GREEN ENERGY PROJECT AT KUTCH BY POWERICA LIMITED

Document Prepared by EKI Energy Services Limited

Project Title	Green Energy Project at Kutch by Powerica Limited
Version	04
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Project ID	1210
Monitoring Period	01-January-2022 to 31-December-2022 (inclusive of both start and end dates)
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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The project activity involves installation and operation of a 21.6 MW wind power generation project at Bhachau, in the Kutch district of Gujarat by Powerica Limited. The total installed capacity of 21.6 MW comprises of 12 WTGs, each with a capacity of 1.80 MW.

The project provides electricity to the state of Gujarat by effective utilization of renewable resources. The technology has been supplied by Vestas. The project utilizes wind energy for exporting electricity which otherwise would have been generated through alternate fuels (most likely - fossil fuel) based power plants, contributing to reduction in specific emissions (emissions of pollutant) including GHG emissions. Electricity produced from the project activity is supplied to NEWNE (Now Indian grid) grid of India.

The project start date is 14-July-2011 which is the date of commissioning of the first phase of the 21.6 MW wind power project, and has been in continuous operation since then. The detailed commissioning details of each WTG is mentioned in section 3.1 of this monitoring report.

During the current monitoring period of 1-January-2022 to 31-December-2022, the project has supplied 42,165.92 MWh of electricity to the Indian grid, and thus contributing to the GHG reductions of 39,235 tCO_2e.

Following is the audit history of the project activity-

Audit Type	Period	Program	VVB Name	Number of years
Validation	14-July-2011--13-July-2021	VCS	Lloyds Register Quality Assurance Ltd.	10 Years
Verification	14-July-2011--21-October-2012	VCS	Lloyds Register Quality Assurance Ltd.	1 year, 3 months and 8 days
Verification	22-October-2012--30-September-2018	VCS	LGAI Technological Center, S.A. (Applus+ Certification)	5 years, 11 months and 9 days
Verification	01-October-2018--31-January-2020	VCS	Earthood Services Pvt. Ltd.	1 year and 4 months
Verification	01-February-2020--31-December-2020	VCS	KBS Certification Services Pvt.Ltd	11 months

Joint RCP and Verification	01-January-2021--31-December-2021	VCS	LGAI Technological Center, S.A. (Applus+ Certification)	1 year
Verification	01-January-2022--31-December-2022	VCS	TÜV SÜD South Asia Private Limited	1 year
Total	**1 Validation-(14-July-2011–13-July-2021)** **6 verifications-(14-July-2011–31-December-2022)** **1 RCP-(1-January-2021–31-December-2031)**			**Total validations -10 years** **Total verifications -11 years, 5 months and 17 days** **Total RCP -10 Years**

1.2 Sectoral Scope and Project Type

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

Project type: Renewable energy project (wind)

The project activity is not a grouped project.

1.3 Project Proponent

Organization name	Powerica Limited
Contact person	Mr. Pradeep Gupta
Title	Head - Wind Energy Division
Address	9th Floor, Godrej Coliseum, Sion (E), Mumbai – 400021, Maharashtra, India
Telephone	+ 91 22 4001 2000
Email	pradeep.gupta@powericaltd.com

1.4 Other Entities Involved in the Project

Organization name	EKI Energy Services Limited

Role in the Project	Project Consultant
Contact person	Shivangi Tiwari
Title	Project Manager
Address	Office No 201, Plot No 48, Scheme 78, Vijay Nagar Part- II, Indore 452010, India
Telephone	+91 7525976607
Email	registry@enkingint.org, / shivangi.tiwari@enkingint.org

1.5 Project Start Date

The project start date is 14-July-2011 which is the date of commissioning of the first phase of the 21.6 MW wind power project.

1.6 Project Crediting Period

The crediting period of the project activity is for 10 years (renewable twice).

The length of first crediting period from 14-July-2011 to 13-July-2021 (both dates inclusive). The length of the second crediting period is 14-July-2021 to 13-July-2031 (both dates inclusive).

The project is registered under Clean Development Mechanism (CDM) of UNFCCC with 7 years crediting period (Renewable) (Reference No: 7671[1]) on 22-October-2012. The first Crediting period of the project under CDM starts on 22-October-2012 and ends on 21-October-2019 and while the second crediting period starts on 22-October-2019 and ends on 21-October-2026.

