



**Monitoring report form for CDM project activity
(Version 06.0)**

Complete this form in accordance with the instructions attached at the end of this form.

MONITORING REPORT

Title of the project activity	Mampuri Wind Power Project 3	
UNFCCC reference number of the project activity	9990	
Version number of the PDD applicable to this monitoring report	05	
Version number of this monitoring report	03	
Completion date of this monitoring report	05/04/2018	
Monitoring period number	02	
Duration of this monitoring period	01/01/2016 – 31/12/2017	
Monitoring report number for this monitoring report	NA	
Project participants	Senok Wind Resources (Private) Limited	
Host Party	Sri Lanka	
Sectoral scopes	01:Energy Industries	
Applied methodologies and standardized baselines	AMS I.D. Version 17, “Grid Connected Renewable Electricity Generation”	
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
	-	35,715 tCO ₂
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	Annual estimation: 18,324 tCO ₂ For the period of 2016 and 2017, a period of 24 months 01/01/2016 – 31/12/2017 : Total for this monitoring period : 36,648 tCO ₂	

SECTION A. Description of project activity

A.1. General description of project activity

>>

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

The purpose of the project activity is to use the wind energy potential in the North West coastal belt of Sri Lanka to produce 10.5 MW using five wind turbines, each rated at 2.1 MW.

Electricity produced is sold to Ceylon Electricity Board (CEB), the national electricity utility, through a dedicated transmission line and its operations and sale of electricity are governed by the Permit issued by SLSEA, and the standardised Small Power Purchase Agreement (SPPA) signed with CEB.

The SPPA is executed for a period of 20 years, which is also considered the project lifetime. The Operation and the Maintenance of the WTGs will be carried out by the manufacturer and the required spares and accessories will be made available for the duration of the project.

The manufacturers have also guaranteed a power curve and a machine availability percentage, which ensures that the machines have to be at a peak working condition.

Further, the plant will shut down operations in the following scenarios:

- (1) Grid interruptions
- (2) Wind speed lower than cut-in speed and higher than cut-off speed
- (3) Scheduled preventive maintenance
- (4) Unscheduled corrective maintenance

This project was commissioned in 2014.

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

The WTGs are Suzlon make S88 - 2.1 MW machines. The project is located in Mampuri, Puttalam and was developed by Senok Wind Resource (Pvt) Ltd.

The metering of the generation takes place at the panel room of the project, where all five WTGs are connected. The metering of the project was done by the CEB, and at the commissioning of the project, the officials from the CEB connected the meters for the metering as described in Section C below.

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

Date of commissioning of each WTG is as follows

WTG 1	19/05/2014
WTG 2	19/05/2014
WTG 3	19/05/2014
WTG 4	19/05/2014
WTG 5	19/05/2014

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

35,715 tCO₂/yr

A.2. Location of project activity

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Host party : Sri Lanka

Province: North Western

District: Puttalam

Local Authority: Kalpitiya Pradeshiya Sabha

Village: Mampuri/ Nawakkaduwa

Physical location:

The coordinates of the five wind turbine generator locations are the following:

Wind Turbine Generator (WTG)	WTG Unique Serial Number*	Latitude	Longitude
WTG1	2100 S5 PBN 0614 S88	N 7° 59" 23.8"	E 79° 44" 03.7"
WTG1	2100 S5 PBN 0615 S88	N 7° 59" 37.9"	E 79° 44" 06.4"
WTG1	2100 S5 PBN 0612 S88	N 8° 00" 05.0"	E 79° 44" 05.1"
WTG1	2100 S5 PBN 0616 S88	N 8° 00" 18.4"	E 79° 43" 29.4"
WTG1	2100 S5 PBN 0617 S88	N 8° 00" 39.6"	E 79° 43" 44.1"

*These serial numbers have been recorded in the "Grid connection of Renewable Energy Power Project" document which denotes the serial number of each WTG at the corresponding location and has been signed and accepted by the CEB and the project owner.

