

TEMPLATE

MONITORING REPORT

PUBLICATION DATE **14.10.2020**

VERSION **v. 1.1**

RELATED SUPPORT – **TEMPLATE GUIDE Monitoring Report v. 1.1**

This document contains the following Sections

Key Project Information

SECTION A - Description of project

SECTION B - Implementation of project

SECTION C - Description of monitoring system applied by the project

SECTION D - Data and parameters

SECTION E - Calculation of SDG Impacts

SECTION F - Safeguards Reporting

SECTION G - Stakeholder inputs and legal disputes

KEY PROJECT INFORMATION

Key Project Information

GS ID (s) of Project (s)	GS 6999
Title of the project (s) covered by monitoring report	21 MW Wind Energy Project by Shree Cement Limited
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	04
Version number of the monitoring report	02
Completion date of the monitoring report	19/04/2021
Date of project design certification	20/11/2019
Date of Last Annual Report	14/04/2020
Monitoring period number	02
Duration of this monitoring period	01/11/2019 to 31/12/2020 (Inclusive of both days)
Project Representative	Shree Cement Limited
Host Country	India
Activity Requirements applied	☐ Community Services Activities ☒ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Methodology (ies) applied and version number	ACM0002: Grid-connected electricity generation from renewable sources- Version 20.0
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
---	-------------------	------------------------	------------------------

SDG 7	Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all	48,975.91	MWh								
SDG 8	Decent Work and Economic Growth: Promote inclusive and sustainable economic growth, employment and decent work for all	Number of employment opportunities has been provided:<table><tr><td>2019</td><td>30</td></tr><tr><td>2020</td><td>27</td></tr></table> Trainings have been organized:<table><tr><td>2019</td><td>2</td></tr><tr><td>2020</td><td>10</td></tr></table>	2019	30	2020	27	2019	2	2020	10	Number
2019	30										
2020	27										
2019	2										
2020	10										
SDG 13	Take urgent action to combat climate change and its impacts	45,880	tCO ₂ e								

Table 2 – Product Vintages

Start Dates	End Dates	SDG 7	SDG 8(8.5.1)	SDG 8(8.6.1)	SDG 13
01/11/2019	31/12/2019	5,994.34 MWh	30 people employed	2 training conducted	5,615 tCO ₂ e
01/01/2020	31/12/2020	42,981.57 MWh	27 people employed	10 training conducted	40,265 tCO ₂ e

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The purpose of the project activity is to generate power using renewable energy source (wind energy) and sell the electricity generated to the state grid. The project activity generates electricity using wind energy. The generated electricity is exported to the regional grid system, which is under the purview of the INDIAN electricity grid of India.

The project activity is a new facility (Greenfield) and the purpose of the project activity is to generate energy electricity by the utilization of renewable wind energy utilizing Suzlon made S -97 WTGs and further selling the generated energy to the Indian Grid.

In this process, there is no consumption of any fossil fuel and hence the project does not lead to any greenhouse gas emissions. Thus, electricity would be generated through sustainable means without causing any negative impact on the environment. Major Milestone of Project activity:

1. The letter of intent is on 29/11/2017 and order is placed on 20/12/2017.
2. The project activity is commissioned in three phases like 28/03/2018, 31/03/2018 and 28/06/2018

Details of commissioning dates along with WTG ids are given below:

WTG Details	Date of Commissioning (DOC)
KST 091	28/03/2018
KST 129	28/03/2018
KST 134	28/03/2018
KST 145	31/03/2018
KST 146	31/03/2018
KST 127	31/03/2018
KST 179	31/03/2018
KST 132	28/06/2018
KST 133	28/06/2018
KST 092	28/06/2018

Further major milestones and timeline being followed towards implementation of the project activity are as follows:

Sr No.	Particulars	Date
1	DPR of project submitted by third party	13/07/2017
2.	Stakeholder consultation meeting	16/09/2017
3.	LOI Issued to technology supplier	29/11/2017
4.	PO Issued to technology supplier	20/12/2017

5.	Commissioning of project activity	28/03/2018, 31/03/2018 and 28/06/2018
6.	Registration in GS4GG	20/11/2019

In the Pre- project scenario the entire electricity, delivered to the grid by the project activity, would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources.

During the current monitoring period 01/11/2019 to 31/12/2020 (Inclusive of both the dates) the project resulted in emission reductions of 45,880 tCO₂e and underwent continued operation other than scheduled maintenance and breakdowns.

