

MONITORING REPORT

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VERSION v. 1.1

RELATED SUPPORT – TEMPLATE GUIDE Monitoring Report v. 1.1

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KEY PROJECT INFORMATION

Key Project Information

GS ID (s) of Project (s)	GS6290
Title of the project (s) covered by monitoring report	200 MW Wind Power Project in Tamil Nadu by Orange Sironj
Version number of the PDD / VPA-DD (s) applicable to this monitoring report	4.0
Version number of the monitoring report	3.0
Completion date of the monitoring report	05/05/2021
Date of project design certification	26/11/2019
Date of Last Annual Report	02/07/2020
Monitoring period number	02
Duration of this monitoring period	01/10/2019 to 31/12/2020 (Both days included)
Project Representative	Orange Sironj Wind Power Pvt Ltd.
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 18.1
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	MWh of renewable energy generated	674,059	MWh
SDG 8: Decent Work and Economic Growth	Trainings	15	Training
	Employees	60	Employees
	Income (INR)	14,987,998	INR
SDG 13: Climate Action	Emission Reduction	650,601	VERs

Table 2 – Product Vintages

		Amount Achieved
Start Dates	End Dates	VERs
01/10/2019	31/12/2019	95,576
01/01/2020	31/12/2020	555,025

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The project activity is a 200 MW wind power project, promoted by Orange Sironj Wind Power Pvt Ltd. The purpose of the project activity is to generate clean electricity with utilization of wind energy. The project activity aims to harness Wind energy through installation of 100 nos. of 2 MW WTGs of Gamesa make (model - G114/2000kW IEC Class S model year version with 106m height of tower) with total installed capacity of 200 MW.

The electricity generated by the project is exported to the Power Grid Corporation of India Limited (PGCIL). The project activity is therefore displacing an equivalent amount of electricity which would have otherwise been generated by fossil fuel dominant electricity grid and there by reduces the associated CO₂ emissions.

Letter of Award from Solar Energy Corporation of India Ltd. (SECI) Dated 03/11/2017 has been received by the project activity. SECI has also executed a PPA with OSWPPL dated 19/12/2017. Commissioning Dates of the 50 WTGs is 05/03/2019 and remaining 50 WTGs is 13/03/2019. As per commissioning certificates by SECI, the commercial operations of part-I and II of the projects started from 07/03/2019 and 14/04/2019 respectively.

The Emission Reductions as per the vintage break-up (2019,2020) in the monitoring report in the following format:

01/10/2019 to 31/12/2019: 95,576 tCO₂e

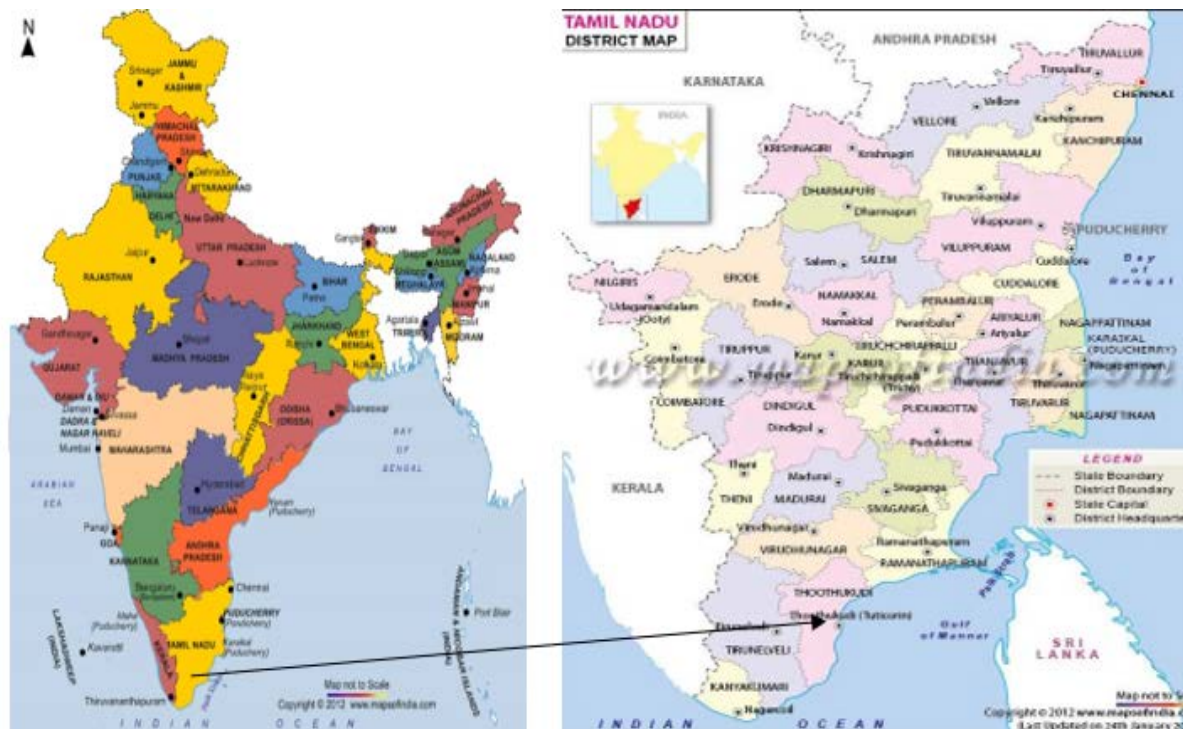
01/01/2020 to 31/12/2020: 555,025 tCO₂e

The project proponent actively takes regular feedback from local villagers about project and has also set up a grievance mechanism in place. There has been no reported bird death in the project vicinity. The impact of parameter is neutral as there is no impact observed during the current monitoring period.

