Gold standard for the global goals
Monitoring report

June 2017, version 1

Title of the project	Renewable Energy Wind Power Project in Rajasthan
Gold Standard project id	GS5007
Version number of the monitoring report	1.1
Completion date of the monitoring report	06/03/2020
Date of project design certification	28/11/2016 (GS Registration Date)
Start date of crediting period	29/11/2014 (retroactive GS crediting start date)
Duration of this monitoring period	01/09/2017 to 31/12/2018; Inclusive of first & last dates of Monitoring Period
Duration of previous monitoring period	01/01/2015 to 31/08/2017 (Inclusive of both days)
Project representative(s)	Vish Wind Infrastrukture LLP ACT Financial Solutions B.V First Climate Markets A.G.
Host Country	India
Certification pathway (activity certification/impact certification)	Activity Certification
SDG Contributions targeted (as per approved PDD)	1 – SDG 3 : Good Health And Well-Being 2 – SDG 7 : Affordable and Clean Energy 3 – SDG 8 :Decent Work and Economic Growth 4 – SDG 13 : Climate Action
Gold Standard statement/product certification sought (GSVER/ADALYs/RECs etc.)	GS CERs
Selected methodology(ies)	ACM0002, version 12.3.0 ("Consolidated baseline methodology for grid-connected electricity generation from renewable sources")
Estimated amount of annual average certified SDG impact (as per approved PDD)	65,362 tonnes of CO2e
Total amount of certified SDG impact (as per approved methodology) achieved in this monitoring period	42,481 tonnes of CO2e

SECTION A. Description of project

A.1. Purpose and general description of project

>>
The project consists of 37 machines of Wind World (The name of Enercon (India) Ltd. has been changed to Wind World (India) Ltd. From 01/01/2013, hereafter it will be referred as Wind World (India) Ltd.) make E-53 type WEGs of 800KW capacity each totalling to the capacity of 29.6 MW. The WEGs generates 3-phase power at 400V, which is stepped up to 33 kV and further transmitted to Wind World Sub-station. From Wind World substation electricity is further evacuated to the Rajasthan regional electricity grid which is part of the NEWNE (Northern, Eastern, Western and North-Eastern) grid in India. The clean and green electricity supplied by the project will aide in sustainable growth in the region. Vish Wind Infrastructure LLP (hereafter referred as 'VWIL') is the project owner and project participant for the project activity.

The purpose of the project activity is to utilize renewable wind energy for generation of electricity. Project activity is the installation of green field energy production using wind as a source of power generation. In the absence of the project activity the equivalent amount of electricity would have been generated from the connected/ new power plants in the NEWNE, which are/ will be predominantly based on fossil fuels. Whereas the operation of Wind Energy Generators (WEG's) is emission free and no emissions occur during the lifetime of the project activity.

The first machine under the project activity was commissioned on 23/09/2010 and last machine under the project activity was commissioned on 26/01/2011. The expected operational lifetime of the project is for 20 years. The end date of crediting period is 27/02/2022. Details of previous GS issuances are provided below:

Monitoring Period	Credit Issued under GS
01/01/2015 to 31/08/2017 (Inclusive of both days)	86238 (tCO_2)

The total emission reductions achieved under current monitoring period (01/09/2017 – 31/12/2018; Inclusive of both dates) are 42,481 tCO2e.

A.2. Location of project

>>
Host Party(ies); India

Region/State/Province, etc.; Rajasthan State

The Project is located in Jaisalmer & Jodhpur district in the Indian State of Rajasthan. The Project is spread across Ugawa, Korwa & Kita villages of Jaisalmer District and Salodi & Jelu Villages of Jodhpur district in the Rajasthan state of India. The nearest railway station for project activity located at Ugawa, Korwa & Kita villages (District-Jaisalmer) is Jaisalmer approximately at a distance of 50 Kms from site, while the nearest railway station for project activity located at Salodi & Jelu villages (District-Jodhpur) is Jodhpur approximately at a distance of 50 Kms.

Individual WEG location numbers and coordinates are detailed out in below table:-

S.No.	WEG Loc No.	Village	District	State	Latitude	Longitude
1	41	Ugawa	Jaisalmer	Rajasthan	N 26° 37'51.5"	E 70° 57'51.2"
2	39	Ugawa	Jaisalmer	Rajasthan	N 26° 37'41.5"	E 70° 57'33.5"
3	38	Ugawa	Jaisalmer	Rajasthan	N 26° 37'35.4"	E 70° 57'38.7"
4	37	Ugawa	Jaisalmer	Rajasthan	N 26° 37'33.3"	E 70° 57'45.8"
5	36	Ugawa	Jaisalmer	Rajasthan	N 26° 37'27.8"	E 70° 57'49.9"
6	35	Ugawa	Jaisalmer	Rajasthan	N 26° 37'21.6"	E 70° 57'53.9"
7	34	Ugawa	Jaisalmer	Rajasthan	N 26° 37'17.7"	E 70° 57'59.2"
8	33	Ugawa	Jaisalmer	Rajasthan	N 26° 37'14.6"	E 70° 58'05.7"

9	31	Ugawa	Jaisalmer	Rajasthan	N 26° 37'11.3"	E 70° 58'13.3"
10	30	Ugawa	Jaisalmer	Rajasthan	N 26° 37'01.5"	E 70° 58'13.1"
11	50	Korwa	Jaisalmer	Rajasthan	N 26° 37'47.9"	E 70° 56'27.3"
12	53	Korwa	Jaisalmer	Rajasthan	N 26° 38'06.1"	E 70° 56'13.0"
13	121	Kita	Jaisalmer	Rajasthan	N 26° 41'05.2"	E 71° 00'07.2"
14	582	Kita	Jaisalmer	Rajasthan	N 26° 41'58.8"	E 71° 01'44.9"
15	601	Kita	Jaisalmer	Rajasthan	N 26° 40'24.0"	E 71° 04'28.4"
16	602	Kita	Jaisalmer	Rajasthan	N 26° 40'12.2"	E 71° 04'31.5"
17	603	Kita	Jaisalmer	Rajasthan	N 26° 40'08.5"	E 71° 04'19.3"
18	153	Jelu	Jodhpur	Rajasthan	N 26° 31'22.3"	E 72° 46'00.2"
19	154	Jelu	Jodhpur	Rajasthan	N 26° 31'24.2"	E 72° 45'52.0"
20	155	Jelu	Jodhpur	Rajasthan	N 26° 31'31.9"	E 72° 45'46.5"
21	156	Jelu	Jodhpur	Rajasthan	N 26° 31'44.0"	E 72° 45'39.4"
22	157	Jelu	Jodhpur	Rajasthan	N 26° 31'49.0'	E 72° 45'33.5"
23	158	Jelu	Jodhpur	Rajasthan	N 26° 31'50.8"	E 72° 45'25.1"
24	159	Jelu	Jodhpur	Rajasthan	N 26° 31'55.7"	E 72° 45'17.0"
25	161	Jelu	Jodhpur	Rajasthan	N 26° 31'22.1"	E 72° 45'03.8"
26	162	Jelu	Jodhpur	Rajasthan	N 26° 31'26.4"	E 72° 45'15.8"
27	163	Jelu	Jodhpur	Rajasthan	N 26° 31'19.3"	E 72° 45'24.0"
28	164	Jelu	Jodhpur	Rajasthan	N 26° 31'15.2"	E 72° 45'11.9"
29	165	Jelu	Jodhpur	Rajasthan	N 26° 30'49.8"	E 72° 45'18.1"
30	166	Jelu	Jodhpur	Rajasthan	N 26° 30'44.3"	E 72° 45'22.1"
31	167	Jelu	Jodhpur	Rajasthan	N 26° 30'32.8"	E 72° 45'17.4"
32	168	Jelu	Jodhpur	Rajasthan	N 26° 30'36.7"	E 72° 45'40.3"
33	169	Jelu	Jodhpur	Rajasthan	N 26° 30'43.3"	E 72° 45'35.3"
34	10	Salodi	Jodhpur	Rajasthan	N 26 ° 25'35.7"	E 72° 48'32.9"
35	11	Salodi	Jodhpur	Rajasthan	N 26 ° 25'25.2"	E 72 ° 48'35.8"
36	509	Salodi	Jodhpur	Rajasthan	N 26 ° 26'51.1"	E 72 ° 50'44.5"
37	510	Salodi	Jodhpur	Rajasthan	N 26 ° 26'57.7"	E 72 ° 50'35.8"