1.7 Project Location

The project activity is located at Village – Jangi, Lakhapr and Vadhiya, Taluka – Bhachau, District - Kutch in the state of Gujarat. The geo-coordinates of each WTG are as follows-

Sr. No.	WTG No.	Latitude	Longitude	Village
1	JW10	23° 11' 56'' N	70° 32' 48'' E	Jangi
2	JW12	23° 12' 29'' N	70° 32' 13'' E	Jangi

[1] https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1349877556.69/view

3	JW13	23° 12' 12'' N	70° 32' 16'' E	Jangi
4	JW27	23° 12' 49'' N	70° 33' 35'' E	Jangi
5	JW30	23° 11' 59'' N	70° 31' 55'' E	Jangi
6	JW09	23° 12' 3'' N	70° 33' 2'' E	Jangi
7	NM82-03	23° 11' 53'' N	70° 35' 26'' E	Vandhiya
8	NM82-04	23° 12' 5'' N	70° 35' 19'' E	Vandhiya
9	NM82-06	23° 11' 59'' N	70° 35' 47'' E	Vandhiya
10	NM82-07	23° 11' 53'' N	70° 35' 58'' E	Vandhiya
11	VW21	23° 12' 20'' N	70° 37' 30'' E	Vandhiya
12	VW32	23° 12' 12'' N	70° 37' 12'' E	Vandhiya

The project location and the wind map are attached in the figure below-

1.8 Title and Reference of Methodology

Title: "Grid-connected electricity generation from renewable sources"

Reference: ACM0002, Version 20.0[2], EB 105

The methodology also refers to the latest approved versions of:

- "Tool to calculate the emission factor for an electricity system", Version 07.0.0[3], EB 100
- "Tool for the demonstration and assessment of additionality", Version 07.0[4], EB 70
- "Guidelines for the reporting and validation of plant load factors", Version 01[5], EB 48

[2] https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG

[3] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf

[4] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf

[5] https://cdm.unfccc.int/methodologies/PAmethodologies/clarifications/02736

1.9 Participation under other GHG Programs

The project activity has also been registered with UNFCCC under Clean Development Mechanism (CDM) program. The registration reference number for the same is 7671[6]. The project proponent has provided undertaking that it will not claim any GHG credits for UNFCCC CDM during the current monitoring period. There are no CERs claimed under CDM mechanism.

Details of credits issued are mentioned below-

Monitoring Period	Mechanism
14-July-2011-- 21-October-2012	VCS
22-October-2012--30-September-2018	VCS
01-October-2018-- 31-January-2020	VCS
01-February-2020--31-December-2020	VCS
01-January-2021--31-December-2021	VCS

1.10 Other Forms of Credit and Supply Chain (Scope 3) Emissions

- **Emission Trading Programs and Other Binding Limits**: The project is registered under CDM and UNFCCC Registration ID 7671[7]. The project proponent (PP) has submitted undertaking that they will not claim same GHG emission reductions of the project from CDM and VCS. PP would not use net GHG emission reductions by the projects for compliance with emission trading program to meet binding limits on GHG emissions.

- **Other Forms of Environmental Credit:** The Project Proponent has also submitted undertaking for not availing other forms of environmental credit for the same crediting period under consideration.

- **Supply Chain (Scope 3) Emissions:** Not applicable, as scope 3 emissions are not accounted for this project.

[6] https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1349877556.69/view

[7] https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1349877556.69/view

1.11 Sustainable Development Contributions

The project activity contributes to the sustainable development of the region in addition to the generation of renewable electricity. The following indicators for sustainable development (as given by the Ministry of Environment and Forest, (Government of India) are considered:

For **SDG- 7**: Through this project activity, it has contributed towards SDG-7 i.e., Affordable and Clean Energy by setting up of 21.6 MW Wind Power Project.

For **SDG- 8**: The project activity has resulted in providing both short-term and long-term employment to the local people,, hence contributing for SDG-8.

For **SDG- 13**: Powerica Ltd. is committed to work for mitigation of climate change by generating electricity using clean energy sources. In this current monitoring period, project has achieved GHG emission reductions of 39,235 tCO_2e.