A.2. Location of project

Orange Sironj Wind Power Pvt Ltd. has installed WTGs at S. Kumarapuram, Puthiumputhur, Ottapidaram, Swamyatham, P. Duraisampuram, Vellaram, Kathcheri Thalavaipuram, Panchalankuruchi, Singathakurichi, Sekkarakudi, Vadakkukaruseri, Ummarikottai, Ramaswamyapuram, Jampulingapuram Villages of Poovani Dist. Thoothukudi, Tamil Nadu state in India. The coordinates of the project activity are as mentioned in Appendix 1:

The geographical location of the project site is as shown below:



A.3. Reference of applied methodology

Title: Grid-connected electricity generation from renewable sources.

References: Approved Large Scale Consolidated Methodology: ACM0002 "Grid-connected electricity generation from renewable sources" (Version 18.1, EB 99 Annex 1)

A.4. Crediting period of project

Type of Crediting Period: Renewable

Start date of the crediting period: 07/03/2019

Length of the current crediting period: 5 years

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

The project activity comprises of 100 nos. of 2 MW WTGs of Gamesa make (model - G114/2000kW IEC Class S model year version with 106m height of tower) with total installed capacity of 200 MW. Commissioning Dates of the 50 WTGs is 05/03/2019 and remaining 50 WTGs is 13/03/2019. (Refer Appendix. I for details & location numbers). As per commissioning certificates by SECI, the commercial operations of the project started from 07/03/2019. The project is connected by 230 kV, 2 x100 MVA substation and the site substation is connected to PGCIL: North Vandanam SS (Tuticorin- II 400/230 KV GIS Substation).

The technical details of the WTGs are given below:

PARAMETER	VALUE
Model : G114-2.0 MW CS Max Power	
General Data	
Make of WTG	Gamesa
Type	Three-bladed wind-facing rotor type
Number of Blades	3
Design Conditions of WTGs	
Rated power	2 MW
Average annual wind speed (m/s)	6.5
Turbulence intensity 15 (%)	18
Reference 10-minute wind speed in 50 years (m/s).	40
Extreme wind speed in 50 years over a 3-second average (m/s)	56
Hub Height	106m
Rotor	
Pitch control hydraulic system	Independent hydraulic actuators for each blade that provide a rotation capacity of between -5° and 87° and a system of accumulators which ensure feathering in the event of an emergency.
Diameter	114m

Swept Area	10,207 m ²
Wind speed in operation (rpm)	13.07
Blades	
Length	56m
Weight (t)	11.5 t
Blade cord (maximum/ minimum) (m)	3.865 m
Torsion (°)	Max 25 , min -1.5
Gearbox	
Type	1 stage planetary / 2 parallel
Generator	
Type	Asynchronous double-feed unit with 4 poles, coil rotor and slip rings.
Nominal power (kW)	2,170 (stator + rotor)
Voltage (Vac)	690
Frequency (Hz)	50 / 60
Transformer	
Type	Three-phase, dry-type encapsulated
Frequency (Hz)	50 / 60
Insulation class	F or H

B.1.1. Forward Action Requests

No FARs envisaged from previous verification and or Validation.

B.2. Post-Design Certification changes

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

There are no deviations/delays regarding the implementation status from registered PDD, Monitoring & Reporting Plan, applied methodology or applied standardized baseline.

B.2.2. Corrections

There is no correction in this monitoring period.

B.2.3. Changes to start date of crediting period

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

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 project proponent has entered into agreement with the WTG Suppliers (Siemens Gamesa Renewable Private Limited (Gamesa) for the operation and maintenance of WTGs. The WTG supplier has dedicated and technically well- equipped O&M team for day-to-day Operation and maintenance of each WTG. Power will be evacuated through 230KV transmission line is connected to PGCIL Tirunelveli GIS PS (230/400 kV) at District Tuticorin. Connectivity and LTA Permission have been received from PGCIL in the name of the Company for 200 MW capacity. The same details is shared with DOE. The project activity has entered a power purchase agreement for a period of 25 years with the Solar Energy Corporation of India Limited (SECI). Monitoring consists of metering the net electricity supplied to the grid ($EG_{\text{facility},y}$). This parameter is based on the monthly Regional Energy Account¹ undertaken by Southern Regional Power Committee, CEA, Ministry of Power, Govt. of India. is continuously through energy meter. The PP will then raise monthly electricity sales invoices to SECI based on the REA reading. All the meters used in the project activity will be calibrated as per CEA guideline i.e., once in 5 years.

