



Monitoring report form for CDM project activity
(Version 07.0)

MONITORING REPORT

Title of the project activity	2.1 MW Wind Power Project by Kaizen Switchgear Products in Rajkot District of Gujarat.	
UNFCCC reference number of the project activity	9918 ¹	
Version number of the PDD applicable to this monitoring report	08	
Version number of this monitoring report	01	
Completion date of this monitoring report	08/10/2020	
Monitoring period number	01	
Duration of this monitoring period	01/04/2014 to 30/11/2019 (Inclusive of both the dates)	
Monitoring report number for this monitoring period	01	
Project participants	M/s Kaizen Switchgear Products	
Host Party	India	
Applied methodologies and standardized baselines	Methodology - AMS-I.D. ver. 17 - Grid connected renewable electricity generation Standardized baselines – Not Applicable	
Sectoral scopes	1 : Energy industries (renewable - / non-renewable sources)	
Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013
	0 tCO ₂ e	20,610 tCO ₂ e
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	20,416 tCO ₂ e	

¹ <https://cdm.unfccc.int/Projects/DB/URSCert1395322773.24/view>

SECTION A. Description of project activity

A.1. General description of project activity

Purpose and general description of project activity

Kaizen Switchgear Products (KSP) are in the field of various types of moulded components for medium voltage Switchgear and transformer applications by various type of moulding methods like automatic pressure gelation, conventional vacuum casting, transformer and compressor moulding. Being a reputed and environment concerned organisation, Kaizen installed a wind power project in the state of Gujarat, India.

Purpose of the project activity

The purpose of the project activity is to generate power through wind power - a non-conventional energy source. The project involves installation of 1 (one) numbers of Wind Turbine Generator (WTG) of capacity 2.1 MW. The project is located at Rajkot district in the state of Gujarat. The project generates energy through renewable source i.e. wind. The kinetic energy of wind is converted into mechanical energy and subsequently into electrical energy. Kinetic energy which is carried by wind when passes through the blades of the WTG, is converted to mechanical energy which rotates the connected generator and which in turn produces the electricity.

The electricity generated by the project activity is sold to grid. The electricity thus produced is displacing the grid electricity which would have been otherwise generated through sources dominated by fossil fuel based power plants. The project activity thereby reduces the emission of greenhouse gases which would have been generated from such fossil fuel based power plants. Prior to the project activity there was no renewable power plant at the project site, hence it is a Greenfield project activity. Wind energy is a pollution-free, infinitely sustainable form of energy. It does not use fuel. It does not produce greenhouse gases, and it does not produce toxic or radioactive waste. Therefore the technology for the project is environmentally safe and sound. Further, there is no technology transfer associated with the project activity.

As per the applicable approved methodology, AMS I.D, the baseline scenario is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.

Project activity comes under sectoral scope-01, Energy Industries (Renewable/Non-renewable sources). And type of the project is Type-I, Renewable Energy Projects. The project activity has commissioned on 18/11/2011.