Vintage wise emission reduction during the entire Monitoring Period are as follows:

Period	Amount
01/11/2019 to 31/12/2019	5,615
01/01/2020 to 31/12/2020	40,265

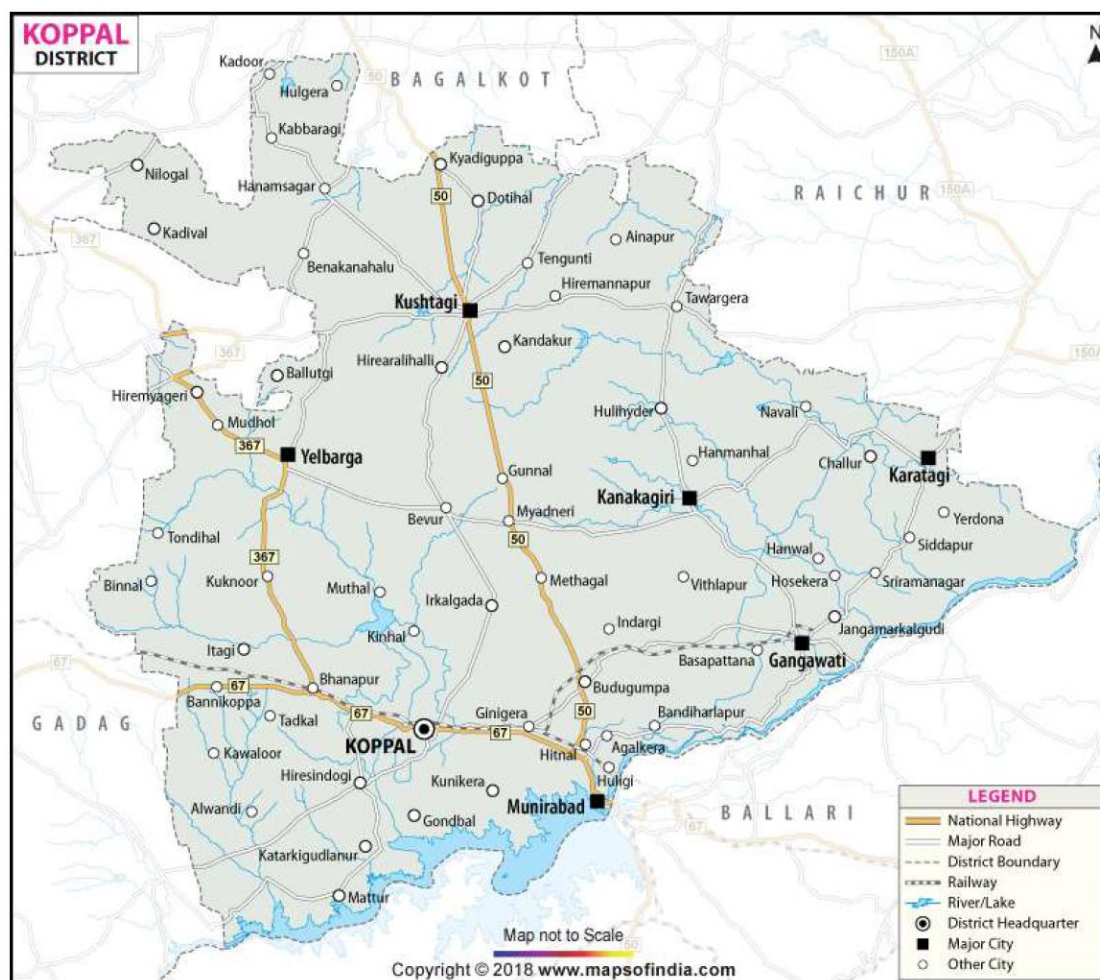
A.2. Location of project

The project activity is located in Kushtagi Wind Farm in Koppal district, Karnataka, India. The project activity consists of ten 2.1 MW wind turbines in the district of Koppal in the state of Karnataka, India.

The specific geographical coordinates of the individual WTGs are mentioned in table below:

Project Investor	WTG Location No	Latitude (D° M' Sec'')	Longitude (D° M' Sec'')
Shree Cement Limited	KST 091	15°52'49.43''	76°12'00.23''
	KST 092	15°52'58.59''	76°13'46.39''
	KST 127	15°53'57.68''	76°13'12.72''
	KST 129	15°53'15.44''	76°11'16.37''
	KST 132	15°53'05.95''	76°12'01.57''
	KST 133	15°53'34.38''	76°10'35.56''
	KST 134	15°52'28.57''	76°12'12.61''
	KST 145	15°53'05.62''	76°13'06.86''

	KST 146	15°53'21.05"	76°13'40.58"
	KST 179	15°52'49.83"	76°13'02.40"