A.3. Reference of applied methodology

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Title: Consolidated baseline and monitoring methodology for grid-connected electricity generation from renewable sources

Reference: Approved consolidated baseline methodology ACM0002 (Version 12.3.0, EB 66)

UNFCCC web reference of methodology:
http://cdm.unfccc.int/methodologies/DB/MPY3HVJIMTKE5P0UNTYE827D6Q7EHB

ACM0002 draws upon the following tools which have been used in the PDD:

- Tool to calculate the emission factor for an electricity system – Version 02.2.0
- Tool for the demonstration and assessment of additionality – Version 5.2

A.4. Crediting period of project

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Type of crediting period	:	Fixed
Start date of crediting period	:	29/11/2014
Length of crediting period	:	10 years (fixed crediting period)

SECTION B. Implementation of project

B.1. Description of implemented project

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The project activity consists of 37 machines (800 kW) of Wind World make E-53. The first machine under the project activity was commissioned on 23/09/2010 and last machine under the project activity was commissioned on 26/01/2011. The commissioning dates for all the machines include in the project activity are given in the table below:

S.No	Village	Dist.	No. of Loc.	Loc. No.	No. of WEGs	Date of Comm.
1	Ugawa	Jaisalmer	1	41	4	23/09/2010
		Jaisalmer	1	39		23/09/2010
		Jaisalmer	1	38		23/09/2010
		Jaisalmer	1	37		23/09/2010
2	Ugawa	Jaisalmer	1	36	6	23/09/2010
		Jaisalmer	1	35		23/09/2010
		Jaisalmer	1	34		23/09/2010
		Jaisalmer	1	33		23/09/2010
		Jaisalmer	1	31		23/09/2010
		Jaisalmer	1	30		23/09/2010
3	Korwa	Jaisalmer	1	50	2	23/09/2010
		Jaisalmer	1	53		23/09/2010
4	Kita	Jaisalmer	1	121	5	30/09/2010
		Jaisalmer	1	582		30/09/2010
		Jaisalmer	1	601		30/09/2010
		Jaisalmer	1	602		30/09/2010
		Jaisalmer	1	603		30/09/2010
5	Jelu	Jodhpur	1	153	20	30/09/2010
		Jodhpur	1	154		30/09/2010
		Jodhpur	1	155		30/09/2010
		Jodhpur	1	156		30/09/2010
		Jodhpur	1	157		30/09/2010
		Jodhpur	1	158		30/09/2010
		Jodhpur	1	159		30/09/2010
		Jodhpur	1	161		30/09/2010
		Jodhpur	1	162		30/09/2010
		Jodhpur	1	163		30/09/2010
		Jodhpur	1	164		30/09/2010
		Jodhpur	1	165		30/09/2010
		Jodhpur	1	166		30/09/2010
		Jodhpur	1	167		30/09/2010
		Jodhpur	1	168		17/11/2010
		Jodhpur	1	169		17/11/2010
	Salodi	Jodhpur	1	10		26/01/2011
		Jodhpur	1	11		26/01/2011
		Jodhpur	1	509		26/01/2011
		Jodhpur	1	510		26/01/2011
			Total		**37**	

Wind World operation and maintenance activities are ISO 9001:2008 certified. Referring to the data available it can be inferred that there have not been any major special events for any of the machines that are included in the project activity. As a part of regular maintenance, the machines are stopped for mechanical and electrical maintenance for 16 to 18 hours annually and for visual inspection for 6 to 7 hours quarterly. During the monitoring period there were no events or situations occurred, which may impact the applicability of the methodology.

The project activity consists of 37 WEGs of Wind World make E-53 and each machine capacity is of 800 kW (E-53) totalling to the capacity of 29.6 MW. The WEGs generates 3-phase power at 400V, which is stepped up to 33 kV and connected to 33kV metering points. From 33 kV metering point's electricity transmitted to Wind World Sub-station. At sub-station electricity is step-up to 220 kV. From Wind World substation electricity is further evacuated to the state electricity grid at 220kV. The Project can operate in the frequency range of 47.5–51.5 Hz and in the voltage range of 400 V ± 12.5%. The other salient features of the state-of-art-technology are:-

- Gearless Construction - Rotor & Generator Mounted on same shaft eliminating the Gearbox.
- Variable speed function – has the speed range of 18 to 33 RPM thereby ensuring optimum efficiency at all times.
- Variable Pitch functions ensuring maximum energy capture.
- Near Unity Power Factor at all times
- Minimum drawl (less than 1% of kWh generated) of Reactive Power from the grid.
- No voltage peaks at any time.
- Operating range of the WEG with voltage fluctuation of -20 to +20%
- Less Wear & Tear since the system eliminates mechanical brake, which are not needed due to low speed generator, which runs at maximum speed of 33 rpm and uses Air Brakes.
- Three Independent Braking Systems
- Generator achieving rated output at only 33 rpm.
- Incorporates lightning protection system, which includes blades.
- Starts generation of power at wind speed of 3 m/s

Wind World (India) Ltd has secured and facilitated the technology transfer for wind based renewable energy generation from Wind World GmbH, has established a manufacturing plant at Daman in India, where along with other components the "Synchronous Generators" using "Vacuum Impregnation" technology are manufactured. Diagram of main component of Wind World make E-53 is shown in below picture:-

Figure: Wind World make E-53 Diagram

B.2. Post-registration changes

B.2.1. Temporary deviations from Certified Key Project Information, Project Design Document, Monitoring & Reporting Plan, applied methodology or applied standardized baseline

>>
Not applicable

B.2.2. Corrections

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The corrections to the registered PDD, have been approved by UNFCCC on 23/09/2014 (PRC Reference PRC-5090-002).
Revised PDD version 11.0, dated 08/07/2014

B.2.3. Changes to start date of crediting period

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There are no changes to the start date of the crediting period.

B.2.4. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

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The permanent changes from the registered monitoring plan have been approved by UNFCCC on 23/09/2014 (PRC Reference PRC-5090-002). Revised PDD version 11.0, dated 08/07/2014.

B.2.5. Changes to project design of approved project

>>
Not applicable

SECTION C. Description of monitoring system applied by the project

>>
Wind World (India) Limited is EPC contractor for the project activity. Wind World (India) Limited will be responsible for the maintaining all the monitoring data on behalf of Vish Wind Infrastructure LLP in respect of the project activity. Wind World (India) Limited has implemented the management structure for managing the monitored data.

