



**Monitoring report form  
(Version 05.1)**

**MONITORING REPORT**

<b>Title of the project activity</b>	Wind Power Project in Maharashtra State, India	
<b>UNFCCC reference number of the project activity</b>	10164 <sup>1</sup>	
<b>Version number of the monitoring report</b>	01	
<b>Completion date of the monitoring report</b>	22/05/2017	
<b>Monitoring period number and duration of this monitoring period</b>	Monitoring Period: 01 Monitoring Period Duration: 24/07/2015 to 01/03/2017	
<b>Project participant(s)</b>	Mahalaxmi Commercial Services Private Limited	
<b>Host Party</b>	India	
<b>Sectoral scope(s)</b>	Sectoral Scope- 1 Energy Industries (renewable/non-renewable sources).	
<b>Selected methodology(ies)</b>	AMS- I.D. Grid connected renewable electricity generation (Version 17)	
<b>Selected standardized baseline(s)</b>	Not Applicable	
<b>Estimated amount of GHG emission reductions or net GHG removals by sinks for this monitoring period in the registered PDD</b>	28,347 tCO <sub>2</sub> e	
<b>Total amount of GHG emission reductions or net GHG removals by sinks achieved in this monitoring period</b>	GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012	GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards
	0	24,186

<sup>1</sup> <https://cdm.unfccc.int/Projects/DB/SGS-UKL1435153630.26/view>

## SECTION A. Description of project activity

### A.1. Purpose and general description of project activity

The Project Participant, Mahalaxmi Commercial Services Private Limited, has proposed to develop a 10.5 MW wind power project at site-Jath, Taluka-Jath, District-Sangli, State-Maharashtra in India. The project activity will generate electricity utilising wind energy and will supply the generated electricity to the regional MSEDCL grid which is under purview NEWNE grid. Net electricity supplied to the grid by project activity is measured on continuous basis with the 0.2s accuracy meters<sup>2</sup>. In absence of the project activity equivalent amount of electricity would have otherwise been generated by existing and new power plants connected to the emission intensive NEWNE electricity grid. Thus the project activity would result in avoidance of Green House Gases (GHGs) emission and contribute to mitigation of global warming.

Details of commissioning date of all WTGs:

Sl. No	Location	Capacity of WTG (MW)	Commissioning Date*
1	JTH- 247	2.1	08/06/2013
2	JTH- 292	2.1	08/06/2013
3	JTH- 293	2.1	08/06/2013
4	JTH- 294	2.1	11/02/2014
5	JTH- 300	2.1	11/02/2014

\* Reference foot note no. 2 is applicable.

The Project Participant has placed the purchase orders to Suzlon Energy Limited and its group companies to supply and install the proposed wind power project. Suzlon shall also provide operation and maintenance services to the project activity.

Purpose of the Project Activity:

- To utilize renewable wind energy for generation of the electricity.
- To sell the generated electricity to Maharashtra State Electricity Distribution Company Limited (MSEDCL).
- To contribute in mitigating the climate change.

#### Pre-project scenario:

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. The main emission source in the pre-project scenario is the power plants connected to the NEWNE grid and main greenhouse gas involved is CO<sub>2</sub>.

#### Project scenario:

The project activity is a renewable source of power generation and would supply electricity to the NEWNE grid. The total planned capacity of the project activity is 10.5 MW. The project activity will use wind energy in producing electricity and no other input will be used, therefore, it will not produce any greenhouse gas emission during its lifetime.

#### Baseline scenario:

The baseline scenario is that the electricity delivered to the NEWNE grid by the project activity would have otherwise been generated by the operation of the grid-connected power plants and by the addition of new generation sources into the NEWNE grid. Hence, pre-project scenario and baseline scenario are the same.

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<sup>2</sup> Commissioning certificates is provided for meter accuracy class and commissioning dates of WTGs.