A.3. Reference of applied methodology

Title : Grid-connected electricity generation from renewable sources

Reference : The project activity meets the eligibility criteria of large scale project as it is more than 15 MW

Methodology : ACM0002: Grid-connected electricity generation from renewable sources - Version 20.0

Type I : Energy industries (renewable / non-renewable sources)

Category : Approved Consolidated Methodology (ACM0002)

Tools referred with above methodology and applicable for project activity are:

- Tool to calculate the emission factor for an electricity system¹ - Version 07.0 (EB 100, Annex 04)
- Tool for the demonstration and assessment of additionality² - Version 07.0.0 (EB 70, Annex 08)
- Methodological Tool- Investment analysis - Version 09.0.0³ and 10.0⁴ (EB 101, Annex 11 and EB 105 Annex 11)

A.4. Crediting period of project

Start date	28/03/2018
Crediting Period	28/03/2018 to 27/03/2023
Duration	5 years
Type	Renewable

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

The total installed capacity of the project is 21 MW, which comprises of total 10 number of Wind Turbine Generator (WTG) in Karnataka. The WTGs used in the project activity are of Suzlon S-97 model. Three WTGs were commissioned on 28/03/2018, four WTGs were commissioned on 31/03/2018 and the rest three WTGs were commissioned on 28/06/2018.

All the WTGs are connected to KPTCL Kushtagi substation.

The technical specification of the S-97 model of WTGs are as follows:

MODEL	S 97 – 2.1 MW
Operating Data	
Rated power	2.1 MW
Cut-in wind speed	4 m/s
Rated wind speed	11 m/s

¹ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf>

² <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

³ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v9.0.pdf>

⁴ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-27-v10.0.pdf>

Cut-out wind speed	25 m/s
Rotor	
Pitch system	Electric drive with electric brake, gear box, frequency converter and batteries
Diameter	97 m
Swept area	7386 m ²
Blade material type	Glass-fibre reinforced plastic (GRP)/Polyester
Generator	
Type	Asynchronous 3 phase induction with slip rings operated with rotor circuit inverter system (DFIG)
Frequency	50/60 Hz
Protection	IP 54, IP23 for slip ring unit
Cooling system	Air cooled
Insulation	Class H
Braking System	
Aerodynamic brake	Pitch/full blade
Mechanical brake	Hydraulic disc brake, activated by hydraulic pressure
Gearbox	
Type	3 stages (One planetary & Two helical)
Yaw System	
Type	Electric motors with brake, gear box and pinion
Bearings	3 (1 per blade) , Material - 42CrMo4 QT
Tower	
Type	Tubular Steel Tower (4 sections)

Technology Transfer

No technology transfer from other countries is involved in the project.

B.1.1. Forward Action Requests

Not Applicable

B.2. Post-Design Certification changes

Not Applicable

B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

Not Applicable

B.2.2. Corrections

Not Applicable

B.2.3. Changes to start date of crediting period

Not Applicable

B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

Not Applicable

B.2.5. Changes to project design of approved project

Not Applicable

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

The monitoring plan is developed in accordance with the modalities and procedures for GS project activities and is proposed for grid-connected wind power project being implemented in Karnataka state, India. The monitoring plan, which has been implemented by the project participant describes about the monitoring organisation, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.

The monitoring methodology specified in the methodology requires that the project-monitoring plan to consist of monitoring of quantity of net electricity supplied to the grid in the year y . In order to monitor the mitigation of GHG due to the project activity, the total energy exported needs to be measured. The net energy supplied to grid by the project activity multiplied by emission factor for regional grid, forms the baseline for the project activity.

Since the baseline emission factor is based on an ex-ante determination, monitoring of this parameter is not required. The sole parameter for monitoring is the net electricity exported to the grid.

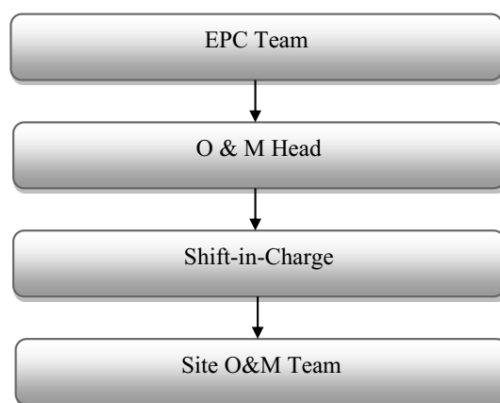
Monitoring roles and responsibilities

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

The monitoring plan is developed in accordance with the modalities and procedures for project activities and is proposed for grid-connected wind power project being implemented within India territory. The monitoring plan, which is implemented by the project proponent describes about the monitoring organisation, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.

