



**Monitoring report form**  
**(Version 05.1)**

**MONITORING REPORT**

<b>Title of the project activity</b>	9.6 MW Wind Energy Project at Jamvadi & Navagam & Kalavad, Jamnagar, Gujarat, India of Rohit Surfactants Pvt. Ltd.	
<b>UNFCCC reference number of the project activity</b>	4470 <sup>1</sup>	
<b>Version number of the monitoring report</b>	01	
<b>Completion date of the monitoring report</b>	02/09/2016	
<b>Monitoring period number and duration of this monitoring period</b>	Monitoring period number – 01 Duration – 01/01/2013 to 31/08/2016	
<b>Project participant(s)</b>	Rohit Surfactants Pvt. Ltd.	
<b>Host Party</b>	India	
<b>Sectoral scope(s)</b>	1 : Energy industries (renewable - / non-renewable sources)	
<b>Selected methodology(ies)</b>	AMS I.D, “Grid connected renewable electricity generation” (Version 16)	
<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>	65,971	
<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	52,936

<sup>1</sup> <https://cdm.unfccc.int/Projects/DB/SIRIM1297157809.18/view>

## SECTION A. Description of project activity

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

The project activity involves installation of 12 Wind Electric Generators (WEGs) with a total capacity of 9.6 MW located at Jamnagar District, Gujarat State, India by Rohit surfactants Private Ltd. The wind farm harnesses wind energy potential in the Jamnagar district and intends to promote renewable energy by addressing the causative factors of low utilisation of renewable energy resources. The project activity is in line with the sustainable development priority of the country.

All the WEGs are connected to the regional grid and as per the Power Purchase Agreement ("PPA") the generated electricity is being sold to Gujarat Urja Vikas Nigam Limited (GUVNL). Wind World (India) Ltd (Formerly known as Enercon India Ltd. (EIL), the MR refers Enercon for being consistent with the PDD) is the equipment supplier and operations & maintenance contractor for the project activity. The principle of wind energy is the conversion of kinetic energy in the wind into mechanical power at the rotor shaft. The rotor shaft is then coupled to the generator where it would be converted to electrical energy. These Enercon make 800KW WEGs feature variable speed and active pitch control. The generator is flanged directly to the hub.

Technology specification of the product is further described in section B.1.

Details of actual implementation status are as mentioned in table below

WEG Identification Number	Village	Date of Commissioning
EIL/800/07-08/0927	Jamvadi	18/03/2008
EIL/800/07-08/0928	Jamvadi	18/03/2008
EIL/800/07-08/0929	Jamvadi	18/03/2008
EIL/800/07-08/0930	Jamvadi	18/03/2008
EIL/800/07-08/0931	Jamvadi	18/03/2008
EIL/800/07-08/0932	Jamvadi	18/03/2008
EIL/800/07-08/0933	Jamvadi	18/03/2008
EIL/800/07-08/01029	Navagam	26/03/2008
EIL/800/07-08/01030	Navagam	26/03/2008
EIL/800/07-08/01031	Navagam	26/03/2008
EIL/800/07-08/01032	Navagam	26/03/2008
EIL/800/07-08/01033	Navagam	26/03/2008

During the current monitoring period, the project activity was operated and monitored in accordance with the applicable baseline and monitoring methodology AMS I D, Version 16 and registered PDD.

All the WEGs are in operation and no abnormal circumstance occurred during this monitoring period. Enercon operation and maintenance activities are ISO 9001:2008 certified and all the events are recorded in the log book available at the project site. As a part of regular maintenance the machines are stopped for mechanical and electrical maintenance.

The total emission reductions achieved for the current monitoring period are 52,936 tCO<sub>2</sub>e.