It is to be noted that though the PP or their representatives are available during meter reading, the calculations of net electricity supplied to grid is completely under purview of SECI and PP does not have any control on it. Also, accuracy class of meters and calibration frequency is under purview of SECI/Discom officer and PP does not have any control on it. PP gets the monthly credit report from where net electricity supplied to grid is obtained and used for emission reduction calculations.

The monitored data will be reported by the PP to the execution team on a monthly basis for the calculation and estimation of emission reductions. This data will be checked against invoices raised. WTGs wise feeder details are provided in ER sheet.

Data storage and Archiving

In accordance with the methodology all, the data collected during the crediting period will be archived electronically and kept for at least two years after the end of crediting period. 100% of

¹ http://www.srpc.kar.nic.in/html/all_uploads.html

the data is monitored and the meters owned by DISCOM/PP are calibrated at regular intervals to ensure low uncertainty in the monitored.

Metering

The electricity exported & imported are measured by Energy meter installed at the Government substations (GSS). Power will be evacuated through 230 KV single circuit transmission line will be connected to PGCIL 230/400 kV GIS Grid Sub-station. The reading is recorded and the difference from last month reading gives the number of units imported/exported.

To the meters at the GSS, there are WTGs of Orange and other PPs connected. Hence, the REA report reflects the total generation from all the WTGs managed by the SECI personal and project representatives.

Mismatch in Monitoring Period and the Billing Period

In case the dates of a particular monitoring period do not match with the dates of the billing period, the net electricity exported to the grid would be calculated from:

$$D = (A/B) * C$$

Where,

A = Difference of number of days which are not matching of billing period and monitoring period.

B = Number of days of the billing period/ month which was not matched with the monitoring period.

C = Net Electricity supplied to the grid for that given billing period/ month.

The calculated value after apportioning would be used for calculation of emission reductions during that period.

Emergency preparedness

The project activity will 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 unlikely event of failure of all Main, Check as well as Standby meter installed at Substation, where all the faulty meters are required to be repaired or replaced simultaneously, the export & import readings from Main, Check & Standby Meters installed at the inter-connection point at the project site will be used for monitoring of net electricity exported to the grid.

Personnel training

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

SECTION D. DATA AND PARAMETERS

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

Data / parameter:	EF _{OM, y}
Unit	tCO ₂ e/MWh
Description	Operating Margin Emission Factor of INDIAN Grid
Source of data	Central Electricity Authority: "CO ₂ Emission Database Calculated from CEA database, Version 12, May 2017" ²
Value(s) applied)	0.9843
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 the procedures prescribed in the approved "Tool to calculate the emission factor for an electricity system".
Purpose of data	The data is used to calculate baseline emission reductions.
Additional comments	This parameter is fixed ex-ante for the entire crediting period.

Data / parameter:	EF _{BM, y}
Unit	tCO ₂ e/MWh
Description	Build Margin Emission Factor of INDIAN Grid
Source of data	Calculated from CEA database, Version 12, May 2017
Value(s) applied)	0.9083
Choice of data or measurement methods and procedures	Build Margin Emission Factor has been calculated by the Central Electricity Authority with the approved "Tool to calculate the emission factor for an electricity system".
Purpose of data	The data is used to calculate baseline emission reductions.
Additional comments	This parameter is fixed ex-ante for the entire crediting period.

Data / parameter:	EF _{CM, y}
Unit	tCO ₂ e/MWh
Description	Combined Margin Emission Factor of INDIAN Grid
Source of data	Calculated from CEA database, Version 12, May 2017
Value(s) applied)	0.9652
Choice of data or measurement methods and procedures	Combined Margin Emission Factor has been calculated with the approved "Tool to calculate the emission factor for an electricity system" as weighted average of 75% of OM (three years average) and 25% of BM for the latest year.
Purpose of data	The data is used to calculate baseline emission reductions.
Additional comments	-