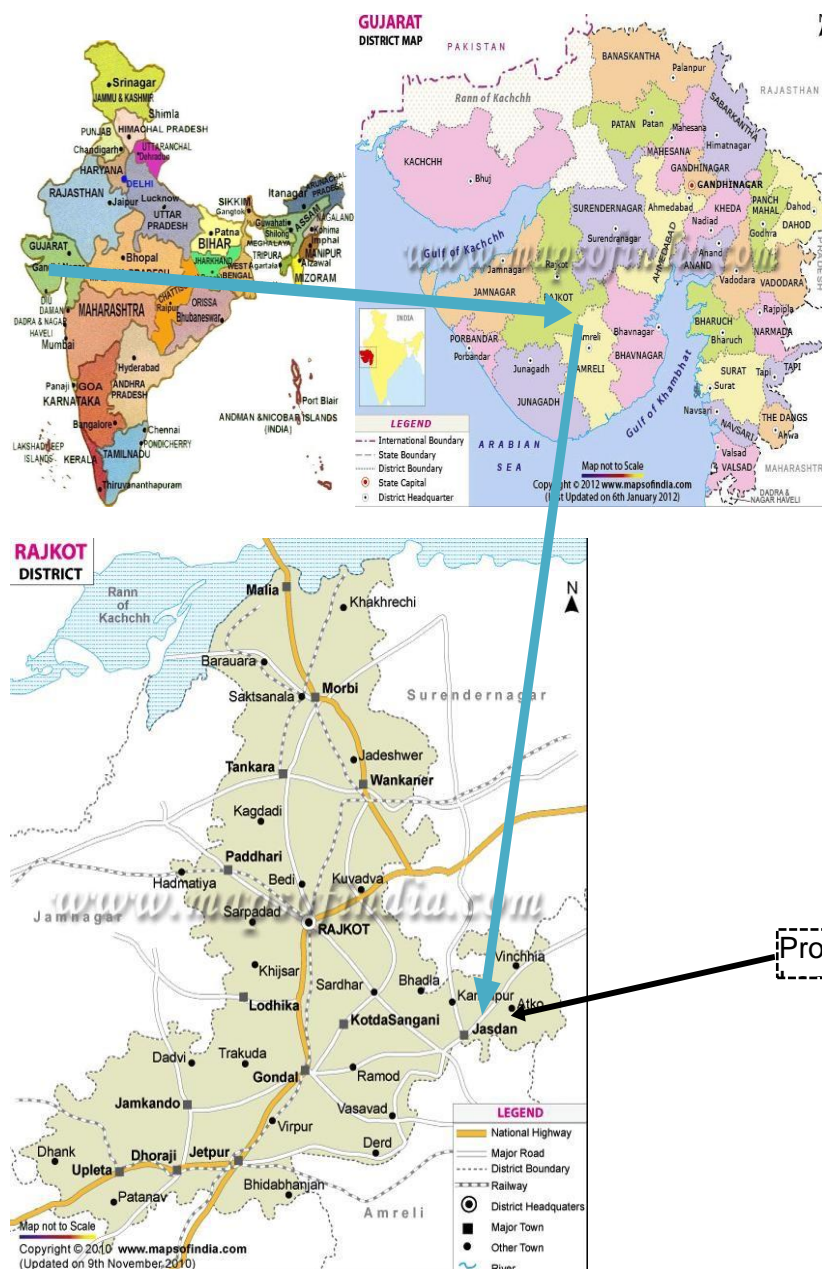
The Emission Reductions achieved in this monitoring period is 20,610 tCO₂e

A.2. Location of project activity

Site: Jasdan
Taluka: Khadvavdi
District: Rajkot
State: Gujarat
Country: India

Project is located at Jasdan site of Khadvavdi village at Rajkot district in the state of Gujarat. The geo-coordinates of the WTGs are as follows:

Latitude	Longitude	Village	District
22° 07' 27.8" N	71° 04' 56.4" E	Khadvavdi	Rajkot



A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
India (host)	Private entity: M/s Kaizen Switchgear Products	No

A.4. References to applied methodologies and standardized baselines

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

Tools: Tool to calculate the Emission Factor for an electricity system version-03.0.0
<http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v3.0.0.pdf>

A.5. Crediting period type and duration

Fixed crediting period - 10 years 00 months

Crediting Period: 01 April 14 – 31 March 24 (Fixed)

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

The project activity incorporates installation of one number of 2100 kW S-88 wind turbine generator of Suzlon Energy Limited. In wind energy based power generation, the kinetic energy of the wind is being converted to mechanical energy and subsequently to electric energy. The wind, when passes through the blades of the WTG, its kinetic energy is converted into mechanical energy, which rotates the wind turbine's blades. The wind blade supplies the mechanical energy to the generator thereby producing electricity.

The technical specification of the wind turbine is depicted below:

Specification of S – 88/2100 KW WTG:

MODEL		S.88 – 2.1 MW
S. No	Parameters	Specification
Operating data		
1.	Rated Power	2.1 MW
2.	Cut in wind speed	4 m/s
3.	Rated wind speed	14 m/s
4.	Cut out wind speed	25 m/s
5.	50 years gust wind speed	59.5 m/s
6.	Hub height	79m (Foundation top equal to ground level)
7.	Wind Class	IEC-IIA
8.	Rotational speed	15 to 17.6 rpm
Rotor		
1.	Pitch System	Pitch regulated, electrical
2.	Diameter	88 m
3.	Swept Area	6082 m ²
4.	Blade Material Type	Epoxy bounded fibre glass
Generator		
1.	Type	Asynchronous slip ring type induction generator
2.	Rated Power	2100 kW
3.	Rated voltage	690/600 V
4.	Frequency	50/60 Hz
5.	Protection	IP 54, IP23 for slip ring unit
6.	Cooling system	Air-cooled
7.	Insulation	Class H
8.	Slip control	Unique flexi slip providing slip up to 16.67%
Braking system		
MODEL		S.88 – 2.1 MW
S. No	Parameters	Specification
1.	Aerodynamic brake	3 independent systems with blade pitching mechanism
2.	Mechanical brake	Hydraulic fail-safe disc brake system
Gear box		
1.	Type	3 stages (One planetary and Two helical)
2.	Ratio	1:98.8 / 1:118.1
3.	Nominal Load	2200 kW
Yaw system		
1.	Type	Driven by 3 electrical driven planetary drives

2.	Bearings	Polyamide slide
Certification		
1.	Design standards	GL 2003
2.	Quality	ISO 9001:2000, ISO 9001:2008, ISO 14001:2004 And OHSAS 18001:2007
Tower		
1.	Type	Tabular Tower (4 sections)
2.	Corrosion protection	Epoxy/PU coated

B.2. Post-registration changes

B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

There are no deviations from the registered monitoring plan or applied methodology.

B.2.2. Corrections

There are no corrections.

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

There is no change to the start date of crediting period.

B.2.4. Inclusion of monitoring plan

Not Applicable

B.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

There are no any permanent changes from registered monitoring plan or applied methodology.

B.2.6. Changes to project design

There are no changes to project design of registered project activity.

B.2.7. Changes specific to afforestation or reforestation project activity

Not Applicable

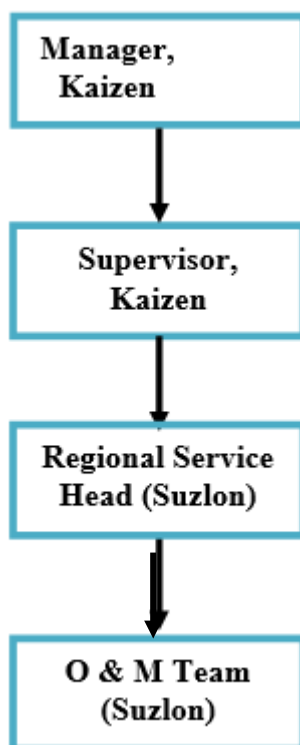
SECTION C. Description of monitoring system

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

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

Structure of the monitoring team

Following diagram depicts the structure of the monitoring team:



Roles and responsibilities of the monitoring team:

Manager, Kaizen – He is the ultimate authority for ensuring smooth and timely execution of all the monitoring and monitoring related activities for the project activity. He is reported by Supervisor, Kaizen.

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

Regional Service Head (Suzlon) - He ensures that the monitoring plan is adhered and operations are carried out as per standard procedures. He also collects all the relevant data from O&M Team (Suzlon) and submit them to the supervisor, Kaizen

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

Metering System:

The procedures for the metering of electricity is as discussed here. The net electricity exported to the grid by project activity WTGs are ascertained by government agency, GETCO on the basis of substation meter reading (includes generation from project and non-project WTGs) and meter readings at various transformer yard meters (near each WTG) based upon an apportioning method. The ABT meters installed at the sub-stations continuously monitor the electricity generated. Continuous monitoring, hourly measurement and monthly recording is carried out.

Apportioning of net electricity supplied to grid by WTGs of project activity is being carried out by GETCO. Apportioning is being carried out based on reading of meters at substation and yard meter at each WTG. Apportioning is not under the control of PP and data is not shared with PP. State Load Dispatch Centre (SLDC) issues certificate of share of electricity generated which

provides net electricity exported to grid by WTGs of PP and this forms basis of emission reduction calculations.

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

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

The apportionment procedure for the project activity is done by State Utility based on the meter readings of the various yard meters of various project owners connected to substation and substation meter reading (ABT meter), connecting all the machines of the project activity and other project developers. PP does not have any role in the apportionment procedure.