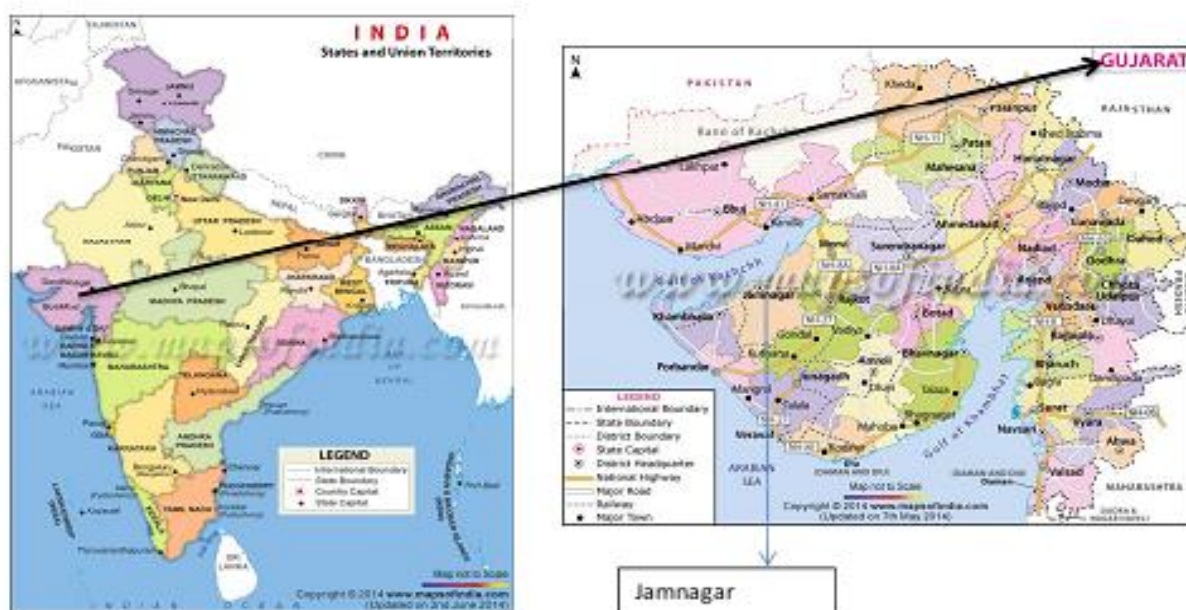
### A.2. Location of project activity

Project activity is located at  
 Village : Jamvadi & Navagam  
 Taluka : Kalavad,  
 District: Jamnagar,  
 State: Gujarat  
 Country : India

Below table mentioned WEG wise location details:

Sr. No.	Details of site of installation			WTG ID commissioning	GPS Coordinates
	Name of village	Taluka	District		
1	Jamvadi	Kalavad	Jamnagar	EIL/800/07-08/0927	N22°07' 13.2" – E70°18' 39.3"
2	Jamvadi	Kalavad	Jamnagar	EIL/800/07-08/0928	N22° 07' 19.5" – E70°18' 39.5"
3	Jamvadi	Kalavad	Jamnagar	EIL/800/07-08/0929	N 22 ° 07' 25.8" E70° 18' 36.1"
4	Jamvadi	Kalavad	Jamnagar	EIL/800/07-08/0930	N22° 07' 32.3" – E70° 18' 36.2"
5	Jamvadi	Kalavad	Jamnagar	EIL/800/07-08/0931	N22° 08' 12.1" – E 70° 18' 20.2"
6	Jamvadi	Kalavad	Jamnagar	EIL/800/07-08/0932	N 22° 08' 18.1" E70 °18' 18.4"
7	Jamvadi	Kalavad	Jamnagar	EIL/800/07-08/0933	N22° 08' 25.2" – E70° 18' 16.1"
8	Navagam	Kalavad	Jamnagar	EIL/800/07-08/01029	N 22°03' 27.6" – E70° 16' 53.9"
9	Navagam	Kalavad	Jamnagar	EIL/800/07-08/01030	N22° 03' 22.4" – E70° 16' 54.0"
10	Navagam	Kalavad	Jamnagar	EIL/800/07-08/01031	N22° 03' 14.4" – E70 °17' 01.8"
11	Navagam	Kalavad	Jamnagar	EIL/800/07-08/01032	N22° 03' 08.4" – E70 °17' 03.9"
12	Navagam	Kalavad	Jamnagar	EIL/800/07-08/01033	N22° 03' 02.4" – E70° 17' 06.3"

The below is location map for the project activity



**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)	Rohit Surfactants Pvt. Ltd.	NO

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

Type I – Renewable Energy Projects  
AMS I.D – Grid connected renewable electricity generation, Version 16 ,  
Sectoral Scope 01- Energy Industries (Renewable -/ non-renewable sources)

The Tools used :

Tool to calculate the emission factor for an electricity system. Version 2/EB 50/Annex 14

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

Type - Fixed  
Monitoring Period - 02  
Start date of crediting period - 08/09/2011  
Length of Crediting period - 10 Years  
Duration of Crediting Period - 08/09/2011 to 07/09/2021  
Current Monitoring Period (Second)- 01/01/2013 to 31/08/2016

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

Mr. Bhaskar Dutta  
Manager- Operations  
EKI Energy Services Limited  
Plot 48, Scheme 79, Part- 2, Vijay Nagar, Indore- 452010, Madhya Pradesh (India)  
Mob: +91 9109916710  
Ph: +91 731 4289086  
Fax: +91 731 4289086  
Email: [bhaskar@enkingint.org](mailto:bhaskar@enkingint.org)

The above entity is not project participant as mentioned in Appendix 1.

