y = \sum_{Project} E_{WEC,Export} - \sum_{Project} E_{WEC,Import} \quad \text{..(5)}$$

The summation is done for the WECs belonging to the project activity.

Schematic diagram for the wind farm showing location of main, backup and LCS meters in the wind farm



Metering

- There is a main & back meter at DISCOM substation with an accuracy class of 0.2s, to which the project & non project activity WECs are connected.[1]
- There is a secondary back up meter installed at Enercon Pooling substation, although the secondary back up meter reading is not used by DISCOM for calculating the generation.

[1] The physical location of main/backup meter is subject to change in future based on the decision of DISCOM, which is beyond the control of PP.

- The electricity supplied to the grid is metered at DISCOM substation. Representatives of DISCOM and Enercon jointly take the main/back up meter readings and sign the meter reading on monthly basis.

- The allocation of the net electricity supplied to the grid by the project activity is done based on the joint meter readings taken at the DISCOM substation & LCS meter readings of individual WECs. Apportioning procedure is applied by the EPC contractor, the details of which have been explained in Section B.7.2.

    - Based on this apportioning procedure, break up sheet indicating the net electricity supplied to the grid by the project activity is prepared by EPC contractor, based on which the PP raises invoice for payments. The copy of the invoice raised by PP to DISCOM would be used for cross checking the net electricity supplied by project activity as indicated in the break up sheet.

    - The meters will be jointly inspected/ tested once in a year as per the provisions of PPA. The main and the backup metering systems will be sealed in presence of representatives of Enercon and RRVPN/Jodhpur DISCOM. Joint inspection and testing will also be carried out as and when difference in monthly meter readings exceeds the sum of maximum error as per accuracy class of main and back up meters.

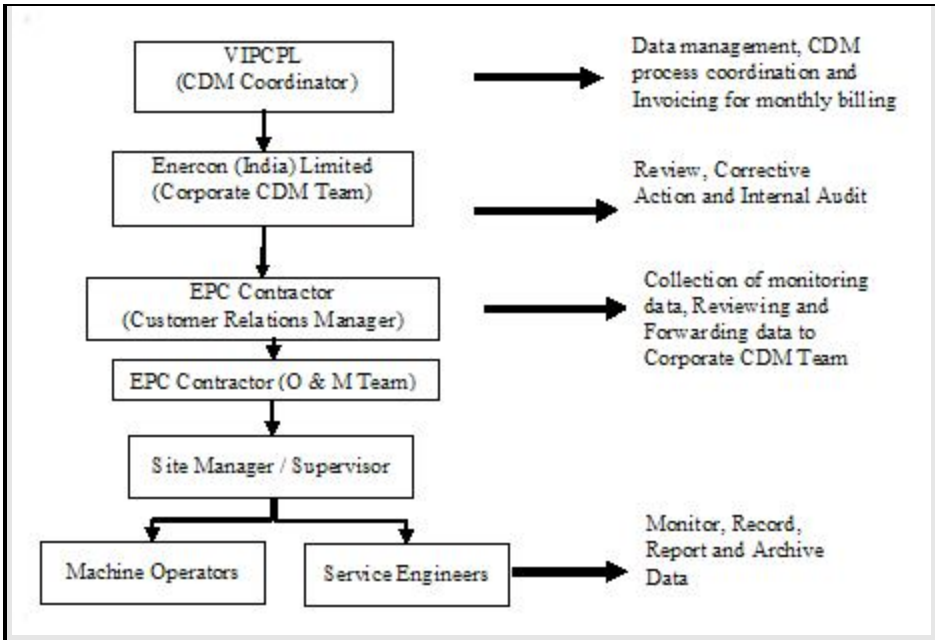
Metering Equipment and Metering Arrangement Information

- The meters are two-way meter and measure the electricity import and export and give the net electricity.
- As per the Power Purchase Agreement entered into with the electricity distribution utility, there will be two meters, one main meter and one backup meter. Both meters would be two-way export import meters that measure both export and import of electricity and provide net electricity exported to the grid.
- In case the meters are found to operate outside the permissible limits, the meters will be either replaced immediately or calibrated. Whenever a main meter goes defective, the consumption recorded by the backup meter will be referred.
- If main as well as back up metering system becomes defective, the details of the malfunctioning along with date and time and snaps shot parameters along with load survey will be retrieved from the main meter. The exact nature of the malfunctioning will be determined after analyzing the data so retrieved and the consumption recorded by the main meter will be adjusted accordingly.
- The main meter readings are apportioned based upon the LCS meter readings from the individual WECs to compute net electricity supplied from individual WECs. The LCS meter readings of project activity WECs are archived electronically on continuous basis. Joint meter reading at the DISCOM substation is noted each month. Therefore cumulative LCS meter reading for each month is used for purpose of allocation of net electricity supplied to the grid from the project activity.
- Both main and back up meters will be calibrated annually.
- The LCS meters do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WECs. In case there is any mismatch in the energy values recorded by the LCS meter and the energy values calculated by the inverting system; the machine will stop working and generate the error report. The operations and maintenance staff will attend to the problem immediately in order to identify the error and correction factor will be determined.

The empirical formula applied for computing net electricity supplied to the grid is detailed in B.7.2. PP will be monitoring the data sent by the O&M contractor and the data for electricity generated by the project activity will be kept as records for the period of 10+2 years i.e. 2 years beyond the term of crediting period. Enercon is O&M contractor and will be responsible for data recording.

The main and check meters are calibrated once each year and LCS meters do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WECs. In case there is any mismatch in the energy values recorded by the LCS meter and the energy values calculated by the inverting system; the machine will stop working and generate the error report. Furthermore the net electricity supplied to the grid that is used for calculation of emission reductions can be cross checked from the invoices raised by the PP on the state utility. Therefore there is no data uncertainty.

The operational and management structure implemented for data monitoring is as follows:



Training and maintenance requirements:

Training on the machine is an essential pre-requisite, to ensure necessary safety of man and machine. Further, in order to maximize the output from the Wind Energy Converters (WECs), it is extremely essential, that the engineers and technicians understand the machines and keep them in good health. In order to ensure, that Enercon's service staff is deft at handling technical snags on top of the turbine, the necessity of ensuring that they are capable of climbing the tower with absolute ease and comfort has been established. The Enercon Training Academy provides need-based training to meet the training requirements of Enercon projects. The training is contemporary, which results in imparting focused knowledge leading to value addition to the attitude and skills of all trainees. This ultimately leads to creativity in problem solving.

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante or at renewal of crediting period

Data / Parameter:	$EF_{grid,OM,y}$
Unit:	tCO_2e/MWh
Description:	Operating Margin Emission Factor of NEWNE Electricity Grid
Source of data:	"CO_2 Baseline Database for Indian Power Sector", version 5 published by the Central Electricity Authority, Ministry of Power, Government of India. The "CO2 Baseline Database for Indian Power Sector" is available at www.cea.nic.in
Value(s) applied):	1.00498
Purpose of data:	Operating Margin Emission Factor has been calculated by the Central Electricity Authority using the simple OM approach in accordance with ACM0002.
Additional comment:	The value is calculated on ex-ante basis and it will remain same throughout the crediting period.

Data / Parameter:	$EF_{grid,BM,y}$
Unit:	tCO_2e/MWh

Description:	Build Margin Emission Factor of NEWNE Electricity Grid
Source of data:	"CO_2 Baseline Database for Indian Power Sector", version 5 published by the Central Electricity Authority, Ministry of Power, Government of India. The "CO2 Baseline Database for Indian Power Sector" is available at www.cea.nic.in
Value(s) applied):	0.6752
Purpose of data:	Build Margin Emission Factor has been calculated by the Central Electricity Authority in accordance with ACM0002.
Additional comment:	The value is calculated on ex-ante basis and it will remain same throughout the crediting period.

Data / Parameter:	EF_y or $EF_{grid,CM,y}$
Unit:	tCO_2e/MWh
Description:	Combined Margin Emission Factor of NEWNE Electricity Grid
Source of data:	"CO_2 Baseline Database for Indian Power Sector", version 5 published by the Central Electricity Authority, Ministry of Power, Government of India. The "CO2 Baseline Database for Indian Power Sector" is available at www.cea.nic.in
Value(s) applied):	In case of wind power projects default weights of 0.75 for $EF_{grid,OM,y}$ and 0.25for $EF_{grid,BM,y}$ are applicable as per ACM0002. Combined Margin Emission Factor ($EF_{grid,CM,y}$) = 0.92252
Purpose of data:	Combined Margin Emission Factor has been calculated by the Central Electricity Authority in accordance with CDM methodologies: ACM0002, and Tool to Calculate the emission Factor for an Electricity System.
Additional comment:	The value is calculated on ex-ante basis and it will remain same throughout the crediting period.

D.2. Data and parameters monitored

Data / Parameter:	EG_y
Unit:	MWh (Mega-watt hour)
Description:	Net electricity supplied to the grid by the Project Activity
Measured/ Calculated / Default:	Calculated
Source of data:	The break-up sheet based on Joint Meter Reading (JMR).
Value(s) of monitored parameter:	Annual electricity supplied to the grid by the Project (EG_y) = 44638.385 MWh
Monitoring equipment:	The value is calculated, so there is no monitoring equipment.
Measuring/ Reading/ Recording frequency:	Monthly
Calculation method (if applicable):	$EG_y = \sum_{Project} E_{WEG,Export} - \sum_{Project} E_{WEG,Import}$

QA/QC procedures:	QA/QC procedures will be as implemented by Discom pursuant to the provisions of the power purchase agreement and there will be no additional QA/QC procedures. The monitoring frequency of the data parameter will be on monthly basis.
Purpose of data:	To calculate emission reduction.
Additional comment:	The data will be archived for crediting period + 2 years.

Data / Parameter:	$E_{Controller,Export}$
Unit:	MWh (Mega-watt hour)
Description:	Summation of electricity generated by the project activity WECs recorded at respective LCS meters.
Measured/ Calculated / Default:	Measured
Source of data:	Monthly operating logs recorded in electronic format by EPC contractor
Value(s) of monitored parameter:	46249.198 MWh
Monitoring equipment:	LCS Meter
Measuring/ Reading/ Recording frequency:	Monthly
Calculation method (if applicable):	Not Applicable
QA/QC procedures:	This data parameter will be logged electronically on a monthly basis by EPC contractor on its online portal. The value of this parameter shall be compared with the value of EG_y and the conservative approach would be taken by the PP for estimating the net electricity supplied value for the calculation of emission reduction.
Purpose of data:	To calculate net electricity exported to grid.
Additional comment:	The data will be archived for crediting period + 2 years.

Data / Parameter:	$\sum_{Project} E_{WEG,Export}$
Unit:	MWh (Mega-watt hour)
Description:	Summation of electricity exported to the grid by all the WECs (63 machines) included in the project activity.
Measured/ Calculated / Default:	Calculated
Source of data:	The break-up sheet based on Joint Meter Reading (JMR).
Value(s) of monitored parameter:	44683.477 MWh
Monitoring equipment:	Not Applicable
Measuring/ Reading/ Recording frequency:	Monthly
Calculation method (if applicable):	NA
QA/QC procedures:	The value is calculated and can be cross checked from the invoices raised on the state utility. The monitoring frequency of the data parameter will be on monthly basis.

Purpose of data:	To calculate net electricity exported to grid.
Additional comment:	The data will be archived for crediting period + 2 years.

Data / Parameter:	$\sum_{Project} E_{WEG,Import}$
Unit:	MWh (Mega-watt hour)
Description:	Summation of electricity imported from the grid by all the WECs (63 machines) included in the project activity.
Measured/ Calculated / Default:	Calculated
So rce of data:	The break-up sheet based on Joint Meter Reading (JMR).
Value(s) of monitored parameter:	45.092 MWh
Monitoring equipment:	Not Applicable
Measuring/ Reading/ Recording frequency:	Monthly
Calculation method (if applicable):	NA
QA/QC procedures:	The value is calculated and can be cross checked from the invoices raised on the state utility. The monitoring frequency of the data parameter will be on monthly basis.
Purpose of data:	To calculate net electricity imported from grid by project.
Additional comment:	The data will be archived for crediting period + 2 years.

D.3. Implementation of sampling plan

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No sampling plan is followed by PP.

SECTION E. Calculation of emission reductions or GHG removals by sinks

E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

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The baseline emissions are to be calculated as follows:

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

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 CDM 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)

Baseline Emission for the period (01/07/2012 to 31/12/2012)
= 44638.385 (MWh) * 0.92252 (tCO2/MWh)
= 41,179 tCO_2

Month	Net Export	Emission Factor	CER

Jul-12	18220856.00[2]	0.92252	16,809
Aug-12	9844893.00	0.92252	9,082
Sep-12	5231792.00	0.92252	4,826
Oct-12	2980707.00	0.92252	2,750
Nov-12	2463639.00	0.92252	2,273
Dec-12	5896498.00	0.92252	5,439
Total	44638385.00		41,179

E.2. Calculation of project emissions or actual net GHG removals by sinks

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The project activity is a renewable energy project which generates electricity using wind power and hence does not result in project emissions.

E.3. Calculation of leakage

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No leakage is considered from the project activity as per approved methodology ACM0002 (Version 12.1.0)

E.4. Summary of calculation of emission reductions or net anthropogenic GHG removals by sinks

Item	Baseline emissions or baseline net GHG removals by sinks (t CO_2e)	Project emissions or actual net GHG removals by sinks (t CO_2e)	Leakage (t CO_2e)	Emission reductions or net anthropogenic GHG removals by sinks (t CO_2e)
01/07/2012 – 31/12/2012	41,179	**0**	**0**	41,179
Total	**41,179**	**0**	**0**	**41,179**

E.5. Comparison of actual emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex-ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO_2e)	43,937[3]	41,179

E.6. Remarks on difference from estimated value in registered PDD

[2] The value for month July 2012 is apportioned value because the Breakup sheet was issued for time period 01/06/2012 to 02/07/2012.

[3] The emission reduction has been calculated for 6 months under the present monitoring period, while in registered PDD the Emission Reductions are calculated for a year (12 months).
Proportionate number of CERs for a period of one day will be calculated as 87159/365 which comes out to be 238.79. Accordingly, number of CERs for 6 months i.e.184 days would be 43,937.

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The emission reduction has been calculated for 6 months under the present monitoring period, while in registered PDD the Emission Reductions are calculated for a year (12 months). Proportionate number of CERs for a period of six months as per registered PDD comes out to be 43,937. However, actual number of CERs achieved in the present monitoring period is 41,179. This reflects a difference of 6.28% on the downside, which is due to the low PLF achieved by the project activity.

E.7. Actual emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Item	Actual values achieved up to 31 December 2012	Actual values achieved from 1 January 2013 onwards
Emission reductions or GHG removals by sinks (t CO_2e)	41,179	0

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Document information

Version	*Date*	*Description*
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net anthropogenic GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	28 May 2010	EB 54, Annex 34. Initial adoption.

Decision Class: Regulatory
Document Type: Form
Business Function: issuance
Keywords: monitoring report, performance monitoring

ANNEX I

Metering system details:

The details of meters installed at the site for measuring export and import by project activity are provided below:

S. No.	WEG S.C. NO	No. & Capacity	Make	Serial No.	Accuracy Class	Calibration Frequency	Calibration date
1	2	1 X 800 kW	L & T	11068549	0.2%	Annual	20/03/2012
2	3	1 X 800 kW	L & T	11068549			20/03/2012
3	4	1 X 800 kW	L & T	11068549			20/03/2012
4	5	1 X 800 kW	L & T	11068549			20/03/2012
5	6	1 X 800 kW	L & T	11068549			20/03/2012
6	7	1 X 800 kW	L & T	11068549			20/03/2012
7	8	1 X 800 kW	L & T	11068549			20/03/2012
8	9	1 X 800 kW	L & T	11068549			20/03/2012
9	10	1 X 800 kW	L & T	11068549			20/03/2012
10	13	1 X 800 kW	L & T	11068549			20/03/2012
11	14	1 X 800 kW	L & T	11068549			20/03/2012
12	15	1 X 800 kW	L & T	11068549			20/03/2012
13	16	1 X 800 kW	L & T	11068549			20/03/2012
14	17	1 X 800 kW	L & T	11068549			20/03/2012
15	23	1 X 800 kW	L & T	11068549			20/03/2012
16	24	1 X 800 kW	L & T	11068549			20/03/2012
17	25	1 X 800 kW	L & T	11068549			20/03/2012
18	29	1 X 800 kW	L & T	11068549			20/03/2012
19	30	1 X 800 kW	L & T	11068549			20/03/2012
20	32	1 X 800 kW	L & T	11068549			20/03/2012
21	33	1 X 800 kW	L & T	11068549			20/03/2012
22	38	1 X 800 kW	L & T	11068549			20/03/2012
23	39	1 X 800 kW	L & T	11068549			20/03/2012
24	40	1 X 800 kW	L & T	11068549			20/03/2012
25	72	1 X 800 kW	L & T	11068549			20/03/2012
26	79	1 X 800 kW	L & T	11068549			20/03/2012
27	80	1 X 800 kW	L & T	11068549			20/03/2012
28	87	1 X 800 kW	L & T	11068549			20/03/2012
29	88	1 X 800 kW	L & T	11068549			20/03/2012
30	93	1 X 800 kW	L & T	11068549			20/03/2012
31	99	1 X 800 kW	L & T	11068549			20/03/2012
32	101	1 X 800 kW	L & T	11068549			20/03/2012
33	102	1 X 800 kW	L & T	11068549			20/03/2012
34	103	1 X 800 kW	L & T	11068549			20/03/2012
35	106	1 X 800 kW	L & T	11068549			20/03/2012
36	107	1 X 800 kW	L & T	11068549			20/03/2012
37	110	1 X 800 kW	L & T	11068549			20/03/2012
38	114	1 X 800 kW	L & T	11068549			20/03/2012

39	115	1 X 800 kW	L & T	11068549			20/03/2012
40	117	1 X 800 kW	L & T	11068549			20/03/2012
41	118	1 X 800 kW	L & T	11068549			20/03/2012
42	123	1 X 800 kW	L & T	11068549			20/03/2012
43	124	1 X 800 kW	L & T	11068549			20/03/2012
44	125	1 X 800 kW	L & T	11068549			20/03/2012
45	144	1 X 800 kW	L & T	11068549			20/03/2012
46	148	1 X 800 kW	L & T	11068549			20/03/2012
47	150	1 X 800 kW	L & T	11068549			20/03/2012
48	151	1 X 800 kW	L & T	11068549			20/03/2012
49	152	1 X 800 kW	L & T	11068549			20/03/2012
50	157	1 X 800 kW	L & T	11068549			20/03/2012
51	158	1 X 800 kW	L & T	11068549			20/03/2012
52	159	1 X 800 kW	L & T	11068549			20/03/2012
53	503	1 X 800 kW	L & T	11068549			20/03/2012
54	504	1 X 800 kW	L & T	11068549			20/03/2012
55	505	1 X 800 kW	L & T	11068549			20/03/2012
56	507	1 X 800 kW	L & T	11068549			20/03/2012
57	508	1 X 800 kW	L & T	11068549			20/03/2012
58	512	1 X 800 kW	L & T	11068549			20/03/2012
59	513	1 X 800 kW	L & T	11068549			20/03/2012
60	514	1 X 800 kW	L & T	11068549			20/03/2012
61	520	1 X 800 kW	L & T	11068549			20/03/2012
62	521	1 X 800 kW	L & T	11068549			20/03/2012
63	525	1 X 800 kW	L & T	11068549			20/03/2012