Access to Site: The site is accessed by turning from A3 Colombo-Puttalam road at Palavi, to B 349 Palavi – Kalpitiya road. When travelling from Palavi towards Kalpitiya along this road, turn left at the Mampuri junction, which is approximately 12 km from Palavi. Move through the Mampuri village to reach the beach front, along which the site is located.

A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Sri Lanka (host Party)	Private entity Senok Wind Resource (Private) Limited	No

A.4. Reference to applied methodologies and standardized baselines

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(a) Applied methodology:

AMS-I.D version 17 - Grid connected renewable electricity generation

(b) Tools and any other methodology:

Tool to calculate the emission factor for an electricity system (Version 04.0.0) EB 75 Report Annex 15

Tool for the demonstration and assessment of additionality (Version 07.0.0) EB 70 Report Annex 08

A.5. Crediting period type and duration

Type: Renewable crediting period

Start date and end date of the crediting period: 01/12/2014 – 30/11/2021

Current monitoring period: 01/01/2016 – 31/12/2017
 Length of the current monitoring period: 24 months

SECTION B. Implementation of project activity

B.1. Description of implemented project activity

>>

The project has been implemented as described above in section „A.1.Purpose and general description of project activity“. The total installed capacity of the Project is 10.5 MW equipped with 5 sets of turbines with a unit capacity of 2.1 MW. Electricity generated by the Project is delivered to the CEB via a 33kV line. The project activity uses a proven wind turbine, and has selected the Suzlon S88/2100 machine. Each wind turbine is located within a block of land of approximate dimensions 150 m x 150 m. Foundation for each wind turbine is located approximately in the middle of its block of land. The turbine mast is of tubular structure, transported in sections and was assembled on site. Each turbine consists of three blades, each of length 42.5 m. The nacelle houses the gearbox and the electricity generator. The generator is of induction type. The complete technical specifications are given in the box.

The generating voltage is 690 V. Power generated is connected to a step-up transformer located at the foot of each turbine mast, where the voltage is raised to 33 kV to be compatible with the medium voltage transmission system of CEB. There is a 33 kV transmission line along the entire 3.5 km length of the wind park, to which the output of each turbine is connected. At a location closest to the grid sub station, near WTG 1, there is a central switching arrangement to connect the wind power plant to the CEB network. CEB's metering point is located immediately after this interconnection point. A new 33 kV transmission line from the CEB metering point located near WTG 1 of the wind park to reach the national grid was built by the project proponent.

The project was commissioned in 2014 and each WTG commissioning date is as follows:

WTG 1	19/05/2014
WTG 2	19/05/2014
WTG 3	19/05/2014
WTG 4	19/05/2014
WTG 5	19/05/2014

MODEL	S.88 – 2.1 MW
OPERATING DATA	
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
50 years gust wind speed	59.5 m/s
Hub height	79 m
Wind Class	IECIIA
Rotational Speed	15.0 - 17.6 rpm
ROTOR	
Pitch system	Pitch regulated, electrical
Diameter	88 m
Swept area	6082 m ²
Blade material type	Fibreglas/Epoxy
GENERATOR	
Type	Asynchronous 4 poles with slip ring
Rated power	2100 kW
Rated voltage	690 / 600 V
Frequency	50 / 60 Hz
Protection	IP 54
Cooling system	Air cooled
Insulation	Class H
Slip control	Unique Flexi-Slip providing slip up to 16.67%
BRAKING SYSTEM	
Aerodynamic brake	3 independent systems with blade pitching
Mechanical brake	Hydraulic fail-safe disc brake system
GEARBOX	
Type	3 stages (1 planetary & 2 helical)
Ratio	1:98.8 / 1:118.1
Nominal load	2200 kW
YAW SYSTEM	
Type	Driven by 3 electrical driven planetary drives
Bearings	Polyamide slide
CERTIFICATIONS	
Design standards	GL 2003
Quality	ISO 9001:2000
TOWER	
Type	Tubular in 4 sections
Corrosion protection	Epoxy/PU coated

B.2. Post-registration changes

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

>>There have been no temporary deviations from the registered monitoring plan, applied methodology or applied standardized baseline.