This approved monitoring methodology requires monitoring of the following:

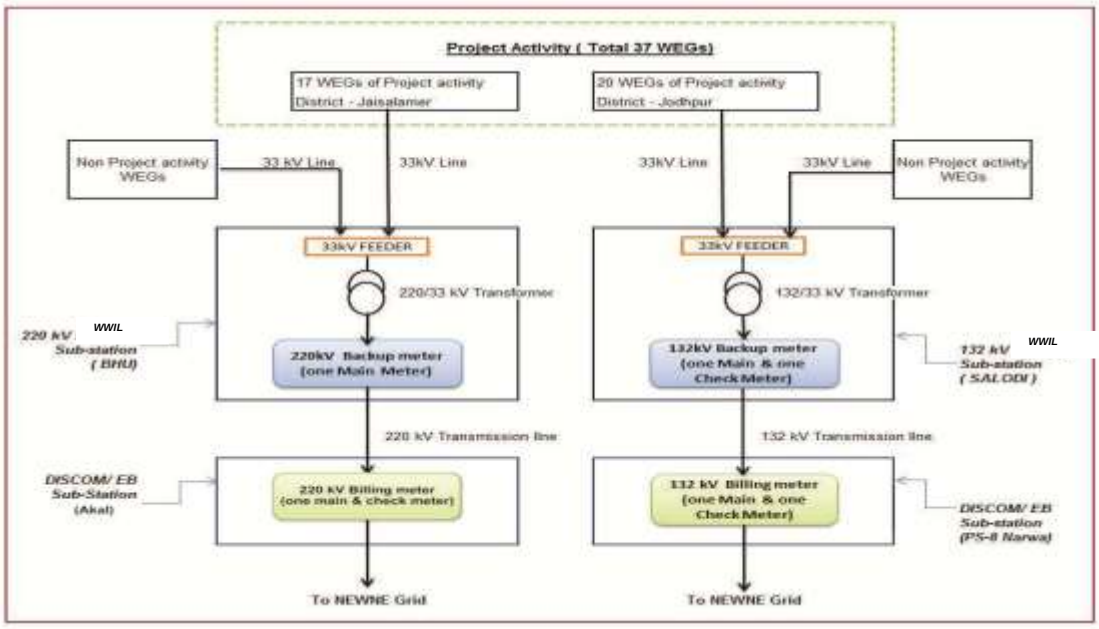
- Net electricity supplied from the project activity; and
- Operating margin emission factor and build margin emission factor of the grid, where *ex post* determination of grid emission factor has been chosen

Emission factor of the project activity is fixed ex ante hence no further monitoring of this parameter is required. As per ACM0002 leakage need not be considered hence leakage has not been considered for the project activity. Hence, the sole parameter for monitoring is the net electricity supplied by the project activity to the grid.

The Project activity is operated by WWIL (EPC contractor for the project activity), and managed by the PP. The operational and maintenance contract for the project activity is with WWIL, which is an ISO 9001 certified company. WWIL 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.

The break-up sheet reflecting net electricity, supplied by the project activity to the grid is prepared by EPC contractor, based on the allocation procedure explained below. Based on this break-up sheet, tariff Invoice is raised by PP to DISCOM.

Calculation of Net Electricity Supplied to the grid by project activity:
Layout of Metering arrangement for project activity is as follows:-



From the above layout it is clear that project activity WEGs (37Nos) along with WEGs of other customers, who are not the part of project activity are connected to WWIL Sub-stations which are further connected to EB sub-station through EHV line. The detail of metering points are as follows;-

1) 17WEGs of project activity installed in Jaisalmer district is connected through 220kV Wind World (India) Limited (herein after referred as WWIL) pooling sub-station (220kV BHU sub-station), through 33kV feeder lines. At WWIL pooling sub-station BHU electricity is stepped up to 220kV, wherein the backup meter (one main meter) is connected. From WWIL pooling sub-station electricity is, transmitted to state utility (DISCOM) sub-station (AKAL sub-station) through 220kV transmission line/ EHV line wherein the billing meter (one main meter & one check meter) is connected. At Akal sub-station, metering is done at 220kV billing meter. From EB sub-station electricity is further transmitted to NEWNE grid.

2) 20WEGs of project activity installed in Jodhpur district is connected through 132kV Wind World (India) Limited (herein after referred as WWIL) pooling sub-station (132kV SALODI sub-station), through 33kV feeder lines. At WWIL pooling sub-station SALODI electricity is stepped up to 132kV, wherein the backup meter (one main & one check meter) connected. From WWIL pooling sub-station electricity is transmitted to state utility (DISCOM) sub-station (PS-8 Narwa Sub-station) through 132kV transmission line/ EHV line wherein billing meter (one main & one check meter) is connected. At EB sub-station metering is done at 132kV billing meter. From EB sub-station electricity is further transmitted to NEWNE grid.

The net electricity supplied to the grid is, calculated on monthly basis at the EB/DISCOM substations (Akal & PS-8 Narwa) wherein the billing meter is connected. The representatives of DISCOM and WWIL (EPC Contractor), who also signs the JMR take the Monthly Joint Meter reading. Simultaneously, the monthly joint meter reading of backup meters available at WWIL pooling sub-stations (BHU & SALODI) is also taken by representatives of RVPN/DISCOM and WWIL. The copy of JMR at backup meters is available with WWIL.

Since the project activity WEGs are connected through common metering system along with non-project activity WEGs of other customers at the main meter. Apportioning of electricity export & import as recorded in JMR is being done to calculate the electricity export & import by individual customer's WEGs Apportioning is being done based on the net electricity generation (Gross Export-Gross Import) recorded at LCS meter installed in individual WEGs.

Based on the monthly JMR reading, which is signed by representative of DISCOM and EPC contractor; WWIL prepares the monthly breakup[1] generation sheets which indicate the export, import & net electricity supplied by individual customers to the grid.

The monthly generation sheet is submitted to both, DISCOM as well as individual investors. PP raises the invoice based on the monthly breakup sheet corresponding to the net electricity generation value indicated in the monthly breakup sheet. DISOM based on the JMR reading along with monthly breakup sheet prepared by WWIL and the invoice raised by investors, conduct the audit to cross check the net electricity values and in case all the values are found to be correct, DISCOM release the payment against the invoice raised by individual investors.

The values of the net electricity supplied to grid by project activity can be cross checked with invoices raised by the PP on DISCOM.

Procedure for apportioning:-

***Case 1*:- Procedure used by EPC Contractor to prepare monthly breakup sheets for project activity**

The monthly JMR reading contains the electricity export, import & net electricity supplied by all the WEGs of project activity as well as non-project activity connected to the metering system at DISCOM substation. Hence in order to arrive at the electricity export, import & net electricity supplied by WEGs of the project activity based on the net electricity generation (Gross Export-Gross Import) recorded at LCS meter, following procedure is used by EPC contractor:-.

As LCS meter measures the net electricity generation (Gross Export-Gross Import) by individual WEG, which is the difference of export and import and doesn't provide individual reading of Export & Import; the apportioning of electricity export & import at recorded at billing meter as indicated in JMR sheet is done based on net electricity generation (Gross Export-Gross Import) of WEGs. This standard procedure is followed in the state of Rajasthan and is accepted by the state DISCOM for payment of tariff invoices.

Electricity exported by all WEGs of project activity is apportioned on the basis of summation of net electricity generation (Gross Export-Gross Import)[2] (by all the WEGs (j number of WEGs) of project activity, as measured at the controller (LCS meter) at project site and the electricity export recorded at the main meter mentioned in the JMR. The formula used for computing electricity export to the grid by the project activity is as follows:-

Electricity Export to the grid by the Project activity,

$$EG_{Export,y} = \frac{EG_{JMR,Export} * \sum EG_{Controller,\,j}}{\sum EG_{Controller,i}} \quad \text{.....(1)}$$

As LCS meter measures the net electricity generation (Gross Export – Gross Import) by WEGs and doesn't provide individual reading of Export & Import. Therefore, apportioning of export as well as, import for all WEGs of the project activity were also apportioned, on the basis of summation of net electricity generation by all the WEGs (j number of WEGs) of project activity, as measured at the controller (LCS meter) at project site and the electricity import recorded at the main meter mentioned in the JMR. The formula used for computing electricity import from the grid by the project activity is as follows

Electricity Import from the grid by the Project activity,

[1] As per section 4.2 (ii) of PPA 'Measurement of Energy and Metering':- The Joint Meter Reading taken at common evacuation /injection system shall be supported by controller readings of individual power producers using such common evacuation/ injection system. Based on this breakup, limited to total energy injection, the power purchase form the individual power plant shall be regulated for the purpose of payment.