**Reduction of GHGs emissions due to the project activity:**

The project activity essentially involves generation of electricity from wind energy. The employed WTGs use wind energy to produce electricity and do not use any other input-fuel for electricity generation. The operation of WTGs is emission free and no GHG emissions are produced during the lifetime of the project activity.

The project activity replaces anthropogenic emissions of greenhouse gases (GHGs) into the atmosphere, which is estimated to be approximately average 16,223 tonnes of CO<sub>2</sub>e per year, 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 expansion connected to the grid.

The WTGs installed in the project activity are connected to the NEWNE grid. Therefore, the emission factor associated with the NEWNE grid is used to evaluate baseline emissions for the project activity. The project boundary composed of the WTGs, transformer, the metering equipment, substation, and the NEWNE grid, which is used to transmit the generated electricity. The project activity does not result in any greenhouse gas emissions and it is a clean source of electricity. The technology is a clean technology as there are no GHG emissions associated with the electricity generation. Technology is indigenous, available within the country, and environmentally safe and sound.

The GHG emission reductions achieved from current monitoring period is 24,186 t CO<sub>2</sub>.

**A.2. Location of project activity**

**District-** Sangli

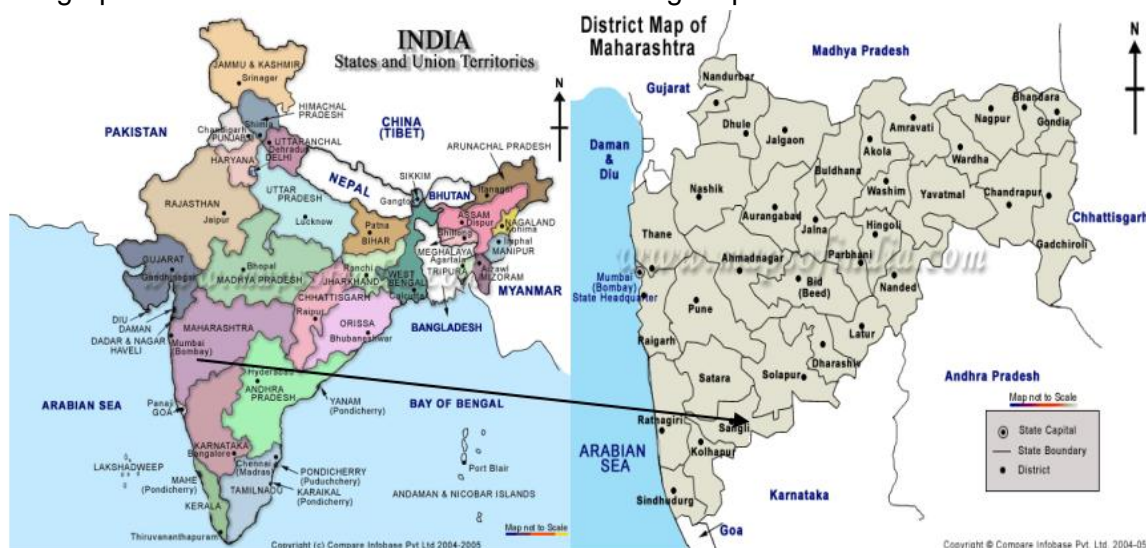
**Taluka-** Jath

**Villages-** Mendhegiri, Muchandi

The project activity is located at Jath site, District-Sangli, State-Maharashtra. The latitude and longitude of each WTG are as follows:

Survey Field No. / Gat No.	Latitude	Longitude	Location
59	N16° 58' 46.3"	E 75° 14' 31.3"	Loc. No. JTH - 292 Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)
128/1 & 128/2	N16° 59' 40.4"	E 75° 13' 46.5"	Loc. No. JTH - 293 Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)
109	N16° 59' 50.5"	E 75° 14' 10.4"	Loc. No. JTH - 247 Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)
32	N17° 00' 9"	E 75° 17' 00.9"	Loc. No. 300, Village - Muchandi, Taluka - Jath, District - Sangli (Maharashtra)
91	N16° 58' 56.5"	E 75° 14' 18.9"	Loc. No. 294, Village-Mendhegiri, Taluka - Jath, District - Sangli (Maharashtra)