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

Project activity is implemented and operated as per the registered PDD. The project activity proposes to install total 12 WEGs of 800 kW each leading to the total capacity of 9.6 MW.

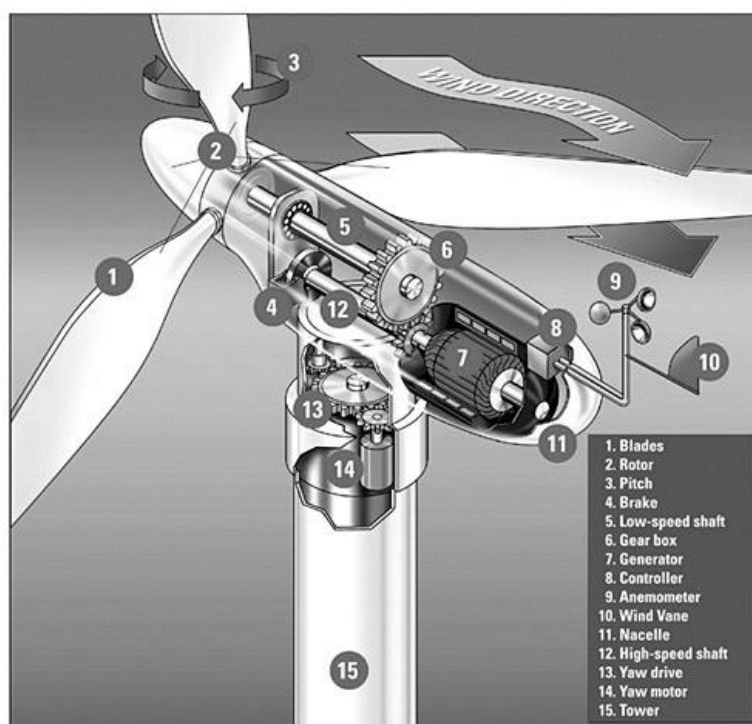
The project participant uses proven technology for wind power generation. This technology was supplied by ENERCON India Ltd (EIL). All the WEGs are connected to the regional grid and as per the Power Purchase Agreement ("PPA") the generated electricity is being sold to Gujarat Urja Vikas Nigam Limited (GUVNL). Enercon India Ltd. (EIL) is the equipment supplier and operations & maintenance contractor for the project activity.

Technical Specifications of turbines are as mentioned below:

Turbine	Enercon
Rated Power	800 kW
No. of Blades	3
Tower	Tubular

Turbine Type	Gearless horizontal
Power regulation	Independent electro-mechanical pitch system for each blade
Cut in wind speed	3 m/s
Rated wind speed	12 m/s
Cutout wind speed	28 – 34 m/s
Extreme wind speed	59.5 m/s
Rated rotational speed	31.5 rpm
Operating range rot. Speed	16 – 31.5 rpm
Orientation	Upwind
No. of blades	3
Blade Material	Glass Fiber reinforced Epoxy
Gear box type	Gear less
Generator type	Synchronous generator
Braking	Aerodynamics
Output voltage	400 V
Yaw system	Active yawing with 4 electric yaw drives with brake motor and friction bearing
Tower	Tubular

The schematic diagram of WTG depicting the major parts of a windmill is provided below



There are no changes that have happened in project activity which may impact the applicability of the methodology.

**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**

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 will be carried out following the guidance provided in the applicable methodology for the project activity i.e. AMS-ID version 16, 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 (Ex ante determination of grid emission factor has been chosen).