[2] LCS meter installed in individual WEGs control panel measures the net electricity generation (Gross Export-Gross Import) by WEG and therefore $\sum EG_{Controller,\,j}$ is used by developer to calculate electricity export & import by individual developer (project activity & non project activity WEGs).

$$EG_{Import,y} = \frac{EG_{JMR,Import} * \sum EG_{Controller,j}}{\sum EG_{Controller,i}} \quad \text{.....(2)}$$

Wherein,

$\sum EG_{Controller,j}$ = Summation of net electricity generation by all the WEGs (j number of WEGs) of project activity, as measured at the controller (LCS meter) at project site.

$\sum EG_{Controller,i}$ = Summation of net electricity generation by all WEG (i number of WEGs) of project activity or non project activity, as measured at the controller (LCS meter) at project site,

$EG_{JMR,Export}$ = Electricity export by project and non project recorded at respective billing meters located at DISCOM sub-station. This can be checked from JMR certificates.

$EG_{JMR,Import}$ = Electricity import by project and non project recorded at respective billing meters located at DISCOM sub-station. This can be checked from JMR certificates.

$\mathbf{EG_{Export,y}}$ = Electricity export by project activity calculated as per formula 1 above

$\mathbf{EG_{import,y}}$ = Electricity import by project activity calculated as per formula 2 above.

Therefore net electricity supplied to grid by 37 WEGs of the project activity is calculated as the difference of equation (1) & (2),

$$\mathbf{EG_{Facitlity,y} = EG_{Export,y} - EG_{Import,y}}$$

Even though the above mentioned of apportioning is done by the EPC Contractor and submitted to respective DISCOM, the same undergoes the series of audit by the hierarchy of auditors (Asst. Auditors, divisional auditors & account auditors) and then finally authorised by the Superintending engineer (SE) of the circle office of respective DISCOMs. The above mentioned procedure of apportioning will be done separately for WEGs of project activity installed at Jaisalmer & Jodhpur site by EPC Contractor.
The apportioning of electricity generated by the all WEGs (project activity and non-project activity) is entirely under the jurisdiction of the EPC Contractor. The project participant has no role in computing and furnishing the apportioned electricity generated for them or any other project developer. The above apportioning procedure for deriving the apportioned electricity generated by the project activity has been included only to bring clarity to the apportioning and overall monitoring procedure.

***Case 2*:- Apportioning procedure in case the date of verification period doesn't match with the billing cycle dates**

In case the date of project registration is not in line with billing cycle of project activity then the calculation of net electricity supplied to grid for period between date of registration and next date of billing cycle will be done by PP based on data available for that month. Although it is not applicable for current monitoring period.

Net electricity export to the grid by a WEG @ SEB meter for n no. of days = (Daily controller net electricity generation (Gross Export-Gross Import) of that WEG for n no. of days) x (Total Net generation of that WEG @ SEB main meter for a month)
Monthly controller net electricity generation (Gross Export-Gross Import) of that WEG for that month

Procedure to deal with data uncertainty:

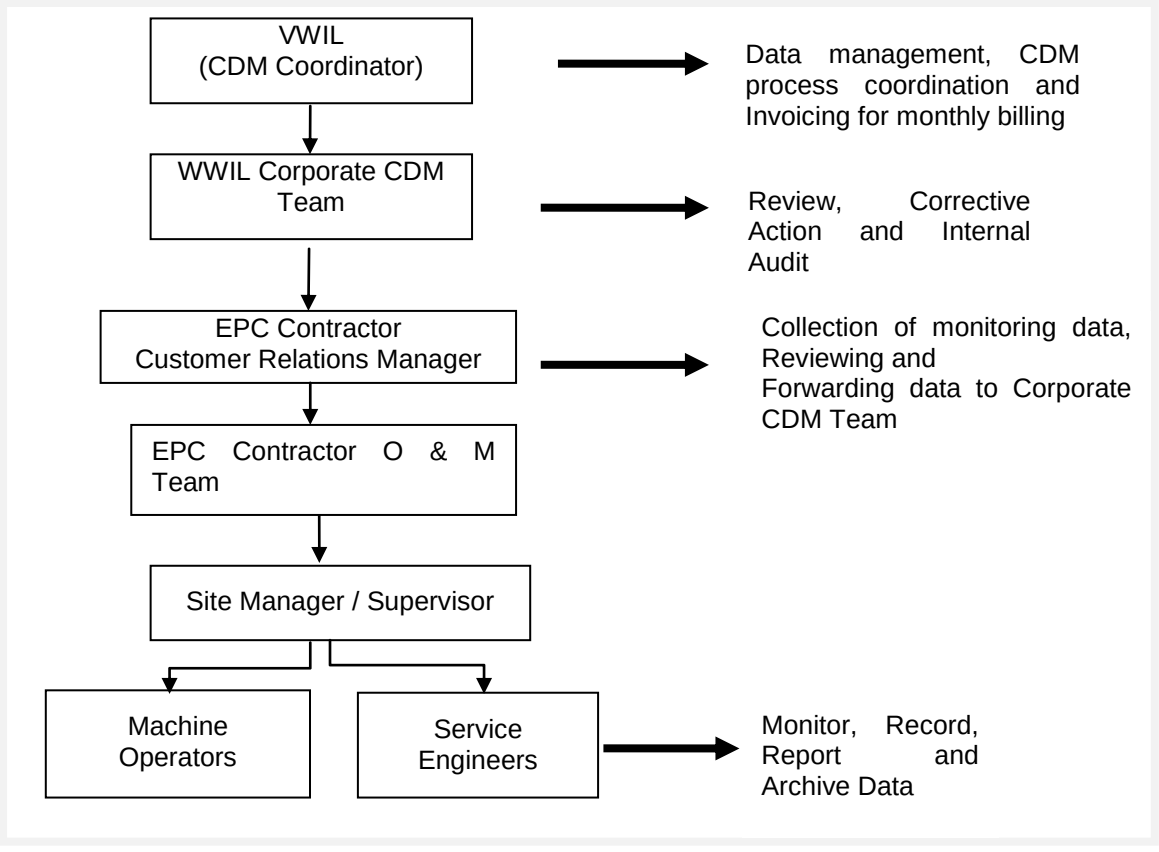
During the annual calibration, if the meter is found to be outside the permissible limits of the error and if that meter readings have been used in JMR, the (–ve) error value would be applied to electricity export and (+ve) error value will be applied to import of electricity from grid to all the JMR values since the date of last calibration. The meter would be replaced immediately with new calibrated meter.

Training and maintenance requirements:

Training on the machine is an essential pre-requisite, to ensure necessary safety of man and machine. Further, in order to maximize the output from the Wind Energy Generators (WEGs), it is extremely essential, that the engineers and technicians understand the machines and keep them in good health. In order to ensure, that WWIL's service staffs is deft at handling technical snags on top of the turbine, the necessity of ensuring that they are capable of climbing the tower with absolute ease and comfort has been established. The Wind World Training Academy provides need-based training to meet the training requirements of WWIL projects. The training is contemporary, which results in imparting focused knowledge leading to value addition to the attitude and skills of all trainees. This ultimately leads to creativity in problem solving.