² ₂ CO₂ Baseline Database for the Indian Power Sector, Version 12, May 2017

D.2. Data and parameters monitored

Data / parameter:	EG _{PJ, y}																						
Unit	MWh																						
Description	Quantity of net electricity supplied to the grid during the year y.																						
Measured/calculated/default	Calculated (based on the measured values of electricity exported and imported)																						
Source of data	Regional Energy Account provided by SECI every month and the Invoice raised from the PP.																						
Value(s) of monitored parameter	Actual Quantity of net electricity supplied: 674,059 MWh <table><tr><th>Vintage</th><th>Net Generation (MWh)</th></tr><tr><td>Year 2019</td><td>99,022</td></tr><tr><td>Year 2020</td><td>575,037</td></tr></table>			Vintage	Net Generation (MWh)	Year 2019	99,022	Year 2020	575,037														
Vintage	Net Generation (MWh)																						
Year 2019	99,022																						
Year 2020	575,037																						
Monitoring equipment	Data Type: Measured Monitoring equipment: Energy Meters of accuracy class 0.2s Calibration frequency: Once in 5 years as per CEA guidelines³ Electricity exported/imported to the grid is in kWh. However, for the calculation purpose electricity exported is converted in MWh. The Net electricity supplied to the grid by the project activity will be calculated as a difference of electricity exported to the grid, electricity imported from the grid obtained from Monthly Meter reading reports provided by SECI as per below equation: EG_{PJ,y} = EG_{Export} - EG_{Import} Cross Checking: Quantity of net electricity supplied to the grid will be cross checked from the Invoices/ Monthly Bill raised by the Project Participant to SECI. Meter Details: <table><tr><th>Details</th><th>Main meter</th><th>Check meter</th><th>Stand by Meter</th></tr><tr><td>Meter Number</td><td>SA0011A</td><td>SA0012A</td><td>SA0015A</td></tr><tr><td>Accuracy class</td><td>0.2S</td><td>0.2S</td><td>0.2S</td></tr><tr><td>Location</td><td>PGCIL Substation</td><td>PGCIL Substation</td><td>Project Site Switchyard</td></tr><tr><td>Calibration</td><td>05/02/2016 (valid up to 04/02/2021)</td><td>05/02/2016 (valid up to 04/02/2021)</td><td>05/02/2016 (valid up to 04/02/2021)</td></tr></table> The monitoring period is from 01/10/2019 to 31/12/2020; hence no calibration delay has been observed.			Details	Main meter	Check meter	Stand by Meter	Meter Number	SA0011A	SA0012A	SA0015A	Accuracy class	0.2S	0.2S	0.2S	Location	PGCIL Substation	PGCIL Substation	Project Site Switchyard	Calibration	05/02/2016 (valid up to 04/02/2021)	05/02/2016 (valid up to 04/02/2021)	05/02/2016 (valid up to 04/02/2021)
Details	Main meter	Check meter	Stand by Meter																				
Meter Number	SA0011A	SA0012A	SA0015A																				
Accuracy class	0.2S	0.2S	0.2S																				
Location	PGCIL Substation	PGCIL Substation	Project Site Switchyard																				
Calibration	05/02/2016 (valid up to 04/02/2021)	05/02/2016 (valid up to 04/02/2021)	05/02/2016 (valid up to 04/02/2021)																				
Measuring/reading/recording frequency:	Measuring Frequency: Continuous Frequency of Recording: Monthly																						
Calculation method (if applicable):	Net Electricity is calculated difference between export & import which is measured by energy meter.																						
QA/QC procedures:	The net electricity is cross-checked with the invoice copies.																						
Purpose of data:	Calculation of baseline emission																						
Additional comments:	As per the registered PDD “Calibration of all the meters will be undertaken once in 5 years as per CEA guidelines”.																						

³ http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf , page 12

Data / parameter:	Air quality
Unit	tCO ₂
Description	Reduction in CO ₂ emission reduction due to implementation of project activity
Measured/calculated/default	Calculated
Source of data	Calculated as per "Tool to calculate the emission factor for an electricity system,". The data are obtained from "CO ₂ Baseline Database for Indian Power Sector" version 12.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Value(s) of monitored parameter	650,601 tCO ₂ emission reductions achieved during the reported monitoring period. The applied Combined margin for the project activity is 0.9652 tCO ₂ /MWh. This high emission factor signifies the fact that the electricity being fed in the Indian grid is highly carbon intensive. Every MWh of electricity generated by the project activity prevents further emissions.
Monitoring equipment	Calculated from CEA database and Energy Generation
Measuring/reading/recording frequency:	Monthly
Calculation method (if applicable):	-
QA/QC procedures:	Calibration of all the meters will be undertaken once in 5 years as per CEA guidelines. The meters will be of accuracy class 0.2s.
Purpose of data:	Calculation of baseline emissions
Additional comments:	-

Data / parameter:	Quality of employment
Unit	Number of Trainings provided to employees & O&M staffs
Description	Trainings provided to employees & O&M staff
Measured/calculated/default	Measured
Source of data	Training Records (HSE & HR) & Employee feedback forms
Value(s) of monitored parameter	15 Trainings were conducted to the staff of the project activity. The records of training are submitted to DOE. The training programmes help in making the workforce efficient and skilled at their job. This not only helps the company but also adds to growth of individual employees. Thus, the project has a positive impact on the parameter.
Monitoring equipment	-
Measuring/reading/recording frequency:	Annually
Calculation method (if applicable):	Manually by O & M Contractor
QA/QC procedures:	-

Purpose of data:	Continuation of regular trainings/workshops for employees & O&M staffs
Additional comments:	-