B.2.2. Corrections

>>There have been no corrections to the registered monitoring plan, applied methodology or applied standardized baseline.

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

>>There have been no changes to the start date of crediting period

B.2.4. Inclusion of monitoring plan

>>There have been no inclusions of a monitoring plan to the registered PDD that was not included at registration.

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

>>There have been no permanent changes to the registered monitoring plan, applied methodology or applied standardized baseline. However, there have been post registration changes in the previous period and approved by CDMEB on 7th April 2017 by the PRC -REF-PRC – 9990-001

B.2.6. Changes to project design

>>There have been no changes to project design of registered project activity

SECTION C. Description of monitoring system

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An electricity meter is fixed at the metering point located at the interconnection point to the Ceylon Electricity Board (CEB) grid. This is a requirement specified in the Small Power Purchase Agreement (SPPA) already executed between Senok Wind Resource (Pvt) Ltd and CEB. The meter measures electricity dispatched to the grid at the project boundary. This meter accuracy is approved by CEB, and the SPPA states that it will be read by CEB once a month. This is an established practice for CEB to read the meters of all the small power producers in the country once a month. This meter reading is in two parts:

M1: Electricity exports to the project electricity system from the small scale CDM project activity

M2: Electricity imports from the project electricity system for requirements of the project activity, when the wind power plant is not in operation

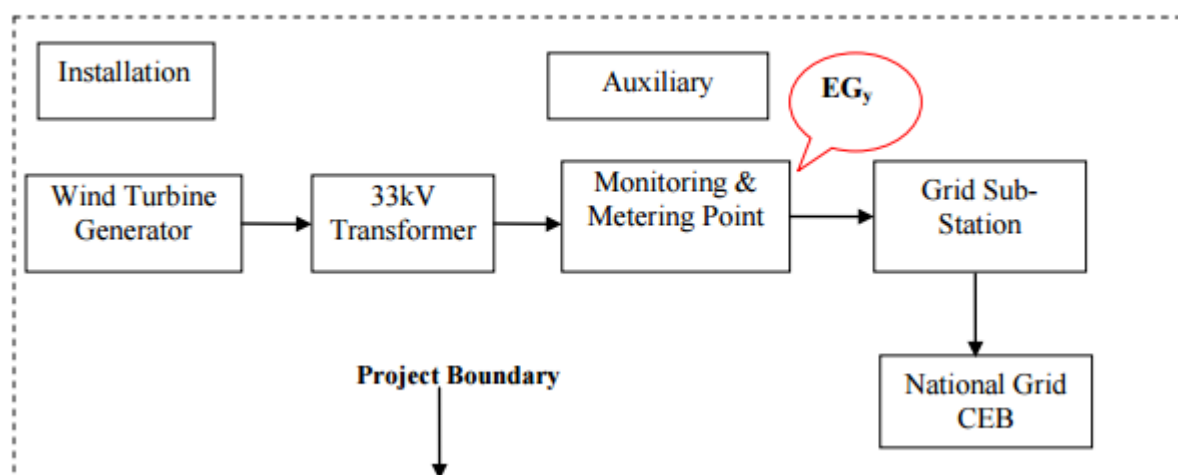
Reading M1 is also be used by SWRPL to prepare the monthly invoice to the purchaser, CEB for the sale of electricity.

Reading M2 is also be used by CEB to issue an invoice for the electricity purchased by the project activity, when the wind power plant is not in operation

M1 and M2 are incorporated in the same meter housing. The meter calibration reports for M1/M2 done by the CEB have been provided and the results are given in section D2 below. There is a second meter located elsewhere, as described below.

A diagrammatic representation of the implemented project activity and the project boundaries as per the monitoring plan has been enclosed below.

Project boundary is shown by the dotted line box in diagram below:



SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante

(Copy this table for each data or parameter.)