Monitoring roles and responsibilities

The operational and management structure implemented for data monitoring is as follows:



Meter Test Checking Details:

The metering equipment were inspected & tested by State Utility. Meter details & calibration details for the all the main and check meters are as follows:-

Jaisalmer Site (220 KV Feeder Line)			
Location of meter	Akal Sub -station (Electricity board)		Bhu Sub-station (Wind World)
Type of meter	Main Meter	Check Meter	Back up meter

Meter Sr. No.		15624843	15624844	15197055
Meter Make		L&T	L&T	Secure
Accuracy class		0.2%	0.2%	0.2%
Type		All the meters are two-way Tri-vector meters capable of recording import and export of electricity.		
Frequency		Annual		
Calibration Details	2017	09/03/2017	09/03/2017	25/05/2017
	2018	14/05/2018	14/05/2018	14/05/2018

Jodhpur Site (132 KV Feeder Line)					
Location of meter		PS-8 Sub-station (EB)		Salodi Sub-station (Wind World)	
Type of meter		Main Meter	Check Meter	Backup main meter	Backup check meter
Meter Sr. No.		RJB00354	RJB00356	RJB00358	RJB00357
Meter Make		Secure	Secure	Secure	Secure
Accuracy class		0.2%	0.2%	0.2%	0.2%
Type		All the meters are two-way Tri-vector meters capable of recording import and export of electricity.			
Frequency		Annual			
Calibration Details	2017	16/06/2017 and 14/08/2019	16/06/2017 and 14/08/2019	16/06/2017 and 14/08/2019	16/06/2017 and 14/08/2019

As per Guidelines for assessing compliance with the calibration frequency requirements, (CDM Standard : CDM validation and verification standard for project activities VVS Version 02.0 para 366 (a)) states that: "Applying the maximum permissible error of the instrument to the measured values taken during the period between the scheduled date of calibration and the actual date of calibration, if the results of the delayed calibration do not show any errors in the measuring equipment, or if the error is smaller than the maximum permissible error".

In Current Monitoring Period for the meters installed at Jaisalmer site, calibration was due on 09/03/2018 but the same was done on 14/05/2018.Hence the calibration of the meters got delayed for the period from 09/03/2018 to 13/05/2018. However, the billing cycle is from 01st of every month to last day of the month, hence the correction factor is applied for month Mar-18 to May-18.

For Jodhpur site, the calibration was due on 16/06/2018 but the same has been conducted on 14/08/2019. Hence, the calibration of the meters got delayed for the period from 16/06/2018 to 31/12/2018. Hence, the correction factor (maximum permissible error of "0.2%") is applied for month of Jun-18 to Dec-18.

SECTION D. Data and parameters

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

Relevant SDG Indicator	**13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other**
Data/parameter	$EF_{grid,OM,y}$

Unit	tCO_{2e}/MWh
Description	Operating Margin Emission Factor of NEWNE Electricity Grid
Source of data	"CO2 Baseline Database for Indian Power Sector", version 5.0, published by the Central Electricity Authority, Ministry of Power, Government of India. The "CO2 Baseline Database for Indian Power Sector" is available at http://www.cea.nic.in/tpeandce.html
Value(s) applied	1.005
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 ACM0002.
Purpose of data	Calculation of Baseline Emissions
Additional comment	This value is calculated on ex-ante basis and will remain fixed for the entire crediting period.

Relevant SDG Indicator	**13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other**
Data/parameter	$EF_{grid,BM,y}$
Unit	tCO_{2e}/MWh
Description	Build Margin Emission Factor of NEWNE Electricity Grid
Source of data	"CO2 Baseline Database for Indian Power Sector", version 5.0, published by the Central Electricity Authority, Ministry of Power, Government of India. The "CO2 Baseline Database for Indian Power Sector" is available at http://www.cea.nic.in/tpeandce.html
Value(s) applied	0.6752
Choice of data or Measurement methods and procedures	Build Margin Emission Factor has been calculated by the Central Electricity Authority in accordance with ACM0002.
Purpose of data	Calculation of Baseline Emissions
Additional comment	This value is calculated on ex-ante basis and will remain fixed for the entire crediting period.

Relevant SDG Indicator	**13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other**
Data/parameter	$EF_{grid,CM,y}$

Unit	tCO_{2e}/MWh
Description	Combined Margin Emission Factor of NEWNE Electricity Grid
Source of data	Combined Margin Emission Factor (EFgrid,CM,y) is calculated as the weighted average of Operating Margin Emission Factor (EFgrid,OM,y) and Build Margin Emission Factor (EFgrid,BM, y). The "CO2 Baseline Database for Indian Power Sector" published by the Central Electricity Authority, Ministry of Power, Government of India. The "CO2 Baseline Database for Indian Power Sector" is available at www.cea.nic.in
Value(s) applied	0.9225
Choice of data or Measurement methods and procedures	Combined Margin Emission Factor has been calculated by the Central Electricity Authority in accordance with CDM methodologies: ACM0002, and Tool to Calculate the emission Factor for an Electricity System.
Purpose of data	Calculation of Baseline Emissions
Additional comment	This value is calculated on ex-ante basis and will remain fixed for the entire crediting period.

D.2. Data and parameters monitored

Relevant SDG Indicator	**7.2.1Renewable energy share in the total final energy consumption**
Data/Parameter	**$EG_{facitlity,y}$**
Unit	MWh (Mega-watt hour)
Description	Net electricity generation supplied to the grid by the Project activity.
Measured/calculated/ Default	Calculated
Source of data	The break-up sheet prepared by EPC contractor based on Joint Meter Reading (JMR)
Value(s) of monitored parameter	46058.234 MWh
Monitoring equipment	Since it is calculated value, hence not applicable.
Measuring/reading/recording frequency	Frequency of measurement/recording data: Continuously monitoring and Monthly recording Refer section 'C' (Description of monitoring system) for an illustration of the provisions for measurement methods. Monthly values of parameter are provided in the ER calculation sheet.
Calculation method (if applicable)	The procedures for calculation of net electricity supplied to grid has been followed as per the provisions of the power purchase agreement and details of calculation method has been explained in monitoring plan under section C of monitoring report.
QA/QC procedures	Value of $EG_{facitlity,y}$ can be cross checked with the tariff invoices raised on the DISCOM . All the billing Main & Backup meters are calibrated by DISCOM annually and the records are available with the EPC Contractor (WWIL)
Purpose of data	Calculation of Baseline Emissions
Additional comments	The data will be archived both in electronic and hard paper format for crediting period + 2 years.

Relevant SDG Indicator	**7.2.1Renewable energy share in the total final energy consumption**
Data/Parameter	**$EG_{Export,y}$**
Unit	MWh (Mega-watt hour)
Description	Electricity export to the grid by the Project activity.
Measured/calculated/ default	Calculated
Source of data	The break-up sheet based on Joint Meter Reading (JMR) prepared by EPC Contractor.
Value(s) of monitored parameter	46144.608 MWh
Monitoring equipment	Since it is calculated value, hence not applicable.
Measuring/reading/recording frequency	Frequency of recording data: Monthly. Further all the meters have the capability of continuous measurement of data. Refer section 'C' for an illustration of the provisions for measurement methods. Monthly values of parameter are provided in the ER calculation sheet.
Calculation method (if applicable)	Based on the monthly JMR reading recorded at main meters installed at DISCOM sub-stations and the LCS controller meters (panel meters) readings.
QA/QC procedures	Value of $EG_{Export,y}$ can be cross checked with the tariff invoices raised on the DISCOM. All the billing & Backup meters are calibrated by DISCOM annually and the records are available with the EPC Contractor (WWIL).
Purpose of data	Calculation of Baseline Emissions
Additional comments	The data will be archived both in electronic and hard paper format for crediting period + 2 years.