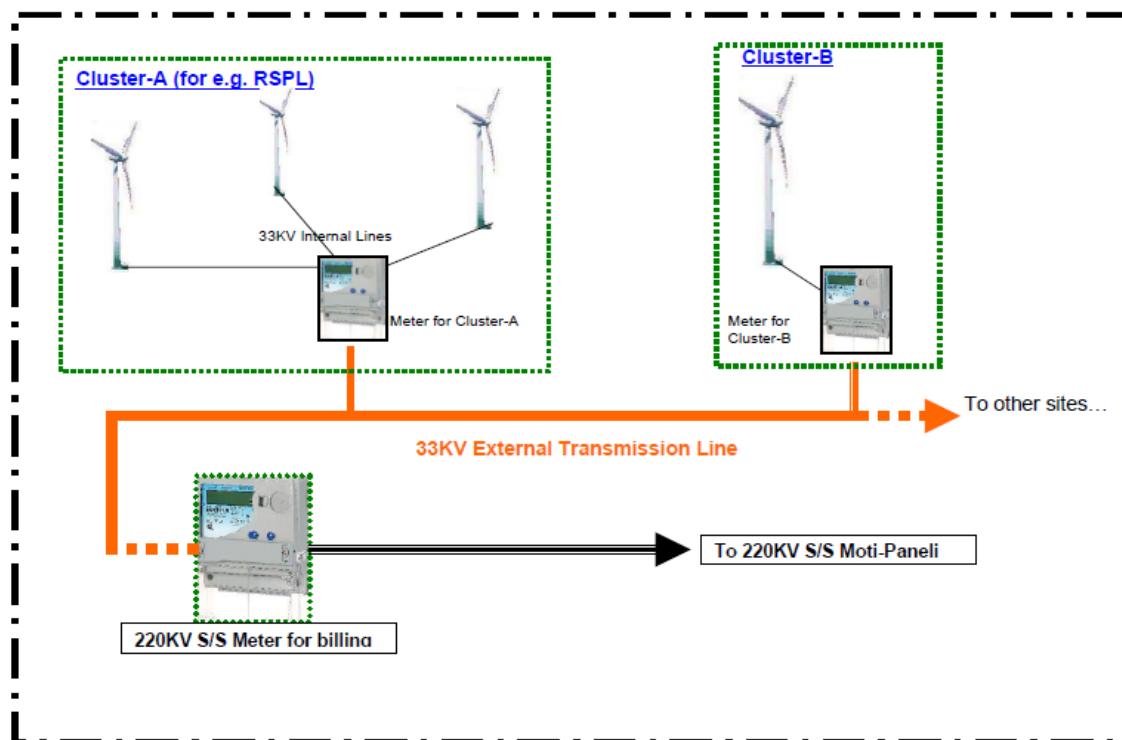
The general conditions set out for metering, recording, meter readings, meter inspections, Test & Checking and communication shall be as per the PPA (power purchase agreement) with GUVNL.

Reading and correction of meters:

- a) The WEGs of a single customer (RSPL in this case) at a particular site are connected to a 33 kV cluster meter which in turn connects to a feeder that ultimately leads to the shared main GETCO meter at the 220 kV substation. Data monitoring takes place at the 220 kV substation and at each WEG (through the SCADA system)
- b) Site technician will collect the generation readings from the WEGs every day and will prepare the daily generation report. Through these collective reports of everyday, monthly generation figures are available.
- c) Cluster meter readings are also taken daily on the same day the WEG meter readings are taken to get the exact generation recording of these meter.

- d) On the billing day decided by GEDA/GETCO/EIL, the reading of the 220 kV substation meter is taken at the same time of daily WEG readings by calculating in the pro-rata basis, the generated units are being allocated to individual customers according to the generated units
- e) The emission reduction calculations are done on the basis of the GETCO Main meter reading (net electricity exported to the grid) after deducting imports from the grid as mentioned in the share certificate issued by GEDA on monthly basis. The following figure illustrates the metering arrangement for the RSPL project activity.

ELECTRICITY SHARE ALLOCATION PROCEDURE FOR WEC GENERATION



- 1 -

- f) Whenever there is a major difference between the readings of the Main meter (220 kV substation meter and the 33kV cluster at Enercon Substation) at wind farm end, the following steps shall be taken.
- i. Checking of CT and PT connections
  - ii. Testing of accuracy of meters at site and at GETCO meter (220 kV substation meter)
- If the difference exists even after such checking or testing, then the defective meter shall be replaced with a correct meter.
- g) In case of conspicuous failures like burning of meter and erratic display of metered parameters and when the error found in testing of meter is beyond the permissible limit of error provided in the relevant standard, the meter shall be immediately replaced with a correct meter.
- h) Sealing and maintenance of meters:

i. The GETCO meter (220 kV substation meter) shall be sealed in the presence of representatives of RSPL / Enercon and GETCO.