Geographical location can be viewed in the following maps:



**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 whether the Party involved wishes to be considered as project participant (yes/no)
India (host)	Mahalaxmi Commercial Services Private Limited (Private Entity)	No

**A.4. Reference of applied methodology and standardized baseline**

**Methodology Title:** AMS I.D.: “Grid connected renewable electricity generation” – Version 17.0

**Reference:** I.D./Version 17, Sectoral Scope: 01, EB 61

<http://cdm.unfccc.int/methodologies/DB/RSCTZ8SKT4F7N1CFDXCSA7BDQ7FU1X>

**Methodological Tool:** “Tool to calculate the emission factor for an electricity system” – Version, 04.0

**Reference:** <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v4.0.pdf>

**A.5. Crediting period of project activity**

Type of crediting period	Fixed
Crediting period from	24/07/2015 - 23/07/2025
Length of the Crediting Period	10 Years
Current Monitoring period from	24/07/2015 to 01/03/2017
Length of the Monitoring Period	587 days

**A.6. Contact information of responsible persons/entities**

<b>Organization Name</b>	Mahalaxmi Commercial Services Private Limited
<b>Contact Person</b>	Mr. Pranav Sharma
<b>Title</b>	Director
<b>Address</b>	Baidyanath Bhawan, Great Nag Road, Nagpur
<b>Telephone</b>	-
<b>E-mail</b>	-

This entity is Project Participant as per Appendix 1.

**SECTION B. Implementation of project activity****B.1. Description of implemented registered project activity**

The Project Participant, Mahalaxmi Commercial Services Private Limited, has proposed to develop a 10.5 MW wind power project at site-Jath, Taluka-Jath, District-Sangli, State-Maharashtra in India. The project activity will generate electricity utilising wind energy and will supply the generated electricity to the regional MSEDCL grid which is under purview NEWNE grid.

The project activity involves WTGs made by Suzlon, model S88<sup>3</sup>, rated capacity 2100 kW. The technical details of the WTGs are provided below:

<b>Operating Data</b>	
Rated Power	2.1 MW
Cut-in wind speed	4 m/s
Rated wind speed	14 m/s
Cut-out wind speed	25 m/s
Hub Height	79 m
Wind Class	IEC-IIA
Rotational speed	15 to 17.6 rpm
<b>Rotor</b>	
Pitch system	Pitch regulated, electrical
Diameter	88 m
Swept Area	6,082 m <sup>2</sup>
Blade material type	Epoxy bundled fibre glass
<b>Generator</b>	
Type	Asynchronous slip ring type induction generator
Rated Power	2,100 kW
Rated Voltage	690 / 600 V
Frequency	50/60 Hz
Protection	IP 54, IP 23 for slip ring unit
Cooling system	Air cooled
Insulation	Class H
Slip control	Unique Flexi-Slip providing slip up to 16.67%
<b>Braking System</b>	
Aerodynamic brake	3 Independent systems with blade pitching mechanism
Mechanical brake	Hydraulic fail-safe disc brake system
<b>Gear box</b>	
Type	3 stage (1 planetary and 2 helical)
Ratio	1:98.8/1:118.1
Nominal load	2,200 kW
<b>Yaw system</b>	
Type	Driven by 3 electrical driven planetary drives
Bearings	Polyamide slide
<b>Certifications</b>	
Design standards	GL 2003
Quality	ISO 9001:2000, ISO 9001:2008, ISO 14001:2004 & OHSAS 18001:2007
<b>Tower</b>	
Type	Tubular Tower (4 sections)
Corrosion Protection	Epoxy/PU coated