S. No.	Name of Training	Number of participants	Date of Training
2019			
1	Permit to work & control of work	10	01/10/2019
2	Electrical Safety	12	02/10/2019
3	Road Safety, Safety Alert Review	11	03/10/2019
2020			
1	Responsibility & Accountability	11	15/06/2020
2	Work at height	13	22/06/2020
3	Training on defensive driving	02	15/10/2020
4	Electrical safety services	13	14/10/2020
5	Environmental awareness	06	11/08/2020
6	Road safety campaign	13	25/07/2020
6	Ergonomics	11	03/08/2020
7	Fire fighting & Electrical safety	14	14/10/2020
8	Incident & Accident reporting	13	14/10/2020
9	Safety Awareness	15	28/09/2020
10	Cut Prevention	09	04/07/2020
11	HSE Awareness E - learning	07	10/07/2020
12	Work Resumption after lockdown	06	21/05/2020

Data / parameter:	Quantitative employment and income generation
Unit	1.INR (Salary) 2.Number of employees involved in the project
Description	- Salary given to the employees of the project. - Number of people employed directly due to the project activity with number of male/female, permanent/temporary, age and person with disabilities.
Measured/calculated/default	Measured
Source of data	Plant employment records Salary Slip of the project employees.

Value(s) of monitored parameter	The monitoring period is from 01/10/2019 to 31/12/2020. The total expenses for the salary of the employees during the monitoring period i.e., 458 days is 14,987,998 INR for all the 100 WTGs of the project. Sample salary slips and the declaration mentioning the same are being provided to the DOE. The total number of O&M staffs employed by the Gamesa and Orange for the operation & maintenance of the project activity are 60 in Poovani site. Out of the 60 employees, 47 employees are locals while others are non-locals.
Monitoring equipment	The total number of persons working in the plant would be calculated based on the daily log available at site. Salary paid to the employees is available in the HR records
Measuring/reading/recording frequency:	Annually
Calculation method (if applicable):	-
QA/QC procedures:	The number of persons employed would be mentioned in the plant register, which can be crossed checked with daily attendance register.
Purpose of data:	To monitor the contribution to SDG 8
Additional comments:	-

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

Data / Parameter	Value obtained in this monitoring period	Value obtained in last monitoring period
Total Monitoring period	458 days	208 days
EG _{facility,y}	674,059 MWh	364,293 MWh
Emissions Reductions in tCO ₂	650,601 tCO ₂	351,616 tCO ₂
Quantitative employment, Quality of employment and income generation.	15 Trainings 60 Employees 14,987,998 INR	2 Trainings 60 employees 6,640,150 INR

The values in this monitoring period are more as compared to the values obtained in last monitoring period for the days.

D.4. Implementation of sampling plan

No sampling process is involved, hence not applicable. The details of sampling any of carried out during the course of verification will be included.

SECTION E. CALCULATION OF SDG IMPACTS

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

In the baseline, there were no Social Development activities taking place; whereas baseline Emissions for electricity supplied by project activity, BE_y is calculated as:

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

Where,

BE_y = Baseline emissions in year y (tCO_2/yr)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr).

$EF_{grid,CM,y}$ = 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)

Thus, the estimated baseline situation of each SDG outcome is summarized as follows:

Item	Baseline estimate
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 650,601 tCO_2

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

The company conducts regular surveys during construction as well as O&M phases in the villages near project locations to check the requirement of facilities by the villages. Based on the surveys, PP identifies the requirements and works on several scope(s) of developmental activities. Apart from these activities, some or all of which will be conducted in any given year, following SDGs will be impacted every year.

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all	Method: Monitored through energy meter. Net electricity will be calculated by DISCOM and O&M operator on monthly basis and provided in the share certificate 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.
	Purpose: To measure the electricity produced and supplied to the grid SDG.
SDG 8: Promote sustained,	Method: Ongoing data collection and storage under HSE records

inclusive and sustainable economic growth, full and productive employment and decent work for all SDG 13: Take urgent action to combat climate change and its impacts	Frequency: Annually QA/QC procedures: Transparent data collection, analysis and reporting. Purpose: To identify and record the number of trainings provided to the employees as well as employment generated due to project activity.
	Method: Using processes and equations provided under “Tool to calculate the emission factor for an electricity system”, v5 and referencing data from CEA database v11. Frequency: Every monitoring period QA/QC procedures: Transparent data collection, analysis, calculation and reporting. Purpose: To calculate emissions avoided due to the project activity

E.3. Calculation of leakage

As per applied methodology ACM0002, version 18.1, Leakage emissions are not considered for the project activity.

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

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
7	MWh of renewable energy generated	0	674,059 MWh	674,059 MWh
8	SDG 8: Decent Work and Economic Growth	0	15 Trainings	15 Trainings
			60 Employees	60 Employees
			14,987,998 INR	14,987,998 INR
13	Emission Reduction	650,601 tCO ₂	0	650,601 tCO ₂

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 ⁴ achieved during this monitoring period
7	635,976 MWh/Year (365 days) 798,019 MWh for the Monitoring period (458 days)	674,059 MWh
8	1 training/year	15 Trainings 60 Employees 14,987,998 INR
13	613,844 tCO ₂ /Year (365 days) 770,248 tCO ₂ for the monitoring period (458 days)	650,601 tCO ₂

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

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It is to be noted here that as per the estimated emission reduction to be achieved from the project activity for the current monitoring period is 770,248 tCO₂e

$$\begin{aligned}
 &= 613,844 * 458(\text{days}) / 365 \\
 &= 770,248 \text{ tCO}_2\text{e}
 \end{aligned}$$

whereas actual emission reductions achieved are 650,601 tCO₂e, which is approximately 18.39% lesser than the estimated emission reductions.