The authority and responsibility for monitoring, measurement, reporting and reviewing of the data rests with the project proponent. PP proposed the following structure for data monitoring, collection, data archiving and calibration of equipments for this project activity.

The team comprises of the following members:



Responsibilities of O & M Head: Overall functioning and maintenance of the project activity and overall responsibility of compliance with the Monitoring Plan.

Responsibilities of Plant In-charge: Responsibility for Maintains the data records, ensures completeness of data, and reliability of data. Regularly verifying the monthly energy generation date with energy sales receipt or installed meters reading for identification of any discrepancies in data collection and taking suitable action to rectify them.

Responsibilities of Shift In-charge: Responsible for daily data collection and maintains day to day log book for monitored data. Responsibility for monthly and annual report generation. Quality assurance of the data/reports and preliminary check of data for any discrepancies.

QA/QC procedures:

The energy meters at the feeders are maintained and owned by state electricity board. Neither the project proponent nor the site personnel have any control over it. The records are cross-checked with the records of sold electricity to state electricity board. The meters are calibrated by state electricity board at-least once in five years.

Data Measurement:

The export and import energy are measured continuously using above mentioned Main and Check meters. Export & Import readings of Main & Check meters are taken on monthly basis by authorized officer of state electricity board in the presence of PP or representative of PP. The meter readings are taken jointly and signed by the representatives of the state electricity board and project investors. Based on the readings, invoices are raised by project investors. These invoices can be used for cross checking the meter readings taken for the project activity. It is to be noted though PP or PP representative is available during meter reading, the calculations of net electricity supplied to grid is completely under purview of state electricity board officer and PP do

not have any control on it. Besides, accuracy class of meters and calibration frequency is under purview of state electricity board officer and PP do not have any control on it. PP got the monthly credit report from where net electricity supplied to grid is obtained and used for emission reduction calculations.

Apportioning:

In case of common metering arrangement, the apportioning is done by state electricity board and PP is getting break up sheet where the energy supplied by project activity to grid is mentioned.

The same break up sheet is used for invoice purpose. This apportioning process is under control of state electricity board and PP do not have any control on it.

Data Archiving:

Monthly data is archived electronically and in paper form and stored for the entire crediting period and two years thereafter.

Emergency preparedness:

The project activity does not result in any unidentified activity that can result in substantial emissions from the project activity. No need for emergency preparedness in data monitoring is visualized.

In the event that the main meter, which is used to record the net electricity exported by the project, is found to be faulty it will be repaired or replaced and the data from the check meter will be used in its place. In the unlikely event that the check meter fails it will also be repaired or replaced.

Training and maintenance requirements:

Each and every site personnel is provided with proper training to meet the requirements of the Operations and maintenance. This ultimately leads to creativity in problem solving.

Personnel training:

In order to ensure a proper functioning of the project activity and a properly monitoring of emission reductions, the staff are trained. The plant helpers are trained in equipment operation, data recording, reports writing, operation and maintenance and emergency procedures in compliance with the monitoring plan.

Apportioning:

In case of mismatch of date between the start date of the billing cycle and the start date of monitoring period the data is apportioned in line to the daily generation values for the said mismatch period.

SECTION D. DATA AND PARAMETERS

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

Relevant SDG Indicator	SDG 13 (Indicators 13.2.1)
Data/parameter	$EF_{grid,OM,y}$
Unit	tCO ₂ /MWh
Description	Operating Margin CO ₂ e emission factor in year y
Source of data	Calculated from CEA database, Version 14, Dec 2018 ⁵
Value(s) applied	0.9610
Choice of data or Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system, version 07" as per the latest data available for the most three recent years 2015-16, 2016-17 and 2017-18. The data is obtained from "CO ₂ Baseline Database for Indian Power Sector" version 14, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data	For the calculation of the Baseline Emission
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

Relevant SDG Indicator	SDG 13 (Indicators 13.2.1)
Data/parameter	$EF_{grid,BM,y}$
Unit	tCO ₂ /MWh
Description	Build Margin CO ₂ e emission factor in year y
Source of data	Calculated from CEA database, Version 14, Dec 2018 ⁶
Value(s) applied	0.8644
Choice of data or Measurement methods and procedures	Calculated as per "Tool to calculate the emission factor for an electricity system, version 07" as per the latest data available for the most three recent years 2015-16, 2016-17 and 2017-18. The data is obtained from "CO ₂ Baseline Database for Indian Power Sector" version 14, published