## B.2. Post-registration changes

### B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

Not Applicable

### B.2.2. Corrections

<sup>3</sup> <http://www.suzlon.com/pdf/S88%20product%20brochure.pdf>

Not Applicable

**B.2.3. Changes to start date of crediting period**

Not Applicable

**B.2.4. Inclusion of a monitoring plan to the registered PDD that was not included at registration**

Not Applicable

**B.2.5. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline**

Not Applicable

**B.2.6. Changes to project design of registered project activity**

Not Applicable

**B.2.7. Types of changes specific to afforestation or reforestation project activity**

Not Applicable

**SECTION C. Description of monitoring system**

Monitoring of emission reductions is carried out as per the baseline and monitoring methodology for the project activity i.e. AMS I.D. version 17, which requires monitoring of the following:

- Quantity of net electricity supplied to the grid from the project activity; and
- CO<sub>2</sub> emission factor of the grid electricity

The Project Participant selected ex-ante determination of the baseline hence the monitoring of operating margin emission factor and build margin emission factor are not required. Further, wind energy based electricity generation is not associated with any kind of leakages. Hence, the sole parameter for monitoring is the net electricity supplied to the grid by the project activity.

The general conditions set out for metering, recording, meter readings, meter inspections, test & checking and communication shall be as per the Power Purchase Agreement executed by the Project Participant with the state electricity utility, MSEDCL.

The Project Participant has undertaken maintenance and services agreement with Suzlon Energy Limited, the contractor. The performance of the WTGs, safety in operation and scheduled / breakdown maintenances are organized and monitored by the contractor. Hence the authority and responsibility of project management lies with the contractor.

**Monitoring Plan:**

**Metering arrangement:**

Measuring and metering arrangement has been done as per Wind Energy Purchase Agreement (WEPA) signed by the Project Participant with MSEDCL. The main meter and check meter installed at the Pacchapur feeder are connected with PP's 5 WTGs at the site. The main meter's readings are taken monthly by the representatives of MSEDCL and the Contractor (Suzlon Energy Limited). The project activity has the following metering systems:

Feeder	Connected WTGs of the project activity
Jath	JTH292, JTH293, JTH294, JTH247, JTH300

**Main and Check meters:**

The main and check meters are installed at Pacchapur feeder to record net electricity data are dedicated meters for project participant's 5 WTGs of Mahalaxmi commercial services private limited. Hence there is no sampling approach required for monitoring net electricity generation supplied to grid.

**Controller:**

The controller installed on each WTG records gross generation of the electricity by that WTG. The controller is a micro-processor based intelligent device which has been specifically designed to control the wind turbines, where control functions, data collection and storage, real time monitoring, storage and other functions are integrated. The controller has three current inputs from CT and three voltage inputs from PT. The analogue values of the current/ voltage are converted into digital signal internally using A/D converters at very high sampling rate. A software program reads these values and displays instantaneous values of parameters such as voltage, current, frequency, power factor, kVA, kVAR and kWh. The instantaneous values are then time integrated displayed and stored. Woodward relay does not have a display and needs special protocol to view energy readings as this relay communicate digital signal through special communication protocol, hence it is not possible to calibrate. In case of any problem related to the controller, the WTG will automatically get shut down and the controller will be replaced by a new controller immediately.

**Monitoring of electricity generation at the WTGs:**

Power generated by the WTGs is monitored continuously and measured hourly at the Central Monitoring Station (CMS) of the technology supplier-Suzlon. The controller/CMS records the electricity generation daily at end of the day 00.00 hrs. This generation is then uploaded on the portal of the Project Participant, which remains there for three years. All WTGs are connected to the CMS located at the project site from where every connected WTG is accessible. In case of any connectivity issue, manual reading at the controller of the WTG is done. Monthly data are compiled and stored electronically.