ii. Any meter seal(s) shall be broken only by the GETCO representative in the presence of Enercon/RSPLs representative whenever the main metering system or the 33kV metering system is to be inspected, tested, adjusted, repaired or replaced.

iii. The GETCO meter at the substation will be calibrated once in a year. The calibration of the meters installed in an individual WEG will take place on yearly basis in accordance with Enercon's operation & maintenance manual which is consistently followed at all Enercon sites across the world.

i) Records: Enercon will maintain an accurate and up-to-date operating log at the project site with records of:

i. 24 Hours logs of real and reactive power generation, frequency, transformer tap position, bus

voltage(s), Main meter and other meter readings and any other data mutually agreed.

ii. Any unusual conditions found during operation/inspections

iii. All the records will be preserved for 2 years after the end of the crediting period.

j) The billing will be on monthly basis. Enercon/RSPL shall raise invoice and submit to GUVNL for payment based on joint meter reading as certified by GEDA at the end of each month for the energy supplied

k) Billing for the failure period:

i. In the event that any GETCO meter fails to register or upon being tested, is found not to be accurate within  $\pm 0.2$  class the energy injected in the grid, shall for the period be measured on the basis of the value registered by the corresponding meter at the feeder end.

ii. In the event that both GETCO meter and the corresponding meter at the feeder end fail to register, or upon being tested, be found not to be accurate within  $\pm 0.2 / 0.5$  the energy injected in the grid, shall for the period be adjusted by immediately restoring and recalibrating the GETCO meter and the corresponding cluster meter (33 kV substation) at the meter and the correction applied to the consumption registered by the GETCO meter.

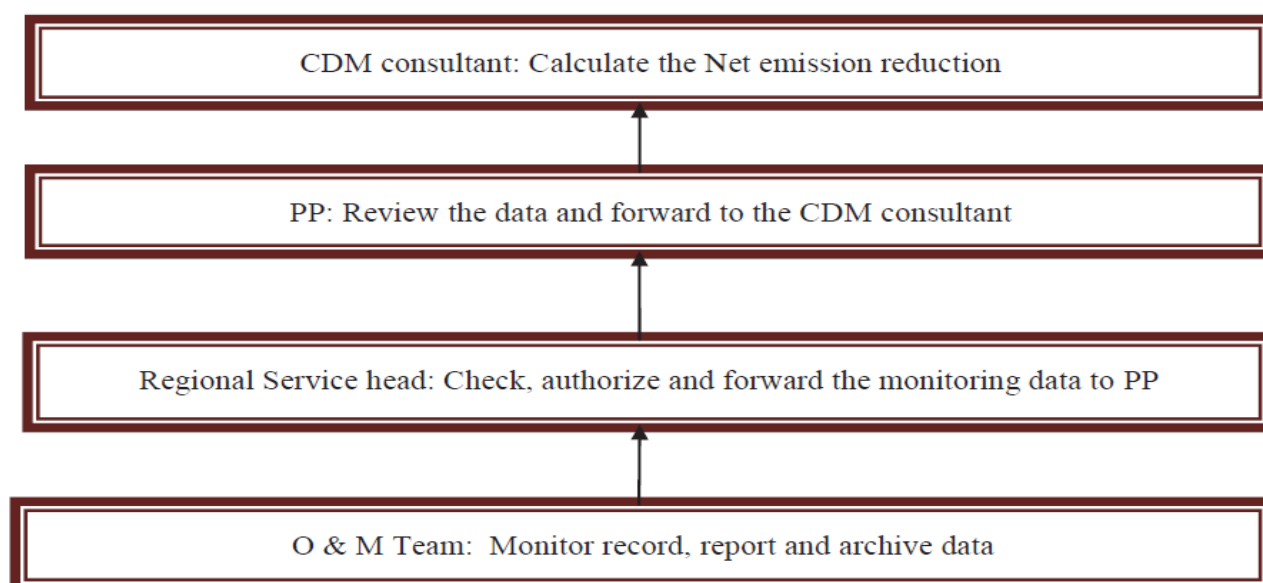
iii. The period referred to in the two points above is the actual period during which inaccurate measurements were made if such period can be determined or, if not readily determinable, the shorter of:

i. The period since the immediately preceding test of the relevant Main meter; or

ii. One hundred and eighty (180) days immediately preceding the test at which the relevant Main meter was determined to be defective or inaccurate.