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

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The actual achieved emission reduction for this monitoring period is 18.39% lesser than estimated value in the PDD and is within the sensitivity range which does not breach even with the increase of 10% in line with the registered PDD The PLF chosen is for the lifetime of the project activity and generation in some years may significantly vary; this is due to variation in wind speed and density year on year.

⁴ Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

SECTION F. SAFEGUARDS REPORTING

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Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	As per Gold Standard Gender Policy “Foundational gender-sensitive requirement, the project strengthens Gold Standard’s ‘do no harm’ approach and addresses safeguards to prevent or mitigate adverse impacts on women or men and girls and boys. India ratified the International Convention on the Elimination of All Forms of Racial Discrimination⁵ on 03/12/1968 with certain reservation. The project activity is in line with strategy of elimination of discrimination. The project is a renewable wind energy project and is not gender sensitive project. The project does not adversely impact women or men.
Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	India is party to “Convention on the Elimination of All Forms of Discrimination against Women” and the project has aligned its policies which does not discriminate on gender. Also, the principle of gender equality is enshrined in the Indian Constitution in its Preamble, Fundamental Rights, Fundamental Duties and Directive Principles.
Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	The project does not employ any personnel based on gender, race, religion, sexual orientation or any other basis. The Project was not designed to increase women’s workload nor add care responsibilities. The Project does not limit women’s ability regarding natural resources. The project being wind power project thus does not have any major impact on natural resources of the region. The Project does not expose women and girls to further risks or hazards. The project proponent has a grievance cell which would look into complaints. The Project does not restrict women’s rights or access regarding natural resources.
Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	Yes, the project applies the stakeholder-related procedures. From the GS Stakeholder guidelines, section 1.4 “In developing a Project, taking gender issues into account require that local stakeholder consultation processes reach a wide range of community representatives in ways that ensure equal and effective participation of women and men in consultation, and that gender issues are fully factored into comprehensive social and environmental impact assessments.” The Local Stakeholder Consultation Meeting had an overall healthy participation from women in the meeting. The meeting was held on not to interfere with the regular schedule of the week. It was held during the day, as women tend to circulate more freely and safely than after sunset. All the villagers were invited for the consultation through invitation pasted in Gram Panchayat (local administration) Office. The meeting was conducted in local language.

⁵ https://nhrc.nic.in/documents/india_ratification_status.pdf

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.

No grievances received

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

No grievances received in the previous monitoring period, thus no follow up required.

