



Monitoring report form
(Version 05.1)

Complete this form in accordance with the Attachment "Instructions for filling out the monitoring report form" at the end of this form.

MONITORING REPORT

Title of the project activity	The Converging World Renewable Energy India Wind Farm Phase 1	
UNFCCC reference number of the project activity	4243	
Version number of the monitoring report	1	
Completion date of the monitoring report	08/01/2016	
Monitoring period number and duration of this monitoring period	Monitoring period number: First Duration: 05/04/2011 to 19/06/2012	
Project participant(s)	CW Renewable Energy (India) Private Limited, The Converging World	
Host Party	India	
Sectoral scope(s)	Sectoral Scope 1 : Energy industries (renewable - / non-renewable sources)	
Selected methodology(ies)	AMS-I.D. ver. 15 - Grid connected renewable electricity generation	
Selected standardized baseline(s)	Not applicable	
Estimated amount of GHG emission reductions or net GHG removals by sinks for this monitoring period in the registered PDD	7,786 tCO ₂ e ¹	
Total amount of GHG emission reductions or net GHG removals by sinks achieved in this monitoring period	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
	6,367 tCO ₂ e	0

¹ Estimated ER as per registered PDD=7,786 tCO₂e per 365 days

Monitoring days in this monitoring period= 442 days

Therefore estimated ER = 6,367 tCO₂e per 442 days

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

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The Converging World is a UK-registered charity with the aim of reducing the impact of climate change as well as reducing inequality and social injustice in the world. As part of its strategy The Converging World (TCW) has developed a wind farm in Tamil Nadu, India, providing non-polluting electricity in a developing country to aid their sustainable development, while helping to reduce global greenhouse gas emissions.

The first phase of The Converging World Renewable Energy India Wind Farm consists of 2 wind turbines, each of which will have a capacity of 1.5 MW, giving a total capacity of 3 MW. The wind farm is expected to generate approximately 8,399 MWh/y net of own use and losses, which will be supplied to the Tamil Nadu Electricity Grid on the basis of a Power Purchase Agreement (PPA).

The project activity will generate greenhouse gas (GHG) emission reductions by avoiding CO₂ emissions from fossil fuel-fired power plant supplying the Southern Grid in India. The expected annual reductions will be 7,786 tCO₂e.

A.2. Location of project activity

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Details	WTG 1	WTG 2
Location No.	2649	2650
Capacity	1.5 MW	1.5 MW
Date of commissioning	4 th August 2008	4 th August 2008
End use of electricity	Sale to Southern Grid	Sale to Southern Grid
Latitude	N8 17.285	N8 17.735
Longitude	E77 46.694	E77 46.111
Village	Kasthurirangapuram	Kasthurirangapuram
Taluka	Radhapuram	Radhapuram
District	Tirunelveli	Tirunelveli
State, Country	Tamilnadu, India	Tamilnadu, India

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)	CW Renewable Energy (India) Private Limited & The Converging World	No

A.4. Reference of applied methodology and standardized baseline

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Sectoral Scope 1: Energy industries (renewable - / non-renewable sources)

AMS-I.D. ver. 15 - Grid connected renewable electricity generation

http://cdm.unfccc.int/filestorage/7/Q/X/7QXAZ5036WN8BEYKUDFRPJGL21V4I9/EB50_repan29_AMS-I.D_ver15.pdf?t=YUI8bnd0dzRzfDDj6ADxn3cIDMSbu97jUdAZ

A.5. Crediting period of project activity

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05 Apr 11 - 04 Apr 18 (Renewable)

A.6. Contact information of responsible persons/entities

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Ms. Wendy Stephenson,
The Converging World. Refer contact details from Appendix 1 of this report.
(Only PP)

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

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All the WTGs are operating continuously depending on the wind availability. The electricity available for carbon credit for this monitoring period is 6869 MWh.

B.2. Post-registration changes**B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline**

There is no temporary deviation in this monitoring period.

B.2.2. Corrections

There is no correction in this monitoring period.

B.2.3. Changes to start date of crediting period

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There is no change in crediting period start date.

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

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There is no such case.

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

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There is no permanent deviation in this monitoring period.

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

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There is no such change

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

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As the project activity falls under Sectoral Scope 1: Energy industries (renewable - / non-renewable sources) this section is not applicable.

SECTION C. Description of monitoring system

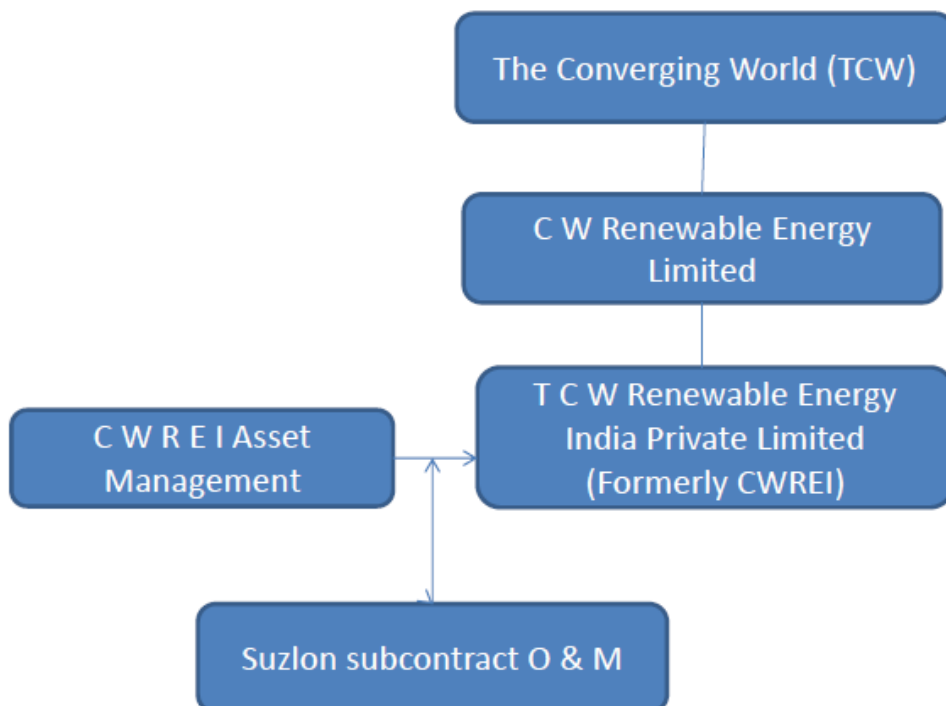
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Tamil Nadu:

The operation and maintenance of the proposed project activity is contracted out to Suzlon, who are an experienced operator and developer of wind farms in India.

Suzlon's onsite project office will be responsible for operation and maintenance of the wind farm, as well as the monitoring and reporting requirements of the CDM project.

The operating and management structure is illustrated as follows:



The Converging World Renewable Energy India Wind Farm adopts AMS-I.D “Grid connected renewable electricity generation” (version 15, EB 50) to determine the emission reductions from the net electricity supplied by the wind farm.

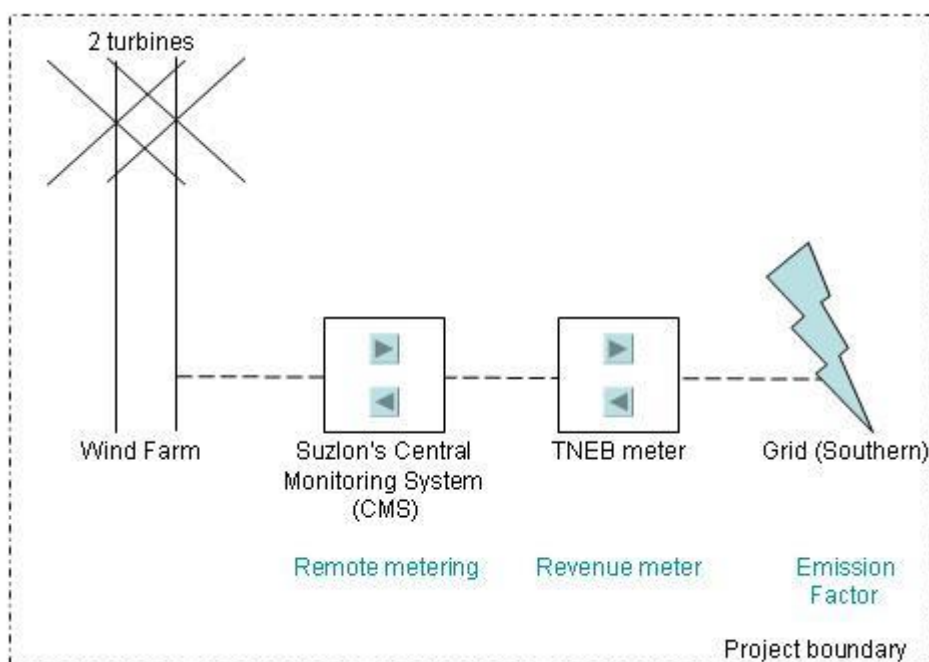
The Converging World has outsourced the operation and maintenance, including the monitoring and reporting following this monitoring plan, to Suzlon an experienced turbine manufacturer, developer and operator.

The output from each of the turbines will be metered at the on-site project office. Each of the wind turbines is individually connected by fibre optic cable/radio modem to the Central Monitoring System (CMS), allowing continuous monitoring.

The utility (TNEB) records the main meter reading every month during the 10th to 15th day of the month and provides a statement for the previous 30 day period. This main meter is a Trivector Meter, recording imports and exports.

The meters are of the 0.5 accuracy class, i.e. having a variation of less than 0.5%.

Line diagram of the meter location



The main meter is first calibrated on commissioning, and then calibrated again once every two years by TNEB, as per industry practice, or during any maintenance.

The operator, Suzlon, is responsible for the calibration and maintenance of the CMS, which will be calibrated as per industry practice, at least every two years, or during any maintenance.

During the first seven operating years, the net electricity supplied to the grid (EG_y) will be monitored and recorded following the procedures above.

All data is continuously recorded in the Central Monitoring System, and is uploaded daily to a secure web site and emailed to the project participants.

Should any previous readings of the main meter be inaccurate by more than the allowable error, or otherwise functioned improperly, the net generation output shall be determined by (a) first, by reading check meter, unless a test reveals it is inaccurate; (b) if the check meter is not with acceptable limits of accuracy or operation is performed improperly the developer and grid company shall jointly prepare an reasonable and conservative estimate of the correct reading, and provide sufficient evidence that this estimation is reasonable and conservative for verification by the DOE; and (c) if the grid company and the developer fail to agree then the net generation for this period are taken as 0.

Net electricity supplied to the grid will be double checked with receipt of sales.

This audit will check compliance with operational procedures in this monitoring plan.

This internal audit will also identify potential improvements to procedures to improve monitoring and reporting in future years.

Physical document such as paper-based maps, diagrams and environmental assessments will be collated in a central place, together with this monitoring plan. In order to facilitate auditors' reference of relevant literature relating to the project, the project material and monitoring results will be indexed.

And all data including calibration records are archived electronically and be kept until 2 years after the end of the total crediting period of the CDM project.

SECTION D. Data and parameters**D.1. Data and parameters fixed ex ante or at renewal of crediting period***(Copy this table for each piece of data and parameter)*

Data/parameter:	EF_{CO2,grid,y}
Unit	t CO ₂ /MWh
Description	Emission factor for the grid
Source of data	CO ₂ baseline database (Version 4.0) published by CEA
Value(s) applied)	0.927 t CO ₂ /MWh
Choice of data or measurement methods and procedures	This value is calculated using OM and BM values as per Version 2.0 of methodological tool to calculate the emission factor for an electricity system
Purpose of data	For the calculation of Baseline emission
Additional comments	Nil

D.2. Data and parameters monitored*(Copy this table for each piece of data and parameter)*

Data/parameter:	EG_{BL,y}
Unit	MWh
Description	Net electricity supplied to the grid by the project in period y
Measured/calculated/default	Measured
Source of data	Suzlon's Central Monitoring System (CMS)
Value(s) of monitored parameter	6,869 MWh/y
Monitoring equipment	Energy meters- Details will be provided to the verifying DOE
Measuring/reading/recording frequency:	Monthly
Calculation method (if applicable):	Electricity exported is measured at the WTG site using energy meters. For billing purpose, the meter readings is recorded every month by state electricity board officials in the presence of company representatives and the readings will be jointly certified.
QA/QC procedures:	Cross checked by receipt of sales
Purpose of data:	For the calculation of baseline emissions
Additional comments:	Nil

Data/parameter:	EG_{consumption,y}
Unit	MWh
Description	Net electricity supplied to the grid by the project in period y
Measured/calculated/default	Measured
Source of data	Suzlon's Central Monitoring System (CMS)
Value(s) of monitored parameter	0 MWh/y
Monitoring equipment	Energy meters- Details will be provided to the verifying DOE

Measuring/reading/recording frequency:	Monthly
Calculation method (if applicable):	Electricity exported is measured at the WTG site using energy meters. For billing purpose, the meter readings is recorded every month by state electricity board officials in the presence of company representatives and the readings will be jointly certified.
QA/QC procedures:	Cross checked by receipt of sales
Purpose of data:	For the calculation of baseline emissions
Additional comments:	Nil

Data/parameter:	EG_y , where y refers to the monitoring period for the purpose of this report
Unit	MWh
Description	Net Electricity exported from the WTGs located in Tamilnadu
Measured/calculated/default	Measured
Source of data	Monthly electricity billing receipts given by Tamil Nadu Electricity Board for electricity generation.
Value(s) of monitored parameter	6869 MWh
Monitoring equipment	Energy meters- Details will be provided to the verifying DOE
Measuring/reading/recording frequency:	Monthly
Calculation method (if applicable):	Electricity exported is measured at the WTG site using energy meters. For billing purpose, the meter readings is recorded every month by state electricity board officials in the presence of company representatives and the readings will be jointly certified.
QA/QC procedures:	Each WTG is equipped with separate energy meters. The electricity export at each WTG is monitored and recorded on a daily basis by company representatives. These readings can be cross checked with the invoices received from respective state electricity boards. The meters is be calibrated on a regular basis as per standard norms.
Purpose of data:	For the calculation of baseline emissions
Additional comments:	Nil

D.3. Implementation of sampling plan

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Sampling plan is not used.

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

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

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Month	Total Electricity generated (Kwh)	Total ER's
Apr-11	124176	115.1112
May-11	340560	315.6991
Jun-11	1070304	992.1718
Jul-11	622008	576.6014
Aug-11	716448	664.1473
Sep-11	638904	592.264

Oct-11	321240	297.7895
Nov-11	262080	242.9482
Dec-11	554832	514.3293
Jan-12	218664	202.7015
Jan-12	173568	160.8975
Feb-12	475008	440.3324
Mar-12	138528	128.4155
Mar-12	98832	91.61726
Apr-12	94176	87.30115
May-12	315672	292.6279
Jun-12	703920	652.5338
Total	6868920	6367

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

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The project activity being a zero emissions renewable energy project, there are no anthropogenic greenhouse gas emission by the project activity.

E.3. Calculation of leakage

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No leakage is considered from the project activity as per approved methodology.

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 ₂ e)	Project emissions or actual net GHG removals by sinks (t CO ₂ e)	Leakage (t CO ₂ e)	GHG emission reductions or net GHG removals by sinks (t CO ₂ e) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
Total	6,367	0	0	6,367	0	6,367

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 (For 15 months)	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO ₂ e)	7,786 tCO ₂ e	6,367 tCO ₂ e

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

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Compared to estimate, actual ER is less. Refer E.5.

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

Project participant and/or responsible person/ entity	<input checked="" type="checkbox"/> Project participant <input checked="" type="checkbox"/> Person/entity responsible for completing the CDM-MR-FORM
Organization name	CW Renewable Energy (India) Private Limited
Street/P.O. Box	Jermiah Road
Building	Old No. 72/3, New No. 18/3
City	Vepery, Chennai
State/region	Tamil Nadu
Postcode	600 007
Country	India
Telephone	+91 44 25387151/25384598
Fax	+91 44 25387151
E-mail	wendystephenson@theconvergingworld.org
Website	www.theconvergingworld.org
Contact person	Ms. Wendy Stephenson
Title	
Salutation	Ms
Last name	Stephenson
Middle name	
First name	Wendy
Department	-
Mobile	
Direct fax	-
Direct tel.	-
Personal e-mail	

Project participant and/or responsible person/ entity	<input checked="" type="checkbox"/> Project participant <input checked="" type="checkbox"/> Person/entity responsible for completing the CDM-MR-FORM
Organization name	The Converging World
Street/P.O. Box	Bordeaux Quay
Building	Canons Rd
City	Bristol
State/region	Maharashtra
Postcode	BS1 5UH
Country	United Kingdom
Telephone	+44 117 917 7200
Fax	+44 117 917 7201
E-mail	wendystephenson@theconvergingworld.org
Website	www.theconvergingworld.org
Contact person	Ms. Wendy Stephenson
Title	
Salutation	Ms

Last name	Stephenson
Middle name	
First name	Wendy
Department	-
Mobile	
Direct fax	-
Direct tel.	-
Personal e-mail	

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: <ul style="list-style-type: none"> • 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 (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.

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