Table 1: Sustainable Development Contributions

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime
1)	7.2	Renewable energy share in the total final energy consumption	Implemented activities to increase	About **42,165.92 MWh** renewable electricity has been supplied to Indian grid during the reported period that helps to increase the renewable energy share.	Overall, **542,268.45 MWh** (56,116.00 + 301,366.00 + 59,275.89 + 38,720.73 + 44,623.91 + 42,165.92) renewable electricity has been supplied to Indian grid throughput the project lifetime that helps to increase the renewable energy share in the energy mix
2)	8.0	Employment of local men and women - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	Implemented activities to increase	The project is employing 06 people in this monitoring period, while giving 6 trainings to the employees.	About 06 people with male employees, by occupation, age and persons with disabilities, are recruited over the entire project period. A total of 06 trainings have been given over the project lifetime.

3)	13.0	Total greenhouse gas emissions per year	Implemented activities to increase	By supplying 42,165.92 MWh of clean electricity to Indian grid, the project avoided release of 39,235 tCO_2e in to the atmosphere during the reporting period.	Overall prevented the release of **512,972 tCO_2e** (53,231 + 285,875 + 56,223 + 36,725 + 41,683+39,235) into the atmosphere since project commissioning.

2 SAFEGUARDS

2.1 No Net Harm

The project does not involve any potential negative environmental and socio economic impacts and hence this criteria is not applicable to this project activity.

2.2 Local Stakeholder Consultation

Project Proponent had invited different stakeholders to a meeting to explain the proposed project activity and benefits associated with it on 06-May-2011.

As a part of ongoing communication with stakeholders, a clustered grievance register has been placed at the Vandhiya substation and accessible to stakeholders to provide their feedback on the project. During the current monitoring period, no grievances have been received.

2.3 AFOLU-Specific Safeguards

Not Applicable, since this is not an AFOLU activity.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The project commissioning has been completed and the monitoring equipments were installed to monitor the parameters as described in the registered Project Description (PD). All the WTGs involved in the project activity are already commissioned and operational. The WTGs are under operation since the date of commissioning and no event has been identified which may impact GHG emission reduction. The commissioning dates of all the WTGs are provided as below-

Sr. No.	WTG ID	WTG No.	Capacity (MW)	Commissioning Date
1	VWT/1800/11-12/2133	VW 21	1.8	19-July-2011
2	VWT/1800/11-12/2134	VW 32	1.8	16-July-2011
3	VWT/1800/11-12/2135	NM 82-04	1.8	14-July-2011

4	VWT/1800/11-12/2136	JW 27	1.8	16-July-2011
5	VWT/1800/11-12/2309	NM 82-03	1.8	29-December-2011
6	VWT/1800/11-12/2316	JW 30	1.8	31-December-2011
7	VWT/1800/11-12/2311	NM 82-07	1.8	29-December-2011
8	VWT/1800/11-12/2312	JW 09	1.8	31-December-2011
9	VWT/1800/11-12/2313	JW 10	1.8	31-December-2011
10	VWT/1800/11-12/2314	JW 12	1.8	31-December-2011
11	VWT/1800/11-12/2315	JW 13	1.8	31-December-2011
12	VWT/1800/11-12/2310	NM 82-06	1.8	29-December-2011

The technical details of the WTGs involved in the project activity are as below-

Parameters	Value
Make	Vestas
Model	V-100
Rated Power	1800 KW
Rotor diameter	100 m
Swept Area	7850 m^2
Cut in wind speed	4 m/s
Cut out wind speed	20 m/s
No. of blades	3

Rotor Speed	14.4 rpm
Hub Height	80 m
Generator Type	Asynchronous with wound rotor, slip rings

The project activity WTGs are connected to substation through Vandhiya Line 1 and Vandhiya Line 2, feeder lines. The energy meters are installed at each WTG site and also at substation feeder line.

During this monitoring period 01-January-2022 to 31-December-2022 (inclusive of both start and end dates), total emission reductions achieved are 39,235 tCO_2e by displacing electricity of 42,165.92 MWh from fossil fuel based electricity grid. The project is running smoothly since commissioning, and underwent normal operation and shut-down for maintenance schedule. The details of plant breakdown are included in Appendix 2 of this document.