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

Not applicable

Appendix. I – Details of WTGs

Feeder	Location	COD*	Feeder	Location	COD*	Feeder	Location	COD*
Feeder-01	GPV023	05-Mar-19	Feeder-04	GPV487	13-Apr-19	Feeder-07	GPV013	05-Mar-19
	GPV560	13-Apr-19		GPV373	13-Apr-19		GPV007	05-Mar-19
	GPV545	13-Apr-19		GPV269	13-Apr-19		GPV539	05-Mar-19
	GPV525	13-Apr-19		GPV531	13-Apr-19		GPV012	05-Mar-19
	GPV010	13-Apr-19		GPV542	13-Apr-19		GPV016	05-Mar-19
	GPV175	13-Apr-19		GPV727	13-Apr-19		GPV085	05-Mar-19
	GPV530	13-Apr-19		GPV398	13-Apr-19		GPV390	05-Mar-19
	GPV130	13-Apr-19		GPV074	13-Apr-19		GPV730	05-Mar-19
Feeder-02	GPV027	05-Mar-19	Feeder-05	GPV077	13-Apr-19		GPV731	05-Mar-19
	GPV526	05-Mar-19		GPV068	13-Apr-19		GPV676	05-Mar-19
	GPV698	05-Mar-19		GPV032	13-Apr-19		GPV005	05-Mar-19
	GPV720	05-Mar-19		GPV691	13-Apr-19		GPV030	05-Mar-19
	GPV290	05-Mar-19		GPV565	13-Apr-19		GPV529	05-Mar-19
	GPV018	05-Mar-19		GPV641	13-Apr-19		GPV095	13-Apr-19
	GPV006	05-Mar-19		GPV256	13-Apr-19		GPV318	05-Mar-19
	GPV724	05-Mar-19		GPV078	13-Apr-19		GPV469	13-Apr-19
Feeder-03	GPV699	05-Mar-19	Feeder-06	GPV070	13-Apr-19		GPV003	13-Apr-19
	GPV528	05-Mar-19		GPV061	13-Apr-19			
	GPV026	05-Mar-19		GPV058	13-Apr-19			
	GPV523	05-Mar-19		GPV349	13-Apr-19			
	GPV726	05-Mar-19		GPV100	13-Apr-19			
	GPV725	05-Mar-19		GPV367	13-Apr-19			
	GPV642	05-Mar-19		GPV541	13-Apr-19			
	GPV547	05-Mar-19		GPV125	13-Apr-19			
Feeder-04	GPV335	05-Mar-19		GPV729	13-Apr-19			
	GPV321	05-Mar-19		GPV161	13-Apr-19			
	GPV310	05-Mar-19		GPV728	13-Apr-19			
	GPV028	05-Mar-19		GPV033	13-Apr-19			
	GPV022	05-Mar-19		GPV543	13-Apr-19			
	GPV002	05-Mar-19		GPV234	13-Apr-19			
	GPV555	13-Apr-19		GPV307	13-Apr-19			
	GPV021	05-Mar-19		GPV355	13-Apr-19			
Feeder-04	GPV151	13-Apr-19		GPV235	13-Apr-19			
	GPV487	13-Apr-19		GPV050	13-Apr-19			
	GPV373	13-Apr-19		GPV696	05-Mar-19			
	GPV269	13-Apr-19		GPV004	05-Mar-19			
	GPV531	13-Apr-19		GPV094	05-Mar-19			
	GPV542	13-Apr-19		GPV011	05-Mar-19			
	GPV727	13-Apr-19		GPV020	05-Mar-19			
	GPV398	13-Apr-19		GPV017	05-Mar-19			
Feeder-04	GPV074	13-Apr-19		GPV009	05-Mar-19			
	GPV077	13-Apr-19		GPV690	05-Mar-19			
	GPV068	13-Apr-19		GPV019	05-Mar-19			
	GPV032	13-Apr-19		GPV227	05-Mar-19			
	GPV691	13-Apr-19		GPV527	05-Mar-19			
	GPV565	13-Apr-19		GPV165	13-Apr-19			
	GPV641	13-Apr-19		GPV472	13-Apr-19			
	GPV256	13-Apr-19		GPV228	05-Mar-19			
Feeder-04	GPV078	13-Apr-19		GPV029	13-Apr-19			
	GPV070	13-Apr-19		GPV297	13-Apr-19			

Appendix II- Coordinates of the project activity

S. No.	WTGs	Easting	Northing
1	GPV-003	77° 59' 52.64"E	8°49'48.53"N
2	GPV-004	77° 55' 28.86" E	8°47'28.29"N
3	GPV-005	77° 57' 53.86"E	8°47'52.95"N
4	GPV-007	77° 55' 41.95"E	8°48'37.92"N
5	GPV-009	77° 57'26.15"E	8°49'16.13"N
6	GPV-010	77° 58'35.36"E	8°51'36.10"N
7	GPV-011	77° 55'37.35"E	8°46'45.70"N
8	GPV-012	77° 55'46.12"E	8°49'50.67"N
9	GPV-013	77° 55'8.16"E	8°49'15.14"N
10	GPV-016	77° 56'51.85"E	8°49'35.66"N
11	GPV-017	77° 57'20.34"E	8°48'58.14"N
12	GPV-019	77° 56'41.27"E	8°48'18.77"N
13	GPV-020	77° 55'28.90"E	8°47'3.03"N
14	GPV-029	77° 55'27.56"E	8°45'39.22"N
15	GPV-085	77° 58'31.60"E	8°48'32.05"N
16	GPV-094	77° 55'9.04"E	8°46'33.73"N
17	GPV-095	77° 57'58.20"E	8°49'5.99"N
18	GPV-165	77° 52'58.34"E	8°46'40.20"N
19	GPV-175	77° 58'38.43"E	8°52'4.94"N
20	GPV-228	77° 53'54.07"E	8°46'4.63"N
21	GPV-030	77° 59'6.81"E	8°47'59.52"N
22	GPV-297	77° 56'9.84"E	8°45'45.68"N
23	GPV-390	77° 59'32.11"E	8°47'23.59"N
24	GPV-469	77° 57'51.91"E	8°46'19.47"N
25	GPV-472	77° 53'58.35"E	8°46'31.75"N
26	GPV-525	77° 57'12.51"E	8°52'7.95"N
27	GPV-527	77° 54'51.48"E	8°45'19.25"N
28	GPV-529	77° 57'17.46"E	8°47'19.32"N
29	GPV-530	77° 59'34.72"E	8°51'57.79"N
30	GPV-539	77° 55'46.90"E	8°48'55.75"N
31	GPV-545	77° 59'16.80"E	8°52'54.88"N
32	GPV-555	77° 59'23.49"E	8°57'39.57"N
33	GPV- 560	77° 58' 49.17" E	8°54'54.42"N
34	GPV- 676	77° 55'57.01" E	8°49'26.56"N
35	GPV- 690	77° 56'19.68" E	8°47'25.52"N
36	GPV- 696	77° 54'27.77" E	8°47'23.14"N
37	GPV- 730	77° 59'30.80" E	8°48'28.33"N
38	GPV- 731	77° 59'28.56" E	8°48'46.72"N
39	GPV- 002	78° 2' 56.28" E	8°54'28.21"N
40	GPV- 006	78° 2' 19.57" E	8°53'25.71"N