Relevant SDG Indicator	**7.2.1 Renewable energy share in the total final energy consumption**
Data/Parameter	**$EG_{Import,y}$**
Unit	MWh (Mega-watt hour)
Description	Electricity Import from grid by the Project activity.
Measured/calculated/ default	Calculated
Source of data	The break-up sheet based on Joint Meter Reading (JMR) prepared by EPC Contractor.
Value(s) of monitored parameter	86.374 MWh
Monitoring equipment	Since it is calculated value, hence not applicable.
Measuring/reading/recording frequency	Frequency of recording data: Monthly Further all the meters have the capability of continuous measurement of data. Refer section 'C' for an illustration of the provisions for measurement methods. Monthly values of parameter are provided in the ER calculation sheet.
Calculation method (if applicable)	based on the monthly JMR reading recorded at main meters installed at DISCOM sub-stations and the LCS controller meter (panel meters) readings.
QA/QC procedures	Value of $EG_{Import,y}$ can be cross checked with the tariff invoices raised on the DISCOM. All the billing & Backup meters are calibrated by DISCOM annually and the records are available with the EPC Contractor (WWIL).

Purpose of data	Calculation of Baseline Emissions
Additional comments	The data will be archived both in electronic and hard paper format for crediting period + 2 years

Relevant SDG Indicator	**7.2.1Renewable energy share in the total final energy consumption**
Data/Parameter	$\sum EG_{Controller,j}$
Unit	MWh (Mega-watt hour)
Description	Summation of net electricity generation (Gross Export-Gross Import) by all the WEGs of project activity (j number of WEGs), as measured at the controller (LCS meter) at project site. Each WEG has exclusive LCS meter that records net electricity generation (Gross Export-Gross Import) from the WEG. j is number of WEGs of project activity connected to main meter (JMR/billing meter) at DISCOM substation and backup meter at WWIL substation.
Measured/calculated/ default	Measured
Source of data	Monthly operating logs recorded in electronic format by EPC contractor.
Value(s) of monitored parameter	45858.442 MWh
Monitoring equipment	Controller meter (LCS).
Measuring/reading/recording frequency	Frequency of measuring/recording data: Continuous measurement and Monthly recording The value is recorded continuously by the online monitoring station. This reading can also be seen in the electronic panel installed inside the WEG tower. The LCS meters do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WEGs. In case there is any mismatch in the energy values recorded by the Panel meter and the energy values calculated by the inverting system; the machine will stop working and generate the error report. The operations and maintenance staff will attend to the problem immediately in order to identify and correct the error. Monthly values of parameter are provided in the ER calculation sheet.
Calculation method (if applicable)	Not Applicable
QA/QC procedures	This data parameter will be logged electronically on a monthly basis by EPC contractor on its online portal. The value of this parameter shall be compared with the value of $EG_{facitlity,y}$ and the conservative approach would be taken by the PP for estimating the net electricity supplied value for the calculation of emission reduction.
Purpose of data	Calculation of Baseline Emissions
Additional comments	The data will be archived both in electronic and hard paper format for crediting period + 2 years

Relevant SDG Indicator	**8.5.2 Unemployment rate, by sex, age and persons with disabilities**
Data/Parameter	Quality of Employment
Unit	Number of Training Programs/Workshops/Awareness Programs
Description	Training provided to employees and O&M staff regarding occupational health management, safeguards put in place

Measured/calculated/ Default	Measured for duration of 01/09/2017 to 31/12/2018
Source of data	Documentation pertaining to training programmes, awareness generation activities, photographs, interviews etc.
Value(s) of monitored parameter	Following training programs have been conducted in order to enhance the safety awareness, operational skill levels and occupational health management for the local staff: 2017: On 15/12/2017, employees benefitted through HSE training programs related to "**Mock drill conducted for (OH&S / Environment) emergency Health**". The records of training & workshops are be submitted to the DOE. 2018: Total 20 employees benefitted through HSE training programs related to job safety, Incident Management and work permit revision. The records of training & workshops are be submitted to the DOE.
Monitoring equipment	Manually by PP representative
Measuring/reading/recording frequency	Annually
Calculation method (if applicable)	Manually by PP representative
QA/QC procedures	The training programmes help in making the workforce efficient and skilled at their job. This not only helps the company but adds to growth of individual employees. Thus, the project has a positive impact on the parameter.
Purpose of data	To monitor the contribution to SDG 8
Additional comments	None

Relevant SDG Indicator	**3.8.1** Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population
Data/Parameter	Human and Institutional capacity
Unit	Total number of initiatives, events and programmes, primarily Health and Education Camps
Description	Health and Education related activities conducted for well-being of locals/villagers
Measured/calculated/ default	Measured for duration of 01/09/2017 to 31/12/2018
Source of data	Records of organized events, photographs, proof of payments etc.

<table>
<tr><td>Value(s) of monitored parameter</td><td>Since access to basic education, health, basic amenities and infrastructural facilities are basic factors to facilitate human and institutional capacity development; various initiatives have been undertaken by the project developer to contribute to these thematic areas. The contribution made during monitoring period is mentioned below:

HEALTH (Healthcare Services)
As part of its broader endeavour towards better health for the local community, Project participant has initiated an ambitious project to provide primary health care services through the operation of a healthcare services. The health services are rendered through qualified medical staff including an MBBS doctor. Mobile health van is also equipped with the essential medical equipment and basic medication. Roster for the van has been prepared in a manner so that it can go to each of the nine villages at least once a week. So far, mobile health van has catered to 500 patients including women, children and elders. (Annex A)
Source: CSR Status Report- By "Wind World (India) Ltd" and Group Companies, (Aug 2016 to April 2017)

Health Camps, School Kits and Promotion of Menstrual Hygiene and Sanitation at Govt, Schools
On 28 and 29th Aug 2018, PP had launched CSR Program has covered three under privileged Schools in the rural villages of Damodara, Sipla and Barna of Jaisalmer district of Rajasthan. The details of program is provided below:
<table>
<tr><th>Sr. No.</th><th>Activities</th><th>Q 1 (first set of events)</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Health Program</td><td>2 Health camps</td></tr>
<tr><td>(i.e. Coverage of around 250-300 students)</td></tr>
<tr><td>2</td><td>Sanitary Napkins Distribution</td><td>150 females</td></tr>
<tr><td>3</td><td>Stationary kits for students</td><td>200 Students</td></tr>
</table>
Source: DHARA Sansthan Program Progress Report, October 2018 & CSR Status Report- By "Wind World (India) Ltd" and Group Companies, (Aug 2016 to April 2017)

Clean Drinking Water
Project Proponent understands that provision of clean drinking water is an integral component for a better health ecosystem. In light of this sensitization Project Proponent has initiated a programme to install RO systems in 12 schools in Rajasthan, so that, the children get access to clean drinking water. (Annex B)
Source: CSR Status Report- By "Wind World (India) Ltd" and Group Companies, (Aug 2016 to April 2017)

Around 200 people have been directly or indirectly benefitted by various HID and CSR initiatives undertaken by the project developer.</td></tr>
<tr><td>Monitoring equipment</td><td>Manually</td></tr>
<tr><td>Measuring/reading/recording frequency</td><td>Annually</td></tr>
<tr><td>Calculation method (if applicable)</td><td>-</td></tr>
<tr><td>QA/QC procedures</td><td>-</td></tr>
<tr><td>Purpose of data</td><td>To monitor the contribution to SDG 3 (Ensure healthy lives and promote well-being for all at all ages)</td></tr>
<tr><td>Additional comments</td><td>None</td></tr>
</table>