The project is operated and managed by Enercon (India) Ltd. The operational and management structure is as mentioned below.





The calibration details of meters used for determining the net electricity supplied to grid are mentioned in Annexure 1 and Annexure 2

## SECTION D. Data and parameters

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

Data/parameter:	Operating margin CO <sub>2</sub> emission factor in year y - EF <sub>grid,OM, y</sub>
Unit	tCO <sub>2</sub> /MWh
Description	Operating Margin Emission factor of the NEWNE grid
Source of data	CO <sub>2</sub> Baseline Database for the Indian Power Sector, User Guide, Version 5.0 dated November 2009 – from Central Electricity Authority (CEA). It is fixed ex-ante and will be constant throughout the crediting period
Value(s) applied)	1.0050
Choice of data or measurement methods and procedures	Operating Margin Emission Factor has been calculated by the Central Electricity Authority using the simple OM approach in accordance with "Tool to calculate the emission factor for an electricity system"
Purpose of data	Calculations of Baseline emissions
Additional comments	This data has been directly referred from the registered PDD.

Data/parameter:	Build margin CO <sub>2</sub> emission factor in year y – EF <sub>grid,BM, y</sub>
Unit	tCO <sub>2</sub> /MWh
Description	Built Margin Emission factor of the NEWNE grid
Source of data	CO <sub>2</sub> Baseline Database for the Indian Power Sector, User Guide, Version 5.0 dated November 2009 – from Central Electricity Authority (CEA).It is fixed ex-ante and will be constant throughout the crediting period
Value(s) applied)	0.6752
Choice of data or measurement methods and procedures	The Build Margin Emission Factor has been calculated by the Central Electricity Authority in accordance with "Tool to calculate the emission factor for an electricity system".
Purpose of data	Calculations of Baseline emissions
Additional comments	This data has been directly referred from the registered PDD.

<b>Data/parameter:</b>	<b>Combined margin CO<sub>2</sub> emission factor in year y <math>EF_{CO_2, grid, y}</math></b>
Unit	tCO <sub>2</sub> /MWh
Description	The Emission factor of the NEWNE grid
Source of data	Calculated as the weighted average of the build margin emission factor (25%) and operating margin emission factor (75%). It is fixed ex-ante and will be constant throughout the crediting period.
Value(s) applied	0.9225 (calculated)
Choice of data or measurement methods and procedures	The calculation has been done as per the Tool to calculate the emission factor for an electricity system, The fixed ex-ante combined margin emission factor from CEA database is used in the calculation of emission factor. This has been calculated as per the Tool to calculate the emission factor for an electricity system, version 2.2.1, based on 75% of OM and 25% of BM values approach.
Purpose of data	Calculations of Baseline emissions
Additional comments	This data has been directly referred from the registered PDD.

## D.2. Data and parameters monitored

<b>Data/parameter:</b>	<b>EG<sub>BL, y</sub></b>
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
Measured/calculated/default	Calculated from Measured value
Source of data	Electricity Share certificate issued by GEDA.
Value(s) of monitored parameter	57383.44
Monitoring equipment	Not applicable as this parameter is calculated
Measuring/reading/recording frequency:	Monitoring continuous and Reported monthly. The data is recorded every day and monthly values are reported in the monthly share certificates issued by GETCO
Calculation method (if applicable):	Net electricity generated will be calculated from the readings of export and import indicated by the main meter (220 kV substation meter) connected to the incoming feeder of GUVNL. The procedures for metering will be as per the provisions of the power purchase agreement. The WEGs of a single customer (RSPL in this case) at a particular site are connected to a cluster meter (33 kV) which in turn connects to a feeder that ultimately leads to the shared main GETCO meter at the 220 kV substation maintained by Enercon India Limited. Data monitoring takes place at the cluster meter (33 kV) and GETCO meter (220 kV) at the substation. The electricity metered at the GETCO meter is proportionally divided among the customers connected to the meter on the basis of the pro-rata readings taken at the cluster meter (33 kV). The emission reduction calculations are done on the basis of the GETCO Main meter reading (net electricity exported to the grid) after deducting imports from the grid as mentioned in the share certificate issued by GEDA on monthly basis.
QA/QC procedures:	As per the registered PDD the regular calibration of all the meters was to be undertaken yearly with an option of the faulty meters to be replaced immediately. While this could not happen during this monitoring period and delays were observed in the calibration of energy meters. Please refer to actual calibration information in Annexure 1 for the substation meters and Annexure 2 for the cluster meters. There was no change in any of the meters during this monitoring period.
Purpose of data:	Baseline calculation
Additional comments:	The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later