41	GPV- 018	78° 2' 18.87" E	8°51'33.34"N
42	GPV- 023	78° 1' 12.19" E	8°51'6.34"N
43	GPV- 026	78° 2' 43.18" E	8°53'9.73"N
44	GPV- 027	78° 2' 54.87" E	8°50'19.87"N
45	GPV- 130	78° 0' 34.54" E	8°51'27.92"N
46	GPV- 151	78° 4' 52.55" E	8°54'23.70"N
47	GPV- 227	78° 1' 41.52" E	8°51'26.51"N
48	GPV- 021	78° 0' 14.33" E	8°58'24.99"N
49	GPV- 022	78° 3' 3.69" E	8°55'39.59"N
50	GPV- 028	78° 3' 16.68" E	8°56'39.79"N
51	GPV- 256	78° 3' 0.34" E	8°59'7.96"N
52	GPV- 269	78° 3' 48.50" E	8°58'38.32"N
53	GPV- 290	78° 2' 59.08" E	8°51'22.11"N
54	GPV- 310	78° 3' 34.77" E	8°56'19.15"N
55	GPV- 318	78° 0' 17.32" E	8°48'56.47"N
56	GPV- 321	78° 2' 40.53" E	8°50'38.44"N
57	GPV- 335	78° 3' 31.73" E	8°54'37.30"N
58	GPV- 373	78° 3' 50.77" E	8°58'15.90"N
59	GPV- 526	78° 2' 30.73" E	8°50'37.43"N
60	GPV- 528	78° 2' 46.27" E	8°53'44.03"N
61	GPV- 531	78° 3' 6.85" E	8°58'43.55"N
62	GPV- 547	78° 3' 26.27" E	8°57'19.84"N
63	GPV- 487	78° 3' 11.25" E	8°58'9.67" N
64	GPV- 523	78° 2' 21.60" E	8°52'41.20"N
65	GPV- 565	78° 2' 52.69" E	8°59'39.96"N
66	GPV- 641	78° 2' 12.49" E	8°59'19.31"N
67	GPV- 642	78° 4' 15.74" E	8°55'43.28"N
68	GPV- 691	78° 2' 13.56" E	8°59'44.43"N
69	GPV- 698	78° 2' 28.26" E	8°50'11.20"N
70	GPV- 699	78° 2' 57.52" E	8°54'5.00"N
71	GPV- 355	78° 6' 57.09" E	8°58'19.68"N
72	GPV-398	78° 4' 28.01" E	9°0'4.53"N
73	GPV- 542	78° 4' 21.08" E	8°59'18.45"N
74	GPV- 074	78° 5' 7.17" E	8°59'51.80"N
75	GPV- 077	78° 5' 6.28" E	8°59'31.82"N
76	GPV- 078	78° 5' 7.60" E	8°58'45.72"N
77	GPV- 070	78° 5' 10.44" E	8°58'25.54"N
78	GPV- 234	78° 5' 42.94" E	8°56'40.59"N
79	GPV- 307	78° 6' 7.82" E	8°56'54.64"N
80	GPV- 050	78° 6' 14.28" E	8°57'32.97"N
81	GPV- 235	78° 6' 21.76" E	8°57'59.14"N
82	GPV- 032	78° 6' 23.73" E	8°59'17.31"N
83	GPV- 033	78° 6' 40.65" E	8°58'55.39"N

84	GPV- 543	78° 6' 34.98" E	8°56'11.07"N
85	GPV- 720	78° 1' 52.37" E	8°50'42.14"N
86	GPV- 724	78° 2' 12.75" E	8°52'59.70"N
87	GPV- 725	78° 4' 12.32" E	8°55'0.94"N
88	GPV- 726	78° 4' 6.75" E	8°56'3.89"N
89	GPV- 727	78°4' 20.29" E	8°59'40.27"N
90	GPV- 058	78° 7' 47.73" E	8°59'1.25"N
91	GPV- 061	78° 7' 46.52" E	8° 59'29.96"N
92	GPV- 100	78° 8' 15.02" E	8°58' 39.08"N
93	GPV- 161	78° 7' 48.95" E	8°56'26.36"N
94	GPV- 367	78° 7' 48.95" E	8°58'26.20"N
95	GPV-068	78° 6' 17.75" E	9°0'1.26"N
96	GPV- 125	78° 9' 19.85" E	8°57'11.12"N
97	GPV- 349	78° 9' 14.75" E	8°58'6.34"N
98	GPV- 541	78° 9' 43.10" E	8°57'33.94" N
99	GPV- 728	78° 8' 0.92" E	8°57'40.43" N
100	GPV- 729	78° 7' 43.08" E	8°55'53.55" N

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