**Monitoring of electricity supplied to the grid by the WTGs:**

The electricity supplied to the grid by the WTGs connected to each main / check meter is recorded monthly. The main/ check meter reading is taken and certified jointly by the representatives of MSEDCL and the contractor (Suzlon Energy Limited). The main meter readings are noted by the authorities of the state utility and sent to its office. Individual statements are generated by the office presented to the Project Participant in form of Joint Meter Reading Report (JMR). The Project Participant generates the invoice as per JMR for the electricity sold. The main meter readings as mentioned in the joint meter reading report shall form the basis of estimation of emission reductions in the project activity.

The main meter readings can be cross-checked with the invoices raised.

**Procedure for apportioning of electricity supplied to the grid where dates of monitoring period are not matching with dates of joint meter reading reports:**

There are instances when the claim of emission reductions will be in middle of any month and apportioning will have to be done to arrive at electricity supplied reading for that certain period. The following apportioning procedure will be followed, if the crediting period date of the project activity falls in between the meter reading cycles: This procedure has been followed for current monitoring period.

The apportioning will be done as follows: The ratio of Electricity generated at controller of project activity WTGs for particular days of billing cycle to the electricity generated at controller of project activity WTGs for all days of billing cycle is obtained and this ratio will multiply to net electricity export by project activity for that particular billing cycle.

The daily electricity generated at controller / CMS is measured by the contractor and sent to the project participant. In case of any problem related to the controller, the WTG will automatically get shut down and the controller will be replaced by a new controller immediately. Any change happening in controller will be reported in the concerned monitoring report during verification. Data will be used for deriving a ratio for apportioning.

**Example:** Let us assume,

X = Sum of the net electricity generation at controller of the WTG(s) of the project activity during the partial period of the corresponding period of main meter reading (kWh)

Y = Sum of the net electricity generation at controller of the WTG(s) of the project activity during the corresponding full period of main meter reading (kWh)

Therefore, ratio of the net electricity generation during the partial period (Z) =  $X/Y$

If G = Net electricity supplied by the WTG(s) of the project activity to the grid during the corresponding full period of main meter reading as per credit notes (kWh).

Then net electricity supplied by the WTG(s) of the project activity to the grid during the partial period (for calculating emission reduction for partial period) =  $G*Z$ .

#### **Troubleshooting Contingency Plan:**

If electricity readings at the main meter in any month differs from the readings of the check meter by more than  $\pm 0.2$  s both the meters shall be tested. If on such testing the main meter error is found to exceed the permissible limit but check meter reading error found within the limit, the check meter reading will be used in calculating the electricity supplied. If error in both main and check meters are found beyond permissible limits, the main and the check meters shall be immediately repaired and recalibrated and correction will be applied, as agreed between the parties, to the monthly main meter readings to arrive at the correct energy for billing purpose for the period of the month up to the time of such test repair and recalibration. The correction factor means the percentage of error between standard check meter and main meter. The meters will be used only after calibration.

#### **QA/QC procedures:**

The energy main/ check meter installed at the project site is having the accuracy class of 0.2 s. The main/ check meter shall be jointly inspected and sealed by the utility and shall not be interfered by either utility or Project Participant except in the presence of the accredited representatives of both utility and Suzlon Energy Limited. The meters are calibrated by the state electricity utility once in a year. The meter accuracy class and calibration frequency is under jurisdiction of state electricity board and PP does not have any control on it. Thus there may change in accuracy class or calibration frequency of meters in future.

#### **Data archiving:**

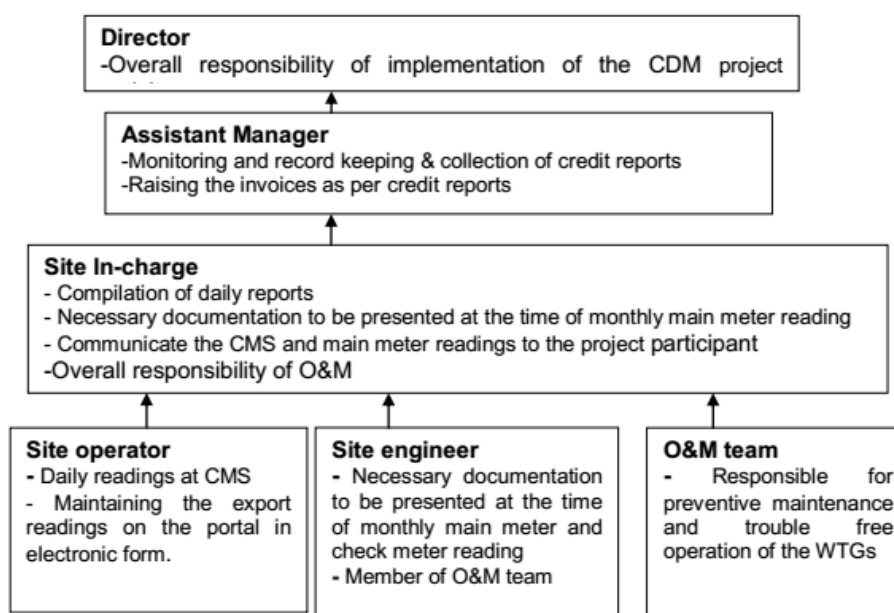
Monthly data shall be archived and stored for the entire crediting period plus two years.

#### **Training**

The monitoring personnel will be trained for performing daily operation and maintenance aspects of the wind farm. The training and maintenance will ensure preventive maintenance and operation control of the wind farm.

#### **Operational and Organisation Structure of Monitoring**





## SECTION D. Data and parameters

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

<b>Data/parameter:</b>	$EF_{grid,OM,y}$
Unit	tCO <sub>2</sub> /MWh
Description	Operating margin CO <sub>2</sub> emission factor for NEWNE grid in the year y
Source of data	"Baseline Carbon Dioxide Emission Database Version 8.0" <sup>4</sup> published by the Central Electricity Authority, Ministry of Power, Government of India.
Value(s) applied)	0.9723 tCO <sub>2</sub> /MWh
Choice of data or measurement methods and procedures	Calculated using "Tool to calculate the emission factor for an electricity system, version 04.0 " as 3-year generation-weighted average of latest three years, 2009-2010, 2010-2011 and 2011-12 data obtained from "CO <sub>2</sub> Baseline Database for Indian Power Sector" version 8.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data	Calculation of baseline emissions
Additional comments	Computed once during PDD finalization (ex-ante).

<b>Data/parameter:</b>	$EF_{grid,BM,y}$
Unit	tCO <sub>2</sub> /MWh
Description	Build margin CO <sub>2</sub> emission factor for NEWNE grid in the year y
Source of data	"Baseline Carbon Dioxide Emission Database Version 8.0" published by the Central Electricity Authority, Ministry of Power, Government of India.
Value(s) applied)	0.9164 tCO <sub>2</sub> /MWh for the year 2011-12.
Choice of data or measurement methods and procedures	Calculated using "Tool to calculate the emission factor for an electricity system, version 04.0".
Purpose of data	Calculation of baseline emissions
Additional comments	Computed once during PDD finalization (ex-ante).

<sup>4</sup> [http://www.cea.nic.in/reports/planning/cdm\\_co2/cdm\\_co2.htm](http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm)