The reading at yard meter and substation meter are directly monitored on continuous basis. Hence, the apportioning of the electricity is based on the meter reading that are directly monitored and measured. The meter recording at yard meters of the project activity are done on monthly basis by the O & M personnel.

$$EG_y = EG_{\text{export},y} - EG_{\text{import},y}$$

$$EG_{\text{Export},y} = EG_{\text{SS, Export}} \times (EG_{\text{yard},y} / EG_{\text{yard, Project \& Non project WTGs}}) \text{ And}$$

$$EG_{\text{Import},y} = EG_{\text{SS, Import}} \times (EG_{\text{yard},y} / EG_{\text{yard, Project \& Non project WTGs}})$$

Where:

EG_y	Net Electricity exported by the project activity to the grid, calculated
$EG_{\text{Export},y}$	Electricity exported by the project activity to the grid, calculated
$EG_{\text{Import},y}$	Electricity imported by the project activity to the grid, calculated
$EG_{\text{SS, Export}}$	Electricity exported by all WTGs connected to the substation (project activity WTGs and non-project activity WTGs), as recorded by the ABT meter at substation (MWh)
$EG_{\text{SS, Import}}$	Electricity imported by all WTGs connected to the substation (project activity WTGs and non-project activity WTGs), as recorded by the ABT meter at substation (MWh)
$EG_{\text{yard},y}$	Net electricity exported by WTG of the project activity, as measured at yard meters (MWh)
$EG_{\text{yard, Project \& Non project WTGs}}$	Net electricity exported by all WTG of the project owners connected to the substation (MWh) measured at switchyard meters.

Only the monitoring parameters $EG_{\text{SS, Export}}$, $EG_{\text{SS, Import}}$ and $EG_{\text{yard},y}$ are included as readings of $EG_{\text{SS, Export}}$ & $EG_{\text{SS, Import}}$ are recorded in JMR and JMR copies are available with State Utility and are provided to the PP as per official request and reading of $EG_{\text{yard},y}$ is the reading of the WTG of PP.

QA/QC Procedures

There are one ABT meter and two trivector meters (one main meter and one check meter) of 0.2s accuracy class beside ABT meter. If some defect occurs to ABT meters, these trivector meters can

be used to obtain the reading. All meters (ABT, main and check and yard meter of WTG of PP) meters are calibrated at least once in a three year by GETCO or its representatives. The measurement results are cross checked with records of sole electricity such as invoices.

Data Management and Data Archiving

The data is archived both electronically and on paper till a period of two years from the end of the crediting period or the date of last issuance, whichever occurs later.

Emergency preparedness plan

In case of any abrupt breakdown, the fault is immediately identified by the O& M personnel. All minor faults shall be handled by the O& M personnel, In case of any major faults, the grid personnel is informed and replacement of the equipment shall be made within 24 hours.

Operation and Maintenance team is trained for emergency situations. Also the team is trained to combat safety issues if occur any.

Training

Operation and maintenance team trains the staff on operation and maintenance aspects of the plant. The training ensures preventive maintenance and better operational control for the plant.

Data adjustments/uncertainties:

- If there is any problem in ABT meter, main meter and check meters are used for monitoring. All these meters are located at the substation only.
- If a situation appears that all meters are faulty then the meters are sent for maintenance and maintaining a conservative approach, CERs are not counted for the duration when all meters are under replacement.
- In case yard meters are faulty, immediate replacement is done

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante

Data/Parameter	EF _{OM,y}
Unit	tCO ₂ /MWh
Description	Operating Margin emission factor for NEWNE grid
Source of data	CO2 Baseline Database for the Indian Power Sector, Version 7.0, Jan 2012 http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm
Value(s) applied	0.9842