3.2 Deviations

3.2.1 Methodology Deviations

There is no any methodology deviation applicable for the project activity.

3.2.2 Project Description Deviations

There are no project description deviations taken during the current monitoring period.

3.3 Grouped Projects

The project is not a grouped project. Thus, this is not applicable.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	$EF_{grid,OM,y}$
Data unit	tCO_2/MWh
Description	Operating margin CO_2 emission factor for NEWNE (Now Indian) grid
Source of data	Calculated from CEA database, Version 17, Oct 2021
Value applied	0.9522
Justification of choice of data or description of	Calculated as per “Tool to calculate the emission factor for an electricity system, version 07” as 3-year generation weighted average using data

measurement methods and procedures applied	for the years 2018-19, 2019-20 & 2020-21.The data are obtained from "CO_2 Baseline Database for Indian Power Sector" version 17, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of Data	For the Calculation of baseline emissions
Comments	Data will be kept for crediting period +2 Years.

Data / Parameter	$EF_{grid,BM,y}$
Data unit	tCO_2/MWh
Description	Build margin CO_2 emission factor of grid
Source of data	Calculated from CEA database, Version 17, Oct 2021
Value applied	0.8653
Justification of choice of data or description of measurement methods and procedures applied	Calculated as per "Tool to calculate the emission factor for an electricity system, version 07" as per the latest data available for the most recent year 2020-21. The data is obtained from "CO_2 Baseline Database for Indian Power Sector" version 17, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of Data	For the Calculation of baseline emissions
Comments	Data will be kept for crediting period +2 Years.

Data / Parameter	$EF_{grid,CM,y}$
Data unit	tCO_2/MWh
Description	Combined margin CO_2 emission factor for grid
Source of data	Calculated from CEA database, Version 17, Oct 2021
Value applied	0.9305
Justification of choice of data or description of measurement methods and procedures applied	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: $EF_{grid,OM,y}$ = Operating margin CO_2 emission factor in year y (tCO_2/MWh) $EF_{grid,BM,y}$ = Build margin CO_2 emission factor in year y (tCO_2/MWh) w_{OM} =Weighting of operating margin emissions factor (%) = 75% w_{BM} = Weighting of build margin emissions factor (%) = 25%.
Purpose of Data	For the Calculation of baseline emissions
Comments	Data will be kept for crediting period +2 Years.

4.2 Data and Parameters Monitored

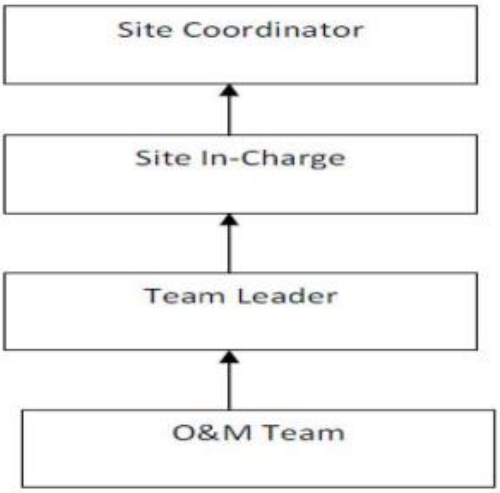
Data / Parameter	$EG_{facility,y}$
Data unit	MWh/year
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data	Certificate for share of electricity generated by the State Electricity Board (GETCO)
Description of measurement methods and procedures to be applied	Monitoring: a) At WTG yard: Electrical Energy Meters which are electronic tri-vector meter of accuracy class 0.2s b) At substation: Electrical Energy Meters which are electronic tri-vector ABT meter of accuracy class 0.2s Data type: Measured & Calculated. Archiving: Paper & Electronic Monitoring Frequency: Continuous measurement and at least monthly recording Responsibility: a) At WTG yard: The O&M site-in-charge shall be responsible for the regular recording of data b) At substation: The representative of the state electricity board at the Vandhiya substation shall be responsible for the regular recording of data Calibration Frequency: The meters shall be calibrated once in five years.
Frequency of monitoring/recording	Continuous monitoring and monthly recording
Value monitored	42,165.92 MWh
Monitoring equipment	Monitoring Equipment: Monitored through the main meter and check meter readings. Both the energy meters are bi-directional tri-vector meters. At WTG Yard Secure make and at Substation L&T make meter are installed. Meter accuracy: 0.2s of the meter at respective substations that are used for the exported electricity metering. 0.2s of the meter at respective WTG yards that would be used for the electricity metering. The meters are calibrated once in five year as per CEA notification and deviation. Calibration details mentioned in Appendix 1.
QA/QC procedures to be applied	The quantity of net electricity generation from the certificate for share of electricity will be cross-checked with the invoices for the sale of