<b>Data/parameter:</b>	<b>EG<sub>y, Export</sub></b>
Unit	MWh
Description	Quantity of electricity exported to GUVNL facility
Measured/calculated/default	Measured
Source of data	Share certificate issued by GEDA monitored from the main GETCO meter
Value(s) of monitored parameter	Please refer excel sheet for same
Monitoring equipment	Energy meters are used for this parameter. Please refer Annexure 1 for meter serial number, accuracy and calibration details etc.
Measuring/reading/recording frequency:	Monitoring continuous and Reported monthly. The data is recorded everyday and monthly values are reported in the monthly share certificates issued by GETCO
Calculation method (if applicable):	-
QA/QC procedures:	As per the registered PDD the regular calibration of all the meters was to be undertaken yearly with an option of the faulty meters to be replaced immediately. Please refer to actual calibration information in Annexure 1 for the substation meters. There was no change in any of the meters during this monitoring period.
Purpose of data:	Baseline calculation
Additional comments:	Electricity exported to GUVNL will be measured at the main meter connected to the incoming feeder of GUVNL. The procedures for metering will be as per the provisions of the power purchase agreement. This value is based on GETCO substation meter reading for wind farm which includes project activity WTGs and non project activity WTGs those are connected to the substation. The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

<b>Data/parameter:</b>	<b>EG<sub>y, Import</sub></b>
Unit	MWh
Description	Quantity of electricity imported from GUVNL facility
Measured/calculated/default	Measured
Source of data	Share certificate issued by GEDA monitored from the main GETCO meter
Value(s) of monitored parameter	Please refer excel sheet for same
Monitoring equipment	Energy meters are used for this parameter. Please refer Annexure 1 for meter serial number, accuracy and calibration details etc.
Measuring/reading/recording frequency:	Monitoring continuous and Reported monthly. The data is recorded everyday and monthly values are reported in the monthly share certificates issued by GETCO
Calculation method (if applicable):	-
QA/QC procedures:	As per the registered PDD the regular calibration of all the meters was to be undertaken yearly with an option of the faulty meters to be replaced immediately. Please refer to actual calibration information in Annexure 1 for the substation meters. There was no change in any of the meters during this monitoring period.
Purpose of data:	Baseline calculation
Additional comments:	Electricity imported from GUVNL will be measured at the main meter connected to the incoming feeder of GUVNL. The procedures for metering will be as per the provisions of the power purchase agreement. This value

	<p>is based on GETCO substation meter reading for wind farm which includes project activity WTGs and non project activity WTGs those are connected to the substation.</p> <p>The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later</p>
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<b>Data/parameter:</b>	<b>EG<sub>y, WEG</sub></b>
Unit	MWh
Description	Electricity generated by each WEG
Measured/calculated/default	Measured
Source of data	Daily generation reports provided by Enercon India Limited
Value(s) of monitored parameter	Please refer excel sheet for same
Monitoring equipment	Monitored through inbuilt WTG integrated electronic meter
Measuring/reading/recording frequency:	Monthly
Calculation method (if applicable):	WEG is equipped with an integrated electronic meter. These meters are connected to the Central Monitoring Station (CMS) of the entire wind farm through communication cables (SCADA system). The generation data of individual WEG can be monitored as a real-time entity at CMS. This data for each individual WEG will be recorded daily.
QA/QC procedures:	The WTG integrated electronic meters are self calibrating type and the same do not need calibration, this has been a standard practice in the wind farm.
Purpose of data:	This data is not used for the calculation of emission reductions per say but would act as a backup data for the net electricity generated. This data will also be recorded daily.
Additional comments:	The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later