Data/Parameter	$EF_{CO_2,y}$
Unit	tCO ₂ /MWh
Description	CO ₂ emission factor of the grid electricity in year y (Combined Margin Grid Emission Factor)
Source of data	Data published by Sri Lanka Sustainable Energy Authority http://www.energy.gov.lk/sub_pgs/elibrary_spe_pub.html
Value(s) applied	0.7193
Choice of data or measurement methods and procedures	The value is calculated as the weighted average of the Simple Operating Margin emission factor ($EFOM,y$) and the Build Margin emission factor ($EFBM,y$) and giving 75% and 25% weightage respectively by default.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	

Data/Parameter	$EF_{CM,y}$
Unit	tCO ₂ /MWh
Description	Simple Operating Margin Emission Factor
Source of data	Data published by Sri Lanka Sustainable Energy Authority http://www.energy.gov.lk/sub_pgs/elibrary_spe_pub.html
Value(s) applied	0.7037
Choice of data or measurement methods and procedures	The data has been published by Sri Lanka Sustainable Energy Authority and Ceylon Electricity Board (CEB), which is the nodal agency for all power related activities in the country. http://www.info.energy.gov.lk/ http://www.energy.gov.lk/sub_pgs/elibrary_spe_pub.html The value applied is the weighted average of the last three recent years (2010, 2011 and 2012); Measurement procedures is as per paragraph 12 of the methodology AMS I.D / Version 17
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	

Data/Parameter	$EF_{BM,y}$
Unit	tCO ₂ /MWh
Description	Build Margin Emission Factor
Source of data	Data published by Sri Lanka Sustainable Energy Authority http://www.energy.gov.lk/sub_pgs/elibrary_spe_pub.html
Value(s) applied	0.7664
Choice of data or measurement methods and procedures	The data has been published by Sri Lanka Sustainable Energy Authority and Ceylon Electricity Board (CEB), which is the nodal agency for all power related activities in the country. http://www.info.energy.gov.lk/ http://www.energy.gov.lk/sub_pgs/elibrary_spe_pub.html The value applied is for year 2012; Measurement procedures is as per paragraph 12 of the methodology AMS I.D / Version 17
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	

D.2. Data and parameters monitored

(Copy this table for each data or parameter.)

Data/Parameter	EG_y
Unit	MWh/y
Description	Quantity of net electricity supplied to the grid in a year
Measured/calculated/Default	Calculated
Source of data	Records of Joint meter reading taken monthly by the project participant and the CEB personnel jointly. The same may be cross checked with the monthly invoice
Value(s) of monitored parameter	49,652MWh (After considering error due to delayed calibration). 49,725MWh(Before considering error due to delayed calibration).

Monitoring equipment	<p>The net electricity export/supplied to the grid is calculated as a difference of measured parameters, electricity exported (EGexp,y) and imported (EGimp,y) which are monitored using the main meter and recorded in the form of Joint Meter Reading taken monthly by CEB every month, in the presence of the SWRPL representative. Each of the WTG is connected to a common energy meter (main meter) which is used to measure the amount electricity evacuated to the grid by the project activity. For measuring, the electricity exported (EGexp,y) and imported (EGimp,y) by the project activity at the interconnection point (i.e. point of supply of electricity to the grid from the project facility), one set of Main meter is provided. This main meter is a bi-directional and measures export as well as import of electricity. The main meter is maintained by CEB in accordance with the Standard Power Purchase Agreement (SPPA). The Joint Meter readings recorded every month is considered for EGy computation.</p>										
	<p>Export Meter (M1)</p> <table border="1" data-bbox="667 674 1233 835"> <tr> <td>Serial No.</td> <td>212564063</td> </tr> <tr> <td>Make</td> <td>EDMI</td> </tr> <tr> <td>Model</td> <td>3 phase 4 wire</td> </tr> <tr> <td>Type</td> <td>PPM</td> </tr> <tr> <td>Accuracy class</td> <td>1%</td> </tr> </table>	Serial No.	212564063	Make	EDMI	Model	3 phase 4 wire	Type	PPM	Accuracy class	1%
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	Make	EDMI									
Model	3 phase 4 wire										
Type	PPM										
Accuracy class	1%										
<p>M1: Electricity exports to the project electricity system from the small scale CDM project activity</p>											
<p>Import Meter (M2)</p> <table border="1" data-bbox="667 987 1233 1180"> <tr> <td>Serial No.</td> <td>212564063</td> </tr> <tr> <td>Make</td> <td>EDMI</td> </tr> <tr> <td>Model</td> <td>3 phase 4 wire</td> </tr> <tr> <td>Type</td> <td>PPM</td> </tr> <tr> <td>Accuracy class</td> <td>1%</td> </tr> </table> <p>M2: Electricity imports from the project electricity system for requirements of the project activity, when the wind power plant is not in operation</p>	Serial No.	212564063	Make	EDMI	Model	3 phase 4 wire	Type	PPM	Accuracy class	1%	
Serial No.	212564063										
Make	EDMI										
Model	3 phase 4 wire										
Type	PPM										
Accuracy class	1%										
Measuring/reading/recording frequency	Monthly										
Calculation method (if applicable)	The value is calculated as the difference between Gross energy sales to CEB and Energy purchased from CEB										

QA/QC procedures	<p>The accuracy of the meter is declared to be 1%. The meter accuracy is tested by an independent agency annually as specified in the Standard Power Purchase Agreement (SPPA)</p> <p>As a backup to the main meter installed above for contractual purpose, an additional meter is installed in the Central Monitoring System (CMS) of the project facility at the expense of the project proponent. In case of any malfunction of the main meter, CMS meter reading shall be considered for billing purpose by CEB.</p> <p>Meter Calibration details: Export Meter (M1)</p> <table border="1" data-bbox="525 490 1273 616"> <tr> <td>Date of Calibration</td><td>03-09-2015</td><td>15-09-2016</td><td>26-09-2017</td></tr> <tr> <td>Percentage Error (%)</td><td>0.060</td><td>0.166</td><td>0.18</td></tr> </table> <p>Import Meter (M2)</p> <table border="1" data-bbox="525 707 1273 833"> <tr> <td>Date of Calibration</td><td>03-09-2015</td><td>15-09-2016</td><td>26-09-2017</td></tr> <tr> <td>Percentage Error (%)</td><td>0.060</td><td>0.166</td><td>0.18</td></tr> </table>	Date of Calibration	03-09-2015	15-09-2016	26-09-2017	Percentage Error (%)	0.060	0.166	0.18	Date of Calibration	03-09-2015	15-09-2016	26-09-2017	Percentage Error (%)	0.060	0.166	0.18
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Date of Calibration	03-09-2015	15-09-2016	26-09-2017														
Percentage Error (%)	0.060	0.166	0.18														
Purpose of data/parameter	Calculation of baseline emissions																
Additional comments	<p>Data will be archived on paper and electronically. Archived data will be kept during the crediting period plus 2 years or the last issuance of CERs for this project activity, whichever occurs later.</p> <p>Calibration Delay:</p> <p>1% has been added to the total imported via M2 for September 2016 and September 2017 and has been indicated in the attached worksheet and</p> <p>1% has been deducted from the total generation for September 2016 and September 2017 (export via M1) and has been indicated in the attached worksheet</p>																

Data/Parameter	EG _{imp,y}
Unit	MWh/y
Description	Electricity imported from the Grid
Measured/calculated/Default	Calculated (summation of (1) and (2))
Source of data	Records of Joint meter reading taken monthly by the project participant and the CEB personnel jointly. The same may be cross checked with the monthly invoice
Value(s) of monitored parameter	110,141 KWh (After considering error due to delayed calibration) 110,159 KWh (After considering error due to delayed calibration)