	power by Powerica. Meter calibration shall be conducted once in five years.
Purpose of the data	Calculation of baseline emissions
Calculation method	--
Comments	The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later. In the case of the crediting period start & end dates of the project activity falls in – between the billing cycles, then for emission reduction calculations, the daily generation reports provided by the O&M service provider, shall be considered.

4.3 Monitoring Plan

The project activity is in accordance with approved large scale methodology ACM0002, Version 20.0, and therefore, can use the monitoring methodology for the same.

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 electricity exported to the grid. The Project is operated and managed by Vestas Wind Technology India Private Limited (Vestas). Vestas has a designated Site-In-Charge (O&M) on site who is responsible for monitoring the electricity exported from the project activity. The organizational structure of the O&M team by Vestas is as follows.



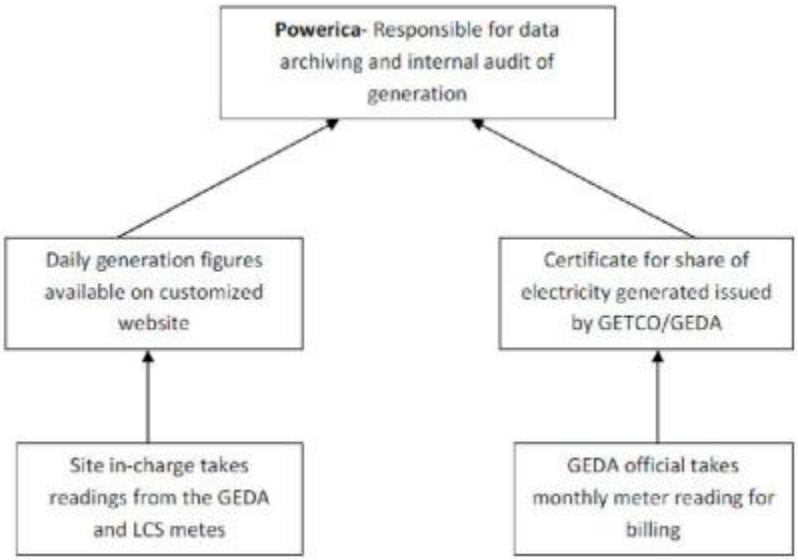
The roles and responsibilities of the O&M team may be elaborated as follows:

O&M Team: The team comprises of site engineers who are directly responsible for carrying out the O & M activity of WTG. They execute the preventive maintenance and attend to break downs as per O&M Manual & Procedures. They respond to breakdown calls and resolve customer complaints. They record all the readings and prepare documentations for reports, logs and Daily Generation Reports.

Team Leader: He leads the O&M team and is responsible for attending to the unscheduled breakdown of WTGs and for ensuring that WTG should be restored at earliest. He ensures the proper reading, recording and monitoring of the generation.

Site-In-charge: He is responsible for the entire site. He has to take timely corrective measures/action to ensure that overall performance of site is met and delivered. He is responsible for the individual site. He executes the preventive maintenance and attends to break downs as per O&M Manual & Procedures. He also checks the daily Generation reports for all the WTGs.

Site Co-ordinator: He is in-charge of overall O&M activities of site. The responsibilities include ensuring complete documentation of the Generation of the site, on-time service delivery, timely response to breakdowns and efficient manpower management for the site. Further, all new technicians on site are trained by Vestas. Also, the O&M personnel are trained regularly in order to improve their technical skills.



Monitoring Process at Gujarat:

Metering of wind power is done as under-

- All 12 wind turbines are connected to the Vandhiya 220 KV substation through Line-1 and Line-2. The WTG IDs as well as their serial no. details are mentioned in Appendix 1.
- Joint meter reading is taken at Vandhiya substation meter by representative of GETCO (Gujarat Electricity Transmission Company) and O&M service provider (on behalf of individual wind farm owners). Let the total generation recorded for particular month is 'X' units in sub-station meter.
- Joint meter reading is taken at Local Meter-(transformer yard meter of each WTG) by representative of GETCO (Gujarat Electricity Transmission Company) and O&M service

provider (on behalf of individual wind farm owners). Let us assume total generation of Powerica recorded for particular month is 'Y1' units.

- Similarly joint meter reading for other wind farm owners is also taken. Let the generation of individual owner recorded for particular month are 'Y2, Y3,…,Yn' units.
- GETCO distributes 'X' to individual wind farm owners using following formula and issues monthly certificates.
- For Powerica, net units calculated for billing = X * Y1 / ΣYn
- It must be noted here that the meter readings as mentioned above are calculated as the product of meter multiplication factor and the difference of the current and previous meter readings.

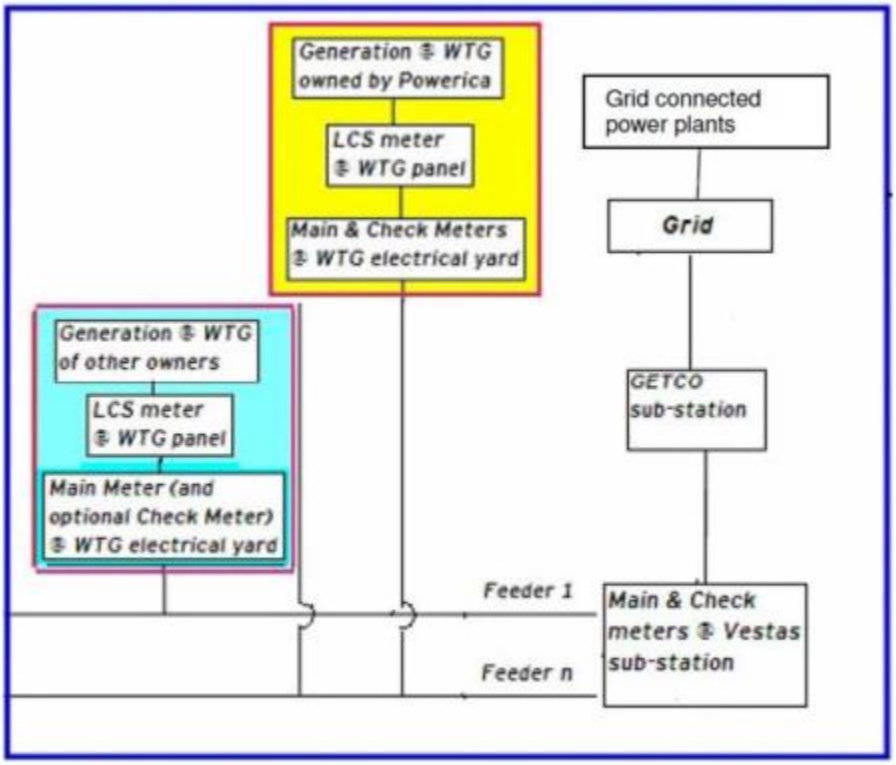


Figure 1 Single line diagram of project activity

Internal audits & Performance Review:

The records are regularly audited and checked by the senior officials from project proponent basis. The officials monitor readings at site are adequately trained. There are no any discrepancy/inconsistency observed in the values of net electricity supplied to grid value.

Emergency preparedness:

In case Main meter or Check meter is found to be outside the acceptable limits of accuracy or faulty or not functioning properly, it will be repaired, recalibrated or replaced as soon as possible. In the event that the Main meter is not in service as a result of maintenance, repairs or testing, the Check meter will be used for readings.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

The emission factor value has been fixed Ex-ante and the same shall be used for the monitoring period. Net Electricity Generated is obtained by deducting total import (from grid) from total export (to grid). These values are taken from the "Certificate for Share of Electricity Generated by Wind Farm" issued by state electricity board. This statement is issued on a monthly basis.