⁵ https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver14.pdf

⁶ https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver14.pdf

	by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of data	For the calculation of the Baseline Emission
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

Relevant SDG Indicator	SDG 13 (Indicators 13.2.1)
Data/parameter	$EF_{grid,CM,y}$
Unit	tCO ₂ /MWh
Description	Combined Margin CO ₂ e emission factor in year y
Source of data	Calculated from CEA database, Version 14, Dec 2018 ⁷
Value(s) applied	0.9368
Choice of data or Measurement methods and procedures	The combined margin emissions factor is calculated as follows: $EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$ Where: $EF_{grid,BM,y}$ = Build margin CO₂ emission factor in year y (tCO₂/MWh) $EF_{grid,OM,y}$ = Operating margin CO₂ emission factor in year y (tCO₂/MWh) WOM = Weighting of operating margin emissions factor (%) = 75% WBM = Weighting of build margin emissions factor (%) = 25%
Purpose of data	For the calculation of the Baseline Emission
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

D.2. Data and parameters monitored

⁷ http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver14.pdf

Relevant SDG Indicator	SDG 7 (Indicators 7.2.1)									
Data / Parameter	EG _{PJ,y}									
Unit	MWh									
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh									
Source of data	Monthly joint meter reading reports/B-Forms									
Value(s) applied	<table><tr><th>Monitoring Period</th><th>Values</th></tr><tr><td>01/11/2019 to 31/12/2019</td><td>5,994.34</td></tr><tr><td>01/01/2020 to 31/12/2020</td><td>42,981.57</td></tr><tr><td>Total</td><td>48,975.91</td></tr></table>		Monitoring Period	Values	01/11/2019 to 31/12/2019	5,994.34	01/01/2020 to 31/12/2020	42,981.57	Total	48,975.91
Monitoring Period	Values									
01/11/2019 to 31/12/2019	5,994.34									
01/01/2020 to 31/12/2020	42,981.57									
Total	48,975.91									
Measurement methods and procedures	The electricity exported and imported by the project activity is measured through meters (ABT Meters) having accuracy class of 0.2s. Net electricity supplied to the grid by the project plant in a given month = Export, kWh – Import, kWh The 115% of import and transmission loss if any would be accounted while calculating net electricity supplied to grid as per PPA.									
Monitoring frequency	Continuous monitoring and monthly recording									
QA/QC procedures	The meters are approved, tested & sealed by the State Utility. The meters are in the custody of State Utility. The frequency of calibration is once in 5 years. The monthly electricity supplied/exported by the project activity in the JMR report is cross checked with the monthly invoices of sale. In the absence or delay in the meter calibration appropriate Guidelines are applied appropriately to confirm the conservativeness of metering. The metering arrangement, accuracy class of meters, calibration frequency is under control of state electricity board and PP do not have any control on it. PP is getting value of net electricity supplied to grid and the same is considered the monitoring parameter. The billing is raised based on substation meters. For detailed schedule of calibration during present monitoring period please refer annexure- 1.									

Purpose of data	To Monitor the SDG 7 Indicator
Additional comment	Data will be archived in paper & electronic form for two years after the end of crediting period or of the last issuance of GS-VERs for this project activity, whichever occurs later.

Relevant SDG Indicator	SDG 13 (Indicators 13.2.1)								
Data / Parameter	ER _y								
Unit	tCO ₂								
Description	Emission reductions achieved								
Source of data	Summarized in ER sheet of "GS 6999 ER Sheet.xlsx". Site metering reading records were used to compile the data.								
Value(s) applied	<table border="1"> <thead> <tr> <th>Monitoring Period</th><th>Values</th></tr> </thead> <tbody> <tr> <td>01/11/2019 to 31/12/2019</td><td>5,615</td></tr> <tr> <td>01/01/2020 to 31/12/2020</td><td>40,265</td></tr> <tr> <td>Total</td><td>45,880</td></tr> </tbody> </table>	Monitoring Period	Values	01/11/2019 to 31/12/2019	5,615	01/01/2020 to 31/12/2020	40,265	Total	45,880
Monitoring Period	Values								
01/11/2019 to 31/12/2019	5,615								
01/01/2020 to 31/12/2020	40,265								
Total	45,880								
Measurement methods and procedures	The baseline emissions are the product of electrical energy baseline EG _{PJ,y} expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor and project emissions & leakage emissions are subtracted from baseline emissions; project emissions and leakage emissions being zero in this project activity, here Baseline Emissions = Emissions Reductions								
Monitoring frequency	As per monitoring period								
QA/QC procedures	Not Applicable								
Purpose of data	To Monitor the SDG 13 Indicator								
Additional comment	Data will be archived in paper & electronic form for two years after the end of crediting period or of the last issuance of VERs for this project activity, whichever occurs later.								