<b>Data/parameter:</b>	$EF_{grid,CM,y}$
Unit	tCO <sub>2</sub> /MWh
Description	Combined margin CO <sub>2</sub> emission factor for NEWNE grid in the year y
Source of data	"Baseline Carbon Dioxide Emission Database Version 8.0" published by the Central Electricity Authority, Ministry of Power, Government of India.
Value(s) applied)	0.9582 tCO <sub>2</sub> /MWh
Choice of data or measurement methods and procedures	<p>Calculated weighted average combined margin using equation –</p> $EF_{grid,CM,y} = EF_{grid,OM,y} \times W_{OM} + EF_{grid,BM,y} \times W_{BM}$ <p>The default values for W<sub>OM</sub> and W<sub>BM</sub> are taken as applicable to wind power generation project activities as W<sub>OM</sub> = 0.75 and W<sub>BM</sub> = 0.25.</p> <p>Reference: Page 24 of "Tool to calculate the emission factor for an electricity system", Version 04.0.</p>
Purpose of data	Calculation of baseline emissions
Additional comments	Computed once during PDD finalization (ex-ante).

## D.2. Data and parameters monitored

<b>Data/parameter:</b>	$EG_{export, y}$
Unit	MWh (Mega-watt hour)
Description	Electricity exported to the grid by the project activity in year y (MWh)
Measured/calculated/default	Measured
Source of data	Joint Meter Reading Report (JMR)
Value(s) of monitored parameter	25,360.341 MWh
Monitoring equipment	Energy meters class: 0.2 s
Measuring/reading/recording frequency:	Continuous monitoring, hourly measurement and monthly recording
Calculation method (if applicable):	The main meter installed at the metering point is dedicated meter for Project Participant 5 WTGs together will measure the export of electricity on continuous basis. Main meter reading will be taken and verified, once in a month, jointly by the representatives of MSEDCL and the authorized representative of the contractor (Suzlon Energy Limited). Joint Meter Reading Report (JMR) is developed by MSEDCL. JMR contains data on export, import and net electricity supplied.
QA/QC procedures:	Calibration Frequency: Once in a year.
Purpose of data:	The data may be cross-checked with the invoices raised for sale of the electricity.
Additional comments:	Calculation of baseline emissions

<b>Data/parameter:</b>	$EG_{import, y}$
Unit	MWh (Mega-watt hour)
Description	Electricity imported by the project activity from the grid in year y (MWh)
Measured/calculated/default	Measured
Source of data	Joint Meter Reading Report (JMR)
Value(s) of monitored parameter	118.89 MWh
Monitoring equipment	Energy meters class: 0.2 s
Measuring/reading/recording frequency:	Continuous monitoring, hourly measurement and monthly recording

Calculation method (if applicable):	The main meter installed at the common metering point is dedicated meter for Project Participant 5 WTGs together will measure the import of the electricity. Main meter readings will be taken and verified, once in a month, jointly by the representatives of MSEDCL and the authorized representative of the contractor (Suzlon Energy Limited). Joint Meter Reading Report (JMR) is developed by MSEDCL JMR contains data on export, import and net electricity supplied.
QA/QC procedures:	Calibration Frequency: Once in a year.
Purpose of data:	The data may be cross-checked with the invoices raised for sale of the electricity.
Additional comments:	Calculation of baseline emissions

<b>Data/parameter:</b>	$EG_{BL, y}$
Unit	MWh (Mega-watt hour)
Description	Net electricity supplied to the grid by the project activity in year y
Measured/calculated/default	Calculated value
Source of data	Joint Meter Reading Report (JMR)
Value(s) of monitored parameter	25,241.453 MWh
Monitoring equipment	-
Measuring/reading/recording frequency:	Continuous monitoring, hourly measurement and monthly recording
Calculation method (if applicable):	<p>Net electricity supplied to the grid will be calculated as</p> $EG_{BL, y} = EG_{\text{export}, y} - EG_{\text{import}, y}$ <p>Joint Meter Reading Report (JMR) is developed by MSEDCL for all connected WTGs after calculating net electricity supplied to the grid as per above mentioned formula. JMR contains data on export, import and net electricity supplied.</p>
QA/QC procedures:	The data may be cross-checked with the invoices raised for sale of the electricity.
Purpose of data:	Calculation of baseline emissions
Additional comments:	Data shall be archived for the entire crediting period + 2 years

### D.3. Implementation of sampling plan

No Sampling approach is required to determine data and parameters required for monitoring.

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

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

As per the approved methodology AMS I.D version 17 baseline emissions for the project activity are calculated by multiplying the net quantity of electricity supplied by this project activity ( $EG_{BL, y}$ ) with the CO<sub>2</sub> baseline emission factor for the electricity displaced due to the project ( $EF_{CO_2}$ ) as follows:

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

Where,

EF <sub>grid,CM,y</sub>	=	Baseline emission factor
	=	0.9582 tCO <sub>2e</sub> /MWh
EG <sub>PJ,y</sub>	=	Net electricity supplied to the NEWNE regional grid (MWh)
	=	25,241.453 MWh
BE <sub>y</sub>	=	25,241.453 * 0.9582
	=	24,186 tCO <sub>2e</sub>

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

Since the project activity is a renewable energy project which generates electricity using wind power therefore there are no resulting project emissions.

## E.3. Calculation of leakage

No leakage is considered from the project activity as per approved methodology AMS-I.D. - Version 17

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

Item	Baseline emissions or baseline net GHG removals by sinks (t CO <sub>2e</sub> )	Project emissions or actual net GHG removals by sinks (t CO <sub>2e</sub> )	Leakage (t CO <sub>2e</sub> )	GHG emission reductions or net GHG removals by sinks (t CO <sub>2e</sub> ) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
<b>Total</b>	24,186	0	0	0	24,186	24,186

## E.5. Comparison of actual emission reductions or net 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 <sub>2e</sub> )	28,347 tCO <sub>2e</sub>	24,186 tCO <sub>2e</sub>

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

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From section E.5 above, it is evident that the actual emission reduction for the current monitoring period is lower than the estimated emission reduction by 14.68%, which is due to the lower performance of the wind machines during the current monitoring period.

## Appendix 1. Contact information of project participants and responsible persons/entities

<b>Project participant and/or responsible person/ entity</b>	<input checked="" type="checkbox"/> Project participant <input checked="" type="checkbox"/> Person/entity responsible for completing the CDM-MR-FORM
<b>Organization name</b>	Mahalaxmi Commercial Services Private Limited
<b>Street/P.O. Box</b>	Baidyanath Bhawan, Great Nag Road,
<b>Building</b>	
<b>City</b>	Nagpur
<b>State/region</b>	Maharashtra
<b>Postcode</b>	440 009
<b>Country</b>	India
<b>Telephone</b>	+91 712 6644920, +91-22-6644949
<b>Fax</b>	+91 712 2743453
<b>E-mail</b>	pranavketan@hotmail.com
<b>Website</b>	-
<b>Contact person</b>	-
<b>Title</b>	Director
<b>Salutation</b>	Mr.
<b>Last name</b>	Sharma
<b>Middle name</b>	Kumar
<b>First name</b>	Siddesh
<b>Department</b>	Marketing and Advertisement
<b>Mobile</b>	+91-9823099399
<b>Direct fax</b>	+91 712 2743453
<b>Direct tel.</b>	91 712 6644920, +91-22-6644949
<b>Personal e-mail</b>	pranavketan@hotmail.com

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### Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: <ul style="list-style-type: none"> <li>• Include provisions related to delayed submission of a monitoring plan;</li> <li>• Provisions related to the Host Party;</li> <li>• Remove reference to programme of activities;</li> <li>• Overall editorial improvement.</li> </ul>

<i>Version</i>	<i>Date</i>	<i>Description</i>
04.0	25 June 2014	Revisions to: <ul style="list-style-type: none"> <li>• Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0));</li> <li>• Include provisions related to standardized baselines;</li> <li>• Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1;</li> <li>• Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>;</li> <li>• Editorial improvement.</li> </ul>
03.2	5 November 2013	Editorial revision to correct table in page 1.
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 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		