Choice of data or measurement methods and procedures	<p>Calculated as per “Tool to calculate the emission factor for an electricity system, version 03.0.0” as 3-year generation weighted average using data for the years 2008-2009, 2009-2010, & 2010-2011. The data are obtained from “CO2 Baseline Database for Indian Power Sector” version 7.0, published by the Central Electricity Authority, Ministry of Power, Government of India.</p> <table><tr><th colspan="3">Operating Margin Estimation for NEWNE Grid (tCO₂/MWh)</th></tr><tr><th>Year</th><th>Operating Margin (tCO₂/MWh)</th><th>Net Generation (GWh)</th></tr><tr><td>2008-09</td><td>1.0066</td><td>421,803</td></tr><tr><td>2009-10</td><td>0.9777</td><td>462,327</td></tr><tr><td>2010-11</td><td>0.9707</td><td>476,987</td></tr><tr><td>Generation Weighted Average OM</td><td colspan="2">0.9842 tCO₂/MWh</td></tr></table>	Operating Margin Estimation for NEWNE Grid (tCO ₂ /MWh)			Year	Operating Margin (tCO ₂ /MWh)	Net Generation (GWh)	2008-09	1.0066	421,803	2009-10	0.9777	462,327	2010-11	0.9707	476,987	Generation Weighted Average OM	0.9842 tCO ₂ /MWh	
Operating Margin Estimation for NEWNE Grid (tCO ₂ /MWh)																			
Year	Operating Margin (tCO ₂ /MWh)	Net Generation (GWh)																	
2008-09	1.0066	421,803																	
2009-10	0.9777	462,327																	
2010-11	0.9707	476,987																	
Generation Weighted Average OM	0.9842 tCO ₂ /MWh																		
Purpose of data/parameter	To calculate the baseline emissions																		
Additional comments	This database is an official publication of Government of India for the purpose of CDM baseline. It is based on most recent data available to the Central Electricity Authority and hence considered authentic. As the calculation of baseline emission has been done <i>ex ante</i> its value will remain fixed for the entire crediting period.																		

Data/Parameter	EF_{BM,y}
Unit	tCO ₂ /MWh
Description	Build Margin emission factor for NEWNE grid
Source of data	CO2 Baseline Database for the Indian Power Sector, Version 7.0, Jan 2012 http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm
Value(s) applied	0.8588
Choice of data or measurement methods and procedures	CEA has Calculated it as per „Tool to calculate the emission factor for an electricity system“, version 03.0.0 for the year 2010-11. The build margin is calculated in this database as the average emissions intensity of the 20% most recent capacity additions in the grid based on net generation and option of ex ante calculation.
Purpose of data/parameter	To calculate the baseline emissions
Additional comments	This database is an official publication of Government of India for the purpose of CDM baseline. It is based on most recent data available to the Central Electricity Authority and hence considered authentic. As the calculation of baseline emission has been done <i>ex ante</i> its value will remain fixed for the entire crediting period.

Data/Parameter	EF_{CO2,grid,y}
Unit	tCO ₂ /MWh
Description	Combined Margin CO ₂ emission factor for NEWNE grid
Source of data	Calculated
Value(s) applied	0.9528

Choice of data or measurement methods and procedures	<p>Calculation based on 75% of OM and 25% of BM values approach as directed by „Tool to calculate the emission factor for an electricity system”, version 03.0.0.</p> <table border="1"> <thead> <tr> <th colspan="2">Combined Margin Estimation for NEWNE Grid (tCO₂/MWh)</th></tr> </thead> <tbody> <tr> <td>Generation Weighted Average OM (EF_{grid, OM,y})</td><td>0.9842</td></tr> <tr> <td>BM (EF_{grid, BM, y})</td><td>0.8588</td></tr> <tr> <td>Combined Margin (EF_{grid, CM,y})</td><td>0.9528</td></tr> </tbody> </table>	Combined Margin Estimation for NEWNE Grid (tCO ₂ /MWh)		Generation Weighted Average OM (EF _{grid, OM,y})	0.9842	BM (EF _{grid, BM, y})	0.8588	Combined Margin (EF _{grid, CM,y})	0.9528
Combined Margin Estimation for NEWNE Grid (tCO ₂ /MWh)									
Generation Weighted Average OM (EF _{grid, OM,y})	0.9842								
BM (EF _{grid, BM, y})	0.8588								
Combined Margin (EF _{grid, CM,y})	0.9528								
Purpose of data/parameter	To calculate the baseline emissions								
Additional comments	This database is an official publication of Government of India for the purpose of CDM baseline. It is based on most recent data available to the Central Electricity Authority and hence considered authentic. As the calculation of baseline emission has been done <i>ex ante</i> its value will remain fixed for the entire crediting period.								

D.2. Data and parameters monitored

Data/Parameter	EG _y
Unit	MWh
Description	Net electricity supplied to the NEWNE grid by Project activity.
Measured/calculated/default	Calculated
Source of data	Certificate for share of electricity authorized by GETCO
Value(s) of monitored parameter	21,631
Monitoring equipment	Energy Meter
Measuring/reading/recording frequency	Continuous monitoring, hourly measurement and monthly recording
Calculation method (if applicable)	<p>The net electricity exported to the grid by project activity WTG are ascertained by government agency GETCO (Gujarat Energy Transmission Corporation Limited) on the basis of ABT meter reading at substation (includes generation from project and non project WTGs) and meter readings at various transformer yard meters (near WTGs). On the basis of these meters readings, apportioning is carried out in order to estimate the net electricity generated by the project activity. Apportioning is discussed in detail in section C</p> <p>The net electricity generated by the project activity is taken directly from the share certificate issued by state utility (currently SLDC) on monthly basis.</p> <p>Continuous monitoring, hourly measurement and monthly recording is carried out.</p>
QA/QC procedures	<p>The ABT meter at the substation is of 0.2S accuracy class and is maintained by GETCO (Gujarat Energy Transmission Corporation Limited). Calibration of the substation meter is done by GETCO at least once in 3 years.</p> <p>Calibration of the yard meters are carried out at least once in 3 years; these yard meters are of accuracy class 0.2s.</p> <p>The substation also has trivector meters (one main meter and one check meter) of 0.2s accuracy class beside ABT meter. If some defect occurs to ABT meters, these trivector meters can be used to obtain the reading. All meters (ABT, main and check) meters are calibrated at least once in a three year by GETCO or its representatives.</p>
Purpose of data/parameter	Calculation of baseline emission
Additional comments	Data is archived for a period of 2 years after crediting period or last issuance whichever is later"

Data/Parameter	EG _{SS, Export}
Unit	MWh
Description	Electricity exported to the grid by the Project Activity and the other PPs connected to the same sub-station
Measured/calculated/default	Measures
Source of data	Jointly taken by the Suzlon and State Utility in the form of JMR (Joint Meter Reading) on monthly basis.
Value(s) of monitored parameter	21,631
Monitoring equipment	Energy Meter
Measuring/reading/recording frequency	Continuous monitoring, hourly measurement and monthly recording
Calculation method (if applicable)	The meter reading at ABT meter at substation is taken jointly by the representatives of Suzlon and State Utility on monthly basis.
QA/QC procedures	The ABT meter at the substation is of 0.2S accuracy class and is maintained by GETCO (Gujarat Energy Transmission Corporation Limited). Calibration of the substation meter is done by GETCO at least once in 3 years.
Purpose of data/parameter	Baseline emission calculation
Additional comments	The data is archived both electronically and on paper till a period of two years from the end of the crediting period or the date of last issuance, whichever occurs later.

Data/Parameter	EG _{SS, Import}
Unit	MWh
Description	Electricity Imported from the grid by the Project Activity and the other PPs connected to the same sub-station
Measured/calculated/default	Measured
Source of data	Jointly taken by the representatives of Suzlon and State Utility in the form of JMR on monthly basis.
Value(s) of monitored parameter	0
Monitoring equipment	Energy Meters
Measuring/reading/recording frequency	Continuous monitoring, hourly measurement and monthly recording
Calculation method (if applicable)	The meter reading at ABT meter at the substation is taken jointly by the representatives of Suzlon and State Utility on monthly basis.
QA/QC procedures	The ABT meter at the substation is of 0.2S accuracy class and is maintained by GETCO (Gujarat Energy Transmission Corporation Limited). Calibration of the substation meter is done by GETCO at least once in 3 years.
Purpose of data/parameter	Baseline emission calculation
Additional comments	The data is archived both electronically and on paper till a period of two years from the end of the crediting period or the date of last issuance, whichever occurs later.

Data/Parameter	EG _{Yard,y}
Unit	MWh
Description	The electricity generated by wind mills of the project activity, recorded by the yard meters near the wind mill

Measured/calculated/default	Measured
Source of data	Reading taken by Suzlon.
Value(s) of monitored parameter	0 This data will not be directly used for the calculation of emission reduction. State Utility will use this value for the apportionment calculation and the PP does not have any role in the calculation
Monitoring equipment	Energy Meters
Measuring/reading/recording frequency	Continuous monitoring, hourly measurement and monthly recording
Calculation method (if applicable)	Each WTG is equipped with a yard meter. The generation data of individual WTG can be monitored through these meters
QA/QC procedures	Meters will be calibrated once in a three year. Accuracy of these meters is also 0.2S.
Purpose of data/parameter	Baseline emission calculation
Additional comments	The data is archived both electronically and on paper till a period of two years from the end of the crediting period or the date of last issuance, whichever occurs later.

D.3. Implementation of sampling plan

Not Applicable.

SECTION E. Calculation of emission reductions or net anthropogenic removals

E.1. Calculation of baseline emissions or baseline net removals

As per registered PDD,

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

Where:

BE_y = Baseline emissions in year y (tCO₂)

$EG_{BL,y}$ = 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)

$EF_{CO_2,grid,y}$ = CO₂ emission factor of the grid in year y (t CO₂/MWh)

The Baseline GHG Emission Reductions are calculated as:

$$\begin{aligned}
 BE_y &= EG_{BL,y} \cdot EF_{CO_2,grid,y} \\
 &= 21,631 \text{ MWh} \cdot 0.9528 \text{ tCO}_2\text{e/MWh} \\
 &= 20,610 \text{ (Round-down Value)}
 \end{aligned}$$

E.2. Calculation of project emissions or actual net removals

As per para-20 of AMS I.D. version 17, for most project activity, project emission is zero. This project activity also does not come under two options suggested in the same para. Hence, for this project activity, project emission remains zero.

E.3. Calculation of leakage emissions

Here energy generating equipment is not transferred from another activity hence as per para-22 of AMS I.D. version 17, leakage need not to be considered.

E.4. Calculation of emission reductions or net anthropogenic removals

	Baseline GHG emissions or	Project GHG emissions or actual net	Leakage GHG emissions	GHG emission reductions or net anthropogenic GHG removals (t CO ₂ e)
--	---------------------------	-------------------------------------	-----------------------	---------------------------------------------------------------------------------

				Before 01/01/2013	From 01/01/2013	Total amount
Total	20,610	0	0	0	20,610	20,610

E.5. Comparison of emission reductions or net anthropogenic removals achieved with estimates in the registered PDD

Amount achieved during this monitoring period (t CO ₂ e)	Amount estimated ex ante for this monitoring period in the PDD (t CO ₂ e)
20,610	20,416

E.5.1. Explanation of calculation of “amount estimated ex ante for this monitoring period in the PDD”

As per CDM registered PDD, 3,600 tCO₂e is the amount of CERs generated annually over the crediting period. Therefore, following unitary method, the amount of estimated ex ante for this monitoring period is identified. The total number of days in this monitoring period is 2070.

$$= (3600/365) * 2070$$

$$= 20,416 \text{ tCO}_2\text{e}$$

E.6. Remarks on increase in achieved emission reductions

There is an increase in the emission reductions by 1% during the current monitoring period relative to the estimation in the registered CDM-PDD. The variability in the environmental conditions, which is beyond the control of the project, is the main reason for the variability in emission reductions between the registered PDD and the emissions claimed for the current monitoring period as is acceptable.

E.7. Remarks on scale of small-scale project activity

The project activity remained within the limit of small scale project activity in each year of the crediting period as the emission reductions are less than the limit of small scale CDM Project activity

- - - - -

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
07.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN); • Add a section on remarks on the observance of the scale limit of small-scale project activity during the crediting period; • Add "changes specific to afforestation or reforestation project activity" as a possible post-registration changes; • Clarify the reporting of net anthropogenic GHG removals for A/R project activities between two commitment periods; • Make editorial improvements.
06.0	7 June 2017	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 01.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN); • Make editorial improvements.
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: <ul style="list-style-type: none"> • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: <ul style="list-style-type: none"> • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>; • Editorial improvement.
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 (EB 70, 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).

<i>Version</i>	<i>Date</i>	<i>Description</i>
01.0	28 May 2010	EB 54, Annex 34. Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: monitoring report		