Baseline emissions are calculated by multiplying the Net electricity exported to the grid with net baseline emission factor, as given in the registered VCS PD.

$$BE_y = EG_{facility,y} \times EF_{grid,CM,y}$$

Where:

BE_y = Emission reductions in year y (tCO_2e/yr)

$EG_{facility,y}$ = Net electricity supplied to the grid in year y (MWh)

$EF_{grid,CM,y}$ = Baseline Emission Factor (Combined margin CO_2 emission factor for grid)

The calculation of yearly baseline emissions is provided below:

BEy = 42,165.92 MWh * $0.9305 tCO_2/year$

= 39,235 tCO_2 e (the value is rounded down)

Hence the baseline emission calculated for the reported monitoring period is **39,235**tCO_2

5.2 Project Emissions

No project emissions are applicable to this wind electric power project, since the electricity generation is based on wind resources, which does not involve in combustion or generation of emissions from fossil fuels. Hence, these emission sources are neglected.

Hence, PEy = 0

5.3 Leakage

No leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, and transport). These emission sources are neglected.

Hence, $LE_y = 0$

5.4 Net GHG Emission Reductions and Removals

The formula used to calculate the net emission reduction for the project activity is

ERy = BEy – PEy

Where, ERy = Emission Reduction in tCO_2/year

BEy = Baseline emission in tCO_2/year

PEy = Project emissions in tCO_2/year

For the project activity during the current monitoring period,

BEy = 39,235 tCO_2e,

PEy = 0 tCO_2e, and

LEy = 0 tCO_2e

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
01-January-2022—31-December-2022	39,235	0	0	39,235
Total	39,235	0	0	39,235

Ex-ante emissions reductions /removals	Achieved emissions reductions/ removals	Percent difference	Justification for the difference
	39,235	-26.14	The actual Emission Reductions of this monitoring period is 26.14% lower than amount estimated ex ante for this monitoring period. The generation of electricity depends

53,122			upon many other climatic conditions, which are not within the control of the project proponent.

APPENDIX 1: METER CALIBRATION DETAILS

The calibration details for meters involved in the project activity and available with PP are as below. The calibration is under control of state electricity board and PP do not have any control on it.

Make: Secure

Accuracy class: 0.2s

WTG ID	Meter Serial No.	Calibration Date	Due Date of Calibration
JW27	GJU65932	09-March-2018	08-March-2023
NM82-04	GJU64200	07-March-2018	06-March-2023
VW21	GJU61844	14-March-2018	13-March-2023
VW32	GJU61845	14-March-2018	13-March-2023
NM82-03	GJU65938	07-March-2018	06-March-2023
NM82-06	GJU74496	07-March-2018	06-March-2023
NM82-07	GJU74498	07-March-2018	06-March-2023
JW09	GJU64145	09-March-2018	08-March-2023
JW10	GJU64174	09-March-2018	08-March-2023
JW12	GJU64152	09-March-2018	08-March-2023
JW13	GJU64146	09-March-2018	08-March-2023
JW30	GJU64165	09-March-2018	08-March-2023

The bulk meters located at the substation-

Meter Sr. No.	GJ-2311- A	GJ-2363 A
Type	Tri-vector Meter	Tri-vector Meter
Make	L & T	L & T
Accuracy Class	0.2 S	0.2 S
Meter Location (Vandhiya 220 KV Substation)	Line-1	Line-2

Date of Calibration	15-Oct.-2018	15-Oct.-2018
Due date of calibration	14-Oct.-2023	14-Oct.-2023

APPENDIX 2: METER BREAKDOWN DETAILS

Turbine Name	Turbine Type	Stop Date	Stop Time	Start Date	Start Time	Duration (in hours)	Remark
JW10	V100	24-May-2022	13:06:00	6-Jun-2022	17:32:00	316.25	Generator failure
NM04	V100	7-Oct-2022	15:33:00	13-Oct-2022	16:35:00	144.75	Gear Box Failure
JW09	V100	31-Dec-2022	17:12:00	3-Mar-2023	13:48:00	1504.95	WTG Stopped for Blade "B" & "C" Edge Vibration Issues; WTG restored after the Blade "B" & "C" Downtower Repairing work completed by Vestas.