<b>Data/parameter:</b>	<b>EG<sub>CM</sub></b>
Unit	MWh
Description	Electricity generated at the Cluster Meter(CM)
Measured/calculated/default	Calculated from Measured Values.
Source of data	Daily generation reports provided by Enercon India Limited
Value(s) of monitored parameter	Please refer excel sheet for same
Monitoring equipment	Energy meters are used for this parameter. Please refer Annexure 2 for meter serial number, accuracy and calibration details etc.
Measuring/reading/recording frequency:	Measured & Recording Continuously and Reporting Daily
Calculation method (if applicable):	The individual WEGs at a particular site connect to a meter at the cluster meter (33 kV) where the secondary metering is done and reported in the daily generation report.
QA/QC procedures:	As per the registered PDD the regular calibration of all the meters was to be undertaken yearly with an option of the faulty meters to be replaced immediately. While this could not happen during this monitoring period and delays were observed in the calibration of energy meters. Please refer to actual calibration information in Annexure 2 for the cluster meters. There was no change in any of the meters during this monitoring period.
Purpose of data:	This data is not used for the calculation of emission reductions per say but would act as a backup data for the net electricity generated. This data will also be recorded daily.

Additional comments:	The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later
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**D.3. Implementation of sampling plan**

Not Applicable

**SECTION E. Calculation of emission reductions or GHG removals by sinks****E.1. Calculation of baseline emissions or baseline net GHG removals by sinks**

BE<sub>y</sub> is calculated by multiplying the net quantity of electricity supplied to the grid by this project activity ( $EG_{BL,y}$ ) with the CO<sub>2</sub> emission factor for the grid ( $EF_{CO_2, grid, y}$ ) as follows:

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

Where:

$EF_{CO_2, grid, y}$  = Baseline emission factor in tCO<sub>2</sub>/MWh = 0.9225 tCO<sub>2</sub>/MWh<sup>2</sup>

$EG_{BL, y}$  = Net electricity supplied to the regional grid in year y

$$\begin{aligned}
 &= BE_y &&= 57383.44 \text{ MWh} \times 0.9225 \text{ tCO}_2/\text{MWh} \\
 &&&= 52,936 \text{ tonnes of CO}_2 \text{ (Rounded down value)}
 \end{aligned}$$

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

As per methodology and registered PDD, it is zero

**E.3. Calculation of leakage**

As per methodology and registered PDD, it is zero

**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>2</sub> e)	Project emissions or actual net GHG removals by sinks (t CO <sub>2</sub> e)	Leakage (t CO <sub>2</sub> e)	GHG emission reductions or net GHG removals by sinks (t CO <sub>2</sub> e) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
<b>Total</b>	52,936	0	0	0	52,936	52,936

**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>2</sub> e)	65,971	52,936

<sup>2</sup> Emission Factor calculation is provided in Annex 3 and section B. 6.1 of registered PDD

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

CER's generated are low as compared due to registered PDD because, in actual case the PLF is on lower side, due to which there is a decrease in the electricity generation. The actual ER is 19.76% lower than estimated values. Thus no further explanation is required.

## 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 type="checkbox"/> Person/entity responsible for completing the CDM-MR-FORM
<b>Organization name</b>	Rohit Surfactants Pvt. Ltd.,
<b>Street/P.O. Box</b>	109/366, R.K.Nagar, G.T. Road
<b>Building</b>	-
<b>City</b>	Kanpur
<b>State/region</b>	Uttar Pradesh
<b>Postcode</b>	208012
<b>Country</b>	INDIA
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**Annexure 1****Details of Main meters at Substation:**

<b>Main Meter</b>	<b>Meter1</b>	<b>Meter 2</b>	<b>Meter 3</b>	<b>Meter 4</b>
Location	Transformer 1	Transformer 2	Transformer 3	Transformer 4
Calibrating Agency	PGVCL	PGVCL	PGVCL	PGVCL
Serial Number	GJU04175	GJU04176	GJB01470	KAB11082
Type	E3M021	E3M021	E3M021	E3M021
Accuracy	0.2s	0.2s	0.2s	0.2s
Make	Secure	Secure	Secure	Secure
Previous Calibration	17/01/2012	17/01/2012	17/01/2012	17/01/2012

**Annexure 2****Details of Cluster Meters**

<b>Main Meter</b>	<b>Meter1</b>	<b>Meter 2</b>	<b>Meter 3</b>
Location	Jamvadi (3 * 800 kW ) Feeder No 14	Jamvadi (4 * 800 kW ) Feeder No 16	Navagam (5 * 800 kW) Feeder No 14
Calibrating Agency	GEDA	GEDA	GEDA
Serial Number	07041606	07038104	GJB00876
Accuracy	0.2s	0.5s	0.5s
Previous Calibration	29/04/2012	29/04/2012	29/04/2012

## 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>
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		