Relevant SDG Indicator	SDG 8 (Indicators 8.5.1)
Data / Parameter	Number of employment generation
Unit	Number

Description	Number of people employed directly due to the project activity																				
Source of data	Plant records or the training records for all the employees/Letter from O&M contractor for employment generation/ DOE interview with employees, local stakeholders etc. Summarized in <i>ER sheet</i> of " <i>GS 6999 ER Sheet.xlsx</i> ".																				
Value(s) applied	Total employment for present monitoring period is 30 with below breakup 2019 : 30 2020 : 27 Further below is the breakup of employment generated during the monitoring period <table><tr><td>Year</td><td>Skilled</td><td>Unskilled</td><td>Total</td></tr><tr><td>2019</td><td>30</td><td>Nil</td><td>30</td></tr><tr><td>Male</td><td>30</td><td>Female</td><td>Nil</td></tr><tr><td>2020</td><td>27</td><td>Nil</td><td>27</td></tr><tr><td>Male</td><td>27</td><td>Female</td><td>Nil</td></tr></table>	Year	Skilled	Unskilled	Total	2019	30	Nil	30	Male	30	Female	Nil	2020	27	Nil	27	Male	27	Female	Nil
Year	Skilled	Unskilled	Total																		
2019	30	Nil	30																		
Male	30	Female	Nil																		
2020	27	Nil	27																		
Male	27	Female	Nil																		
Measurement methods and procedures	PP has provided salary slips and employment agreements of persons getting direct employment opportunity from the project activity. PP has provided salary slips and employment agreement of persons directly getting employment opportunity from the project activity. Further the average hourly earnings of a person are higher than the local level. For e.g. a person is getting a monthly salary of INR 62,000 then his average hourly earnings will be as follows: = 62,000/ (30*8) = INR 258. This is higher than the average wage per hour in India (Average hourly earning of highly skilled workers for Zone C is INR 26.85). Further the same has been crosschecked by the VVB during on site visit by means of attendance register and physical interviews and Salary Slips. The Project thus provides employment opportunities and pays salaries and welfares and also helps to increase the income and living standards of the employees.																				
Monitoring frequency	Monthly monitoring and annual compilation																				
QA/QC procedures	The total number of persons working in the plant is calculated based on the daily log available at site. This parameter also monitors number of men/women employed by the project activity. The project activity ensures that "equal pay for work of equal value" for both men and women and there is no any discrimination against women. "The employment covers number of men and number of women employed by the project activity. The job is of type temporary/permanent or skilled/unskilled, local/																				

	non-local etc. In addition, it is ensured that people get equal payment for equal work. The payment is based on work and no any gender inequality for payment for work of equal value”.
Purpose of data	To Monitor the SDG 8 Indicator
Additional comment	Data are archived in paper & electronic form for two years after the end of crediting period or of the last issuance of GS-VERs for this project activity, whichever occurs later.