Relevant SDG Indicator	**8.5.2 Unemployment rate, by sex, age and persons with disabilities**

Data/Parameter	Quantitative employment and income generation
Unit	Number of Employees
Description	Number of jobs generated during the operation of the wind farm.
Measured/calculated/ Default	Measured for duration of 01/09/2017 to 31/12/2018
Source of data	Attendance Sheet and employment records maintained by Project Developer
Value(s) of monitored parameter	The project activity is located at Jaisalmer and Jodhpur district. 17WEGs of project activity installed in Jaisalmer district is connected through 220kV Wind World (India) Limited (herein after referred as WWIL) pooling sub-station (220kV BHU sub-station), through 33kV feeder lines. 20WEGs of project activity installed in Jodhpur district is connected through 132kV Wind World (India) Limited (herein after referred as WWIL) pooling sub-station (132kV SALODI sub-station), through 33kV feeder lines. At Jodhpur Substation various sites are connected where local staff is employed. The number of jobs created due to the project activity is divided under following categories: • Technical Staff (5) • Non-Technical Staff (3) • Security Staff (2) At Jaisalmer Substation various sites are connected where local staff is employed. The number of jobs created due to the project activity is divided under following categories: • Technical Staff (9) • Non-Technical Staff (4) • Security Staff (2) O&M contractor has assigned team of above mentioned technical, non-technical and security guards for the project activity, who are responsible for all project related wind turbines. Specifically,Total 25 local people have been employed for the project activity during the monitoring period under consideration. Corresponding attendance sheets and other relevant records on annual monitoring have been submitted to DOE. In addition to this, because of the infrastructure development (road construction, road repairs, cleaning of substation etc.), local villagers are getting short time jobs thus leading to income generation. Since this is an indirect benefit of the project activity in terms of income generation, it is not possible to exactly quantify the same. However, it can be conservatively stated that around 50 people have got additional livelihood/income generation opportunities because of the project activity.
Monitoring equipment	Attendance Sheet and employment records maintained by Project Developer
Measuring/reading/recording frequency	Annually
Calculation method (if applicable)	-
QA/QC procedures	Additional job opportunities created for the local population. Income generation to be enhanced by creating relatively high value job opportunities through training and capacity building.
Purpose of data	To monitor the contribution to SDG 8
Additional comments	None

D.3. Implementation of sampling plan

>>
Not Applicable

SECTION E. Calculation of SDG outcomes

E.1. Calculation of baseline value or estimation of baseline situation of each SDG outcome

>>

According to the approved methodology Emission Reductions are calculated as:-

$ER_y = BE_y – PE_y$ ..... (1)

Where:

BE_y	Baseline Emissions in year *y* (t CO_2e/yr)
PE_y	Project Emissions in year *y* (t CO_2e/yr)

Estimation of Baseline Emissions:

"The baseline is the kWh produced by the renewable generating unit multiplied by an emission coefficient (measured in tCO_2e/MWh) calculated in a transparent and conservative manner as the weighted average emissions (in tCO_2e/MWh) as described in PDD Version 11 dated 08/07/2014.

BE_y = $EG_{PJ, y} * EF_{grid, CM, y}$

Where,

BE_y is baseline emissions in year y, tCO_2e.

$EG_{PJ,y}$ is 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/yr).

$EF_{grid,CM,y}$ *is* Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh)

Since the project activity is the installation of a new grid connected renewable power plant the $EG_{PJ,y}$ is calculated as :

$EG_{PJ,y} = EG_{facility,y}$

$EG_{facility,y}$ is Quantity of net electricity generation supplied by the project plant/unit to the grid in year *y* (MWh/yr)

So, $BE_y = EG_{facility,y} * EF_{grid, CM, y}$
$BE_y = 46058.23 * 0.9225$
$= 42,481$

Baseline Emission Reductions calculation for project activity:-

Duration	Net electricity generation supplied to the grid by the Project activity [MWh]	Baseline Emission Factor (tCO_2e/MWh)	Baseline Emissions (tCO_2e)
	[EG_y]	**[EF_y]**	**[BE_y] = [EG_y] * [EF_y]**
01/09/2017-31/12/2017	7929.02	0.9225	7,313

01/01/2018- 31/12/2018	38129.21	0.9225	35,168
Total	46058.23		42,481

Item	Baseline estimate
SDG 3 : Good Health And Well-Being	**No Activities in the baseline**
SDG 7: Affordable and Clean Energy	**No Activities in the baseline**
SDG 8: Decent Work and Economic Growth	**No Activities in the baseline**
SDG 13: Climate Action	**Emission of 42,481 tCO_2**

E.2. Calculation of project value or estimation of project situation of each SDG outcome

>>

Based on the surveys, PP identifies and works on several scope(s) of developmental activities such as health camps, distribution of furniture & sports kits in schools, toilet requirements in government schools, drinking water requirements etc. Apart from these activities, some or all of which will be conducted in any given year, following SDGs will be impacted every year:

SDG Goal	Monitoring Plan
SDG 3: Good Health And Well-Being	Method: PP has conducted health camps, provide free preventive health service and medicines in nearby villages. Frequency: Annually. QA/QC procedures: Maintain records of primary data at execution level; also conduct data analysis and gap assessment at various levels of such programs and events. Purpose: To identify the beneficiaries that are impacted under this SDG parameter.
SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all	Method: Monitored through energy meter. The net electricity supplied to the grid by the wind farm has been calculated by Rajasthan state grid on the basis of main meter reading and the meter readings taken at substation meters after adjusting transmission loss. The net electricity generated by the project activity has been taken directly from the JMR issued by the state grid on monthly basis. Frequency: Monthly QA/QC procedures: Net electricity supplied to the grid by the project activity will be cross checked with invoices submitted to EB. The meter(s) shall be calibrated on a regular basis. Purpose: To measure the electricity produced and supplied to the grid

SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Method: Training records, Attendance Sheet, Employment records data maintained by Project Developer. Project developer has comprehensive internal systems in place wherein all essential norms pertaining to safety, occupational health and working conditions are being followed. Frequency: Annual QA/QC procedures: Continuation of regular trainings/workshops for employees & O&M staffs Purpose: To identify and record the no. of trainings provided to the employees as well as employment generated due to project activity.
SDG 13: Take urgent action to combat climate change and its impacts	Method: Monitored through energy meter. Net electrical energy has been calculated to the best accuracy at the substation of State Electricity Board. Further using processes and equations provided under "Tool to calculate the emission factor for an electricity system", and referencing data from CEA database. Frequency: Every monitoring period (whereas Emission Factor calculated based on combined margin approach is fixed ex-ante for the entire crediting period) QA/QC procedures: Transparent data collection, analysis, calculation and reporting as CEA database is publicly available. Purpose: To calculate emissions avoided due to the project activity

E.3. Calculation of net benefits as difference of baseline and project values or direct calculation for each SDG outcome

>>

Item	Baseline estimate	Project value	Net benefit
SDG 7: Affordable and Clean Energy	**0**	**= 46058.23 MWh**	**46058.23 MWh**
SDG 8: Decent Work and Economic Growth	**0**	**1 trainings 20 employees**	**2 trainings 20 employees**
SDG 13: Climate Action	**42,481 tCO_2**	**0**	**42,481 tCO_2**

E.4. Summary of ex-post values of each SDG outcome for the current monitoring period