Monitoring equipment	<p>The amount of electricity imported from the grid is monitored continuously using the main meter and recorded in the form of Joint Meter Reading taken monthly by CEB every month, in the presence of the SWRPL representative. Each of the WTG is connected to a common energy meter (main meter) which is used to measure the amount electricity evacuated to the grid by the project activity. For measuring, the electricity imported (EGimp,y) by the project activity at the interconnection point (i.e. point of supply of electricity to the grid from the project facility), one set of Main meter is provided. This main meter is a bi-directional and measures export as well as import of electricity. The main meter is maintained by CEB in accordance with the Standard Power Purchase Agreement. The Joint Meter readings recorded every month would be considered for EGimp,y computation.</p> <p>Import Meter (M2)</p> <table border="1" data-bbox="667 613 1233 775"> <tr> <td>Serial No.</td><td>212564063</td></tr> <tr> <td>Make</td><td>EDMI</td></tr> <tr> <td>Model</td><td>3 phase 4 wire</td></tr> <tr> <td>Type</td><td>PPM</td></tr> <tr> <td>Accuracy class</td><td>1%</td></tr> </table>	Serial No.	212564063	Make	EDMI	Model	3 phase 4 wire	Type	PPM	Accuracy class	1%						
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Model	3 phase 4 wire																
Type	PPM																
Accuracy class	1%																
Measuring/reading/recording frequency	Monthly																
Calculation method (if applicable)	On a monthly basis, the total usage for the months, is considered as the total output of the project.																
QA/QC procedures	<p>The accuracy of the meter is declared to be 1%. The meter accuracy will be tested (i.e. the meter shall be calibrated) by an independent agency annually as specified in the Standard Power Purchase Agreement. As a backup to the main meter installed above for contractual purpose, an additional meter will be installed in the Central Monitoring System (CMS) of the project facility at the expense of the project proponent. In case of any malfunction of the main meter, CMS meter reading shall be considered for billing purpose by CEB. This meter will also be calibrated annually by the project proponent using the services of an independent agency</p> <p>Import Meter (M2)</p> <table border="1" data-bbox="526 1420 1273 1671"> <tr> <td>Date of Calibration</td><td>03-09-2015</td><td>15-09-2016</td><td>26-09-2017</td></tr> <tr> <td>Percentage Error (%)</td><td>0.060</td><td>0.166</td><td>0.18</td></tr> <tr> <td>Date of Calibration</td><td>03-09-2015</td><td>15-09-2016</td><td>26-09-2017</td></tr> <tr> <td>Percentage Error (%)</td><td>0.060</td><td>0.166</td><td>0.18</td></tr> </table> <p>Calibration Delay:</p> <p>1% has been added to the total imported via M2 for September 2016 and September 2017 and has been indicated in the attached worksheet.</p>	Date of Calibration	03-09-2015	15-09-2016	26-09-2017	Percentage Error (%)	0.060	0.166	0.18	Date of Calibration	03-09-2015	15-09-2016	26-09-2017	Percentage Error (%)	0.060	0.166	0.18
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Percentage Error (%)	0.060	0.166	0.18														
Purpose of data/parameter	Calculation of baseline emissions																
Additional comments	Data will be archived on paper and electronically. Archived data will be kept during the crediting period plus 2 years or the last issuance of CERs for this project activity, whichever occurs later.																

Data/Parameter	EG_{exp,y}										
Unit	MWh/y										
Description	Electricity exported to the Grid										
Measured/calculated/ Default	Measure										
Source of data	Records of Joint meter reading taken monthly by the project participant and the CEB personnel jointly. The same may be cross checked with the monthly invoice										
Value(s) of monitored parameter	49,762,651 KWh(After considering error due to delayed calibration). 49,835,410 KWh (Before considering error due to delayed calibration).										
Monitoring equipment	<p>The amount of electricity exported to the grid is monitored continuously using the main meter and recorded in the form of Joint Meter Reading taken monthly by CEB every month, in the presence of the SWRPL representative. Each of the WTG is connected to a common energy meter (main meter) which is used to measure the amount electricity evacuated to the grid by the project activity. For measuring, the electricity imported (EG_{imp,y}) by the project activity at the interconnection point (i.e. point of supply of electricity to the grid from the project facility), one set of Main meter is provided. This main meter is a bi-directional and measures export as well as import of electricity. The main meter shall be maintained by CEB in accordance with the Standard Power Purchase Agreement. The Joint Meter readings recorded every month would be considered for EG_{exp,y} computation.</p> <p>Export Meter (M1)</p> <table border="1"> <tr> <td>Serial No.</td><td>212564063</td></tr> <tr> <td>Make</td><td>EDMI</td></tr> <tr> <td>Model</td><td>3 phase 4 wire</td></tr> <tr> <td>Type</td><td>PPM</td></tr> <tr> <td>Accuracy class</td><td>1%</td></tr> </table>	Serial No.	212564063	Make	EDMI	Model	3 phase 4 wire	Type	PPM	Accuracy class	1%
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Model	3 phase 4 wire										
Type	PPM										
Accuracy class	1%										
Measuring/reading/recording frequency	Monthly										
Calculation method (if applicable)	Not applicable as it is a monitored parameter										
QA/QC procedures	<p>The accuracy of the meter is declared to be 1%. The meter accuracy will be tested (i.e. the meter shall be calibrated) by an independent agency annually as specified in the Standard Power Purchase Agreement. As a backup to the main meter installed above for contractual purpose, an additional meter will be installed in the Central Monitoring System (CMS) of the project facility at the expense of the project proponent. In case of any malfunction of the main meter, CMS meter reading shall be considered for billing purpose by CEB. This meter will also be calibrated annually by the project proponent using the services of an independent agency.</p> <p>Export Meter (M1)</p> <table border="1"> <tr> <td>Date of Calibration</td><td>03-09-2015</td><td>15-09-2016</td><td>26-09-2017</td></tr> <tr> <td>Percentage Error (%)</td><td>0.060</td><td>0.166</td><td>0.18</td></tr> </table> <p>Calibration Delay:</p> <p>1% has been deducted to the total export via M1 for September 2016 and September 2017 and has been indicated in the attached worksheet.</p>	Date of Calibration	03-09-2015	15-09-2016	26-09-2017	Percentage Error (%)	0.060	0.166	0.18		
Date of Calibration	03-09-2015	15-09-2016	26-09-2017								
Percentage Error (%)	0.060	0.166	0.18								

Purpose of data/parameter	Calculation of baseline emissions
Additional comments	Data will be archived on paper and electronically. Archived data will be kept during the crediting period plus 2 years or the last issuance of CERs for this project activity, 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**

>>

 $BE_y = EG_y * EF_{CO_2,y}$, where BE_y = Baseline Emissions in tCO₂e EG_y = Quantity of net electricity supplied to the grid [49,652,492] $EF_{CO_2,y}$ = Combined Margin Emission factor - [0.7193 tCO₂/MWh] $BE_y = 49,652 * 0.7193$ $BE_y = 35,715 t_{CO_2e}$ **E.2. Calculation of project emissions or actual net removals**

>> Project emissions for the proposed project activity are zero

E.3. Calculation of leakage emissions

>> Leakage is to be considered if the energy generating equipment is transferred from another activity, leakage is to be considered. Since there is no such transfer in the project activity, leakage will therefore be zero

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

	Baseline GHG emissions or baseline net GHG removals (t CO ₂ e)	Project GHG emissions or actual net GHG removals (t CO ₂ e)	Leakage GHG emissions (t CO ₂ e)	GHG emission reductions or net anthropogenic GHG removals (t CO ₂ e)		
				Before 01/01/2013	From 01/01/2013	Total amount
Total	35,715	0	0	0	35,715	35,715

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 (t CO ₂ e)
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Amount achieved during this monitoring period (t CO ₂ e)	Amount estimated ex ante (t CO ₂ e)
35,715	36,648

E.6. Remarks on increase in achieved emission reductions

>> This variation is still within the allowable $\pm 10\%$ of CUF of the projected value.

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Document information

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