Relevant SDG Indicator	SDG 8 (Indicators 8.6.1)																																																						
Data / Parameter	Quality of Employment																																																						
Unit	Number																																																						
Description	Number of trainings provided per year																																																						
Source of data	Plant records or the training records for all the employees/Letter from O&M contractor for employment generation/ DOE interview with employees, local stakeholders etc.																																																						
Value(s) applied	2019:2 2020:10 <table border="1"> <thead> <tr> <th>Sr No.</th><th>Date</th><th>Topic</th><th>No. of participants</th></tr> </thead> <tbody> <tr><td>1.</td><td>26/11/2019</td><td>LT Switchgear maintenance</td><td>11</td></tr> <tr><td>2.</td><td>15/12/2019</td><td>Power Line Management</td><td>12</td></tr> <tr><td>3.</td><td>26/02/2020</td><td>Power Line Management</td><td>14</td></tr> <tr><td>4.</td><td>16/03/2020</td><td>LT Switchgear maintenance</td><td>12</td></tr> <tr><td>5.</td><td>20/06/2020</td><td>WTG Maintenance</td><td>9</td></tr> <tr><td>6.</td><td>19/08/2020</td><td>Software Operations</td><td>15</td></tr> <tr><td>7.</td><td>20/09/2020</td><td>Computer operating</td><td>15</td></tr> <tr><td>8.</td><td>16/10/2020</td><td>Power Line Management</td><td>14</td></tr> <tr><td>9.</td><td>20/10/2020</td><td>WTG Maintenance</td><td>12</td></tr> <tr><td>10.</td><td>06/11/2020</td><td>LT Switchgear maintenance</td><td>14</td></tr> <tr><td>11.</td><td>18/11/2020</td><td>HSE Training</td><td>15</td></tr> <tr><td>12.</td><td>24/12/2020</td><td>WTG Maintenance</td><td>14</td></tr> </tbody> </table>			Sr No.	Date	Topic	No. of participants	1.	26/11/2019	LT Switchgear maintenance	11	2.	15/12/2019	Power Line Management	12	3.	26/02/2020	Power Line Management	14	4.	16/03/2020	LT Switchgear maintenance	12	5.	20/06/2020	WTG Maintenance	9	6.	19/08/2020	Software Operations	15	7.	20/09/2020	Computer operating	15	8.	16/10/2020	Power Line Management	14	9.	20/10/2020	WTG Maintenance	12	10.	06/11/2020	LT Switchgear maintenance	14	11.	18/11/2020	HSE Training	15	12.	24/12/2020	WTG Maintenance	14
Sr No.	Date	Topic	No. of participants																																																				
1.	26/11/2019	LT Switchgear maintenance	11																																																				
2.	15/12/2019	Power Line Management	12																																																				
3.	26/02/2020	Power Line Management	14																																																				
4.	16/03/2020	LT Switchgear maintenance	12																																																				
5.	20/06/2020	WTG Maintenance	9																																																				
6.	19/08/2020	Software Operations	15																																																				
7.	20/09/2020	Computer operating	15																																																				
8.	16/10/2020	Power Line Management	14																																																				
9.	20/10/2020	WTG Maintenance	12																																																				
10.	06/11/2020	LT Switchgear maintenance	14																																																				
11.	18/11/2020	HSE Training	15																																																				
12.	24/12/2020	WTG Maintenance	14																																																				

Measurement methods and procedures	Together with the technology supplier, the Project Participant also organises training for the staff on the technology and the monitoring of the plant operation, and the emergency and safety procedures at regular intervals.
Monitoring frequency	Annual
QA/QC procedures	The training records for all the employees
Purpose of data	To Monitor the SDG 8 Indicator
Additional comment	Data are archived in paper & electronic form for two years after the end of crediting period or of the last issuance of GS-VERs for this project activity, whichever occurs later.

D.3. Comparison of monitored parameters with last monitoring period

Data/Parameter	Value obtained in this monitoring period		Value obtained last monitoring period
ER _y	45,880		76,503
EG _{PJ, y}	48,975.91		81,675
Number of employment generation	2019	30	27
	2020	27	
Quality of Employment	2019	2	22
	2020	10	

D.4. Implementation of sampling plan

Sampling is not required

SECTION E. CALCULATION OF SDG IMPACTS

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

SDG 13 Climate Action

The baseline emissions are the product of electrical energy baseline $EG_{PJ,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

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

Where,

$EG_{PJ,y}$ = Total quantity of net electricity delivered to the national grid = 48,975.91 MWh

$EF_{grid,CM,y}$ = Baseline emission factor = 0.9368 tCO₂e/MWh

BE_y = 48,975.91 * 0.9368
= 45,880 tCO₂e (rundown values)

Hence, baseline value of SDG 13 Climate Action value is 45,880 tCO₂e.

SDG 7 : Affordable and Clean Energy

Total quantity of net electricity delivered to the national grid = 48,975.91 MWh due to implementation of the project activity.

However, the wind energy based electricity generation project being a greenfield project, in baseline scenario, there is no electricity generation.

Hence, baseline value of SDG 7 i.e. Affordable and Clean Energy is zero.

SDG 8 : Decent Work and Economic Growth

This is a greenfield project. Hence, there was no employment or training in absence of project activity. Therefore, the value of SDG 8 i.e. Decent Work and Economic Growth is zero.

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

SDG 7: Affordable and Clean Energy

For the current monitoring period, the clean energy generation contributed by the project activity is 48,975.91 MWh.

SDG 8: Decent Work and Economic Growth

The project activity has led to employment opportunities which would not have been possible in the baseline scenario. During the current monitoring period, the project activity provided employment to 30 persons (in 2019) and 27 persons (in 2020); besides due to the project activity total 12 trainings (2 in 2019 and 10 in 2020) have been provided in the current monitoring period.

E.3. Calculation of leakage

As per the consolidated methodology ACM0002 v20, no leakage emission through the renewable project electricity generation.