Item	Baseline estimate	Project estimate	Net benefit
SDG 7: Affordable and Clean Energy	0	70853.58 MWh	46058.23 MWh
SDG 8: Decent Work and Economic Growth	0	1 trainings 20 employees	2 trainings 25 employees
SDG 13: Climate Action	65,362 tCO_2	0	42,481 tCO_2

E.5. Comparison of actual value of outcomes with estimates in approved PDD

Item	Values estimated in ex ante calculation of approved PDD	Actual values achieved during this monitoring period
SDG 7 : Affordable and Clean Energy	70853.58 MWh	46058.23 MWh
SDG 8 Decent Work and Economic Growth	1 trainings 20 employees	2 trainings 25 employees
SDG 13 Climate Action	65,362 tCO_2	42,481 tCO_2

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

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The difference of each SDGs in the current monitoring period from estimated value in approved PDD is:

Item	Values estimated in ex ante calculation of approved PDD	Actual values achieved during this monitoring period
SDG 7: Affordable and Clean Energy	70853.58 MWh	46058.23 MWh
SDG 8: Decent Work and Economic Growth	1 trainings 20 employees	2 trainings 25 employees
SDG 13: Climate Action	65,362 tCO_2	42,481 tCO_2

The actual emission reduction achieved is 35 % less than the estimated figure as per registered PDD. This is due to lower electricity generation compared to estimated generation in registered PDD (for the equivalent period) during the monitoring period. Further, as the actual generation is less than the estimated generation mentioned in registered PDD, thus, further justification is not necessary.

SECTION F. Stakeholder inputs and legal disputes

F.1. List all inputs/grievances which have been received for the project during the monitoring period together with their respective answers/actions

>>

No formal complaints were received as part of the grievance mechanism during the monitoring period under consideration. However, as part of organizational policy, continuous interactions have been undertaken by Project Participant's officials with local community stakeholders and there were few common observations and comments which were given by villagers during those discussions. Common queries raised and the suggestions given by villagers have been presented below for reference:

- Project Participant should initiate programs in area of aganwadi training and skill development employment program for women.

- Whether Project Participant is going to enhance basic school infrastructure (School Bags, Furniture, Bicycle) for more schools going students in the vicinity of project site?

- Whether Project Participant is going to enhance the drinking water facility (RO Installations) for more schools going students in the vicinity of project site?

- Project Participant should work more on enhancing the health van services for more villages falling in the vicinity of project site.

All the observations, comments and queries have been adequately responded to. Some of the suggestions have also been incorporated in the overall vision and stakeholder engagement action plan of the organization.

F.2. List all inputs/grievances from previous monitoring period where follow up action is to be verified in this monitoring period

>>

There are no pending inputs/grievances from previous monitoring period where follow up action is to be verified in this monitoring period.

F.3. Provide details of any legal contest or dispute that has arisen with the project during the monitoring period

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No legal contest or dispute that has arisen with the project during the monitoring period.

Annex 1

BASELINE INFORMATION

The Operating Margin data for the most recent three years and the Build Margin data for the NEWNE Region Electricity Grid as published in the CEA database version 5.0 [3]are as follows:

Simple Operating Margin

	NEWNE Grid (tCO_2e/GWh)
Simple Operating Margin – 2006-07	1.0085
Simple Operating Margin – 2007-08	0.9999
Simple Operating Margin – 2008-09	1.0066
Average Operating Margin of last three years	1.0050

Build Margin

	tCO_2e/GWh
Build Margin- 2008-09	0.6752

Combined Margin calculations

	Weights	tCO_2e/GWh
Operating Margin	0.75	1.0050
Build Margin	0.25	0.6752
Combined Margin		**0.9225**

[3] http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

Annexure A

Programme conducted under the initiative "Human and institutional capacity"

कार्यालय प्रधानाचार्य रा.उ.मा.वि. सिपला
पंचायत समिति सम:- (जैसलमेर)

क्रमांक/रा उमा वि सिपला/जैसल/18-19/007/ दि. 29.8.18

श्रीमान CSR Team

Wind World Group

द्वारा संस्थान बाड़मेर के द्वारा विन्ड वर्ल्ड CSR टीम के सहयोग से रा. उ. मा. वि. सिपला, जैसलमेर में स्क्रीनिंग स्वास्थ्य शिविर का आयोजन किया गया। जिसमें बच्चो के स्वास्थ्य की जाँच कर उन्हे निःशुल्क दवाइयाँ दी गई। विन्ड वर्ल्ड CSR टीम द्वारा बच्चियो को सेनेट्री पेड (नेपकीन) तथा जरूरतमंद 41 बच्चो को स्कूल बैग एवं लेखन सामग्री का भी निःशुल्क वितरण किया गया

विद्यालय द्वारा आभार एवं धन्यवाद

प्रधानाचार्य
रा.उ.मा.वि., सिपला
DDO Code - 26977

विन्ड वर्ड ने निभाया सामाजिक सरोकार

विद्यालयों में निःशुल्क शिविर आयोजित कर किया स्वास्थ्य परीक्षण व पाठ्य सामग्री का वितरण

जैसलमेर। विन्ड वर्ल्ड द्वारा सामाजिक सरोकार निभाते हुए दूर दराज के गांवों में स्थित विद्यालयों में चिकित्सा शिविर आयोजित किये गए एवं विद्यार्थियों को शिक्षण सामग्री वितरित की गई। विन्ड वर्ल्ड के जितेन्द्र छांगाणी ने बताया कि विन्ड वर्ल्ड द्वारा धारा संस्थान बाड़मेर सामाजिक संगठन के सहयोग से जिले के दामोदरा सिपला तथा बरना गांव में अलग अलग शिविर तथा पाठ्य सामग्री वितरण कार्यक्रम आयोजित किये गए। उन्होंने बताया कि राजकीय उच्च माध्यमिक विद्यालय दामोदरा में निःशुल्क स्वास्थ्य परीक्षण शिविर में 120 विद्यार्थियों के स्वास्थ्य की जांच की गई तथा आवश्यकतामंद विद्यार्थियों को निःशुल्क दवाईयां वितरित की गई साथ ही बालिकाओं को नेपकिन सेनेट्री पेड का भी निःशुल्क वितरण किया गया। संस्था की ओर से एक सौ दस बच्चों को बैग, पाठ्य सामग्री भी वितरित की गई। राजकीय उच्च माध्यमिक विद्यालय, सिपला व राजकीय उच्च प्राथमिक विद्यालय, बरना में आयोजित शिविर में 50 विद्यार्थियों को स्कूली बैग, उतरपुस्तिकाएं तथा छात्राओं को सेनेट्री पेड वितरित किये

गए। वर्ल्ड विन्ड के सामाजिक सरोकार ग्रुप के मनोज श्रीवास्तव ने बताया कि संस्था समय समय पर इस तरह के आयोजन कर जरूरतमंदों को शिक्षण सामग्री व उपयोगी वस्तुए निःशुल्क उपलब्ध करवाती रही है। जिले के अलग अलग विद्यालयों में आयोजित शिविरों व पाठ्य सामग्री वितरण कार्यक्रम विद्यालय का स्टॉफ, प्रधानाध्यापक के साथ ही फरान खान, जावेद खान, दीपज्योति उपस्थित थे। कार्यक्रम के अन्त में संस्था प्र ान ने विन्ड वर्ल्ड व धारा संस्थान का ध न्यवाद ज्ञापित किया तथा इस तरह के शिविरों को ग्रामीण इलाकों के बच्चों के लिए उपयोगी बताते हुए शीघ्र स्वास्थ्य लाभ की कामना की। कार्यक्रम का संचालन जितेन्द्र छांगाणी ने किया।

Annexure B: RO Installation in Kita Village School

Damodara School