E.4. Calculation of net benefits or direct calculation for each SDG Impact

SD G	SDG Impact	Baseline estimate	Project estimate	Net benefit																
13	Climate Action	45,880 tCO ₂ e	0	45,880 tCO ₂ e																
7	Affordable and Clean Energy		48,975.91 MWh	48,975.91 MWh																
8	Decent Work and Economic Growth	0	Number of employment opportunities created:<table><tr><td>2019</td><td>30</td></tr><tr><td>2020</td><td>27</td></tr></table> number of trainings provided:<table><tr><td>2019</td><td>2</td></tr><tr><td>2020</td><td>10</td></tr></table>	2019	30	2020	27	2019	2	2020	10	Number of employment opportunities created:<table><tr><td>2019</td><td>30</td></tr><tr><td>2020</td><td>27</td></tr></table> number of trainings provided:<table><tr><td>2019</td><td>2</td></tr><tr><td>2020</td><td>10</td></tr></table>	2019	30	2020	27	2019	2	2020	10
2019	30																			
2020	27																			
2019	2																			
2020	10																			
2019	30																			
2020	27																			
2019	2																			
2020	10																			

E.5. Comparison of actual SDG Impacts with estimates in approved PDD

SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values achieved during this monitoring period
13	52,417 tCO ₂ e	45,880 tCO ₂ e

7

55,953.38 MWh

48,975.91 MWh

8

10 people employment and 01 trainings/year

Number of employments created:

2019	30
2020	27

Number of trainings provided

2019	2
2020	10

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period

SDG 13 Climate Action

As per GS4GG PDD, 44,806 tCO₂e is the amount of GS VER generated annually. Therefore, following unitary method, the amount of estimated ex ante for this monitoring period is identified. The total number of days in this monitoring period is 427.

$$= (44806/365) * 427$$

$$= 52,417 \text{ tCO}_2\text{e}$$

SDG 7 : Affordable and Clean Energy

As per the SDG 13 calculation above, 52,417 tCO₂e estimated. Correspond to that 55,953.38 MWh is estimated based on the value of estimated annual net electricity export 47,829 MWh

$$= (47,829/365) * 427 = 55,953.38 \text{ MWh}$$

SDG 8 : Decent Work and Economic Growth

Annual estimate has been considered for SDG i.e. employment of 10 persons and minimum 01 training per year.

E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

SDG 7 and SDG 13:

A total of 12.5% lower generation and emissions reductions achieved with respect to estimated values due to factors less wind speed, grid availability etc. which are beyond the control of PP. Lower emission reduction is conservative.

SDG 8:

Number of trainings and employments created - little-a-bit higher than estimated values which is conservative.

SECTION F. SAFEGUARDS REPORTING

As per the safeguarding Principle Assessment in Appendix-1 of the GS4GG PDD, there are no safeguarding principles which are to be included in the monitoring plan or hold any relevance to the project activity. Also, there is no impact (positive/negative) for any mitigation measures, being applicable to any of the safeguarding principles. Hence, this section is not relevant.

SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

As a part of continuous feedback from stakeholders, the grievances register is being placed at site and is being continuously monitored and addressed through the grievances cell on regular basis and maintained in a register at site office.

During the monitoring period no grievances have been received, the comments received are satisfactory and appreciating in nature. The scan copies have been provided to the VVB.

G.2. Report on any stakeholder mitigations that were agreed to be monitored.

Not Applicable as there were no negative feedback logged during the monitoring period.

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

Not Applicable as there were no negative feedback logged during the monitoring period.

Appendix 1: Meter Details

Serial No & Type	Make	Accuracy Class	Calibration Date	Validity
18015377 (Main meter)	L&T	0.2 s	23/02/2018	22/02/2023
18015378 (check meter)	L&T	0.2 s	23/02/2018	22/02/2023

Considering the dates of calibration of meters, it can be concluded that there has been no delay in calibration of meters.

APPENDIX 2. Plant Breakdown Details

Date from	Date to	Duration	Event allocation	Category
18/12/2019	21/12/2019	67:17	Utility	Force Majeure
07/02/2020	10/02/2020	54:06	Utility	Internal grid failure
26/03/2020	29/03/2020	71:23	Manufacturer	Predictive maintenance
31/05/2020	02/06/2020	51:00	Utility	Force Majeure
17/08/2020	19/08/2020	40:06	Manufacturer	WTG breakdown
23/10/2020	25/10/2020	31:43	Manufacturer	Predictive maintenance
01/12/2020	04/12/2020	52:04	Utility	Force Majeure

Revision History

Version	Date	Remarks
1.1	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Section for POA monitoring Forward action request section Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on safeguard reporting Clarity on design changes Leakage section added for VER/CER projects Addition of Comparison of monitored parameters with last monitoring period Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption