



**Verified Carbon
Standard**

BUNDLED WIND POWER PROJECT IN MADHYA PRADESH, GUJARAT AND KERALA BY D.J. MALPANI



Document Prepared by EKI Energy Services Limited

Project Title	Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani
Version	06
Report ID	1679
Date of Issue	25-January-2023
Project ID	1679
Monitoring Period	01-July-2021 to 31-March-2022 (Inclusive of both start and end dates)
Prepared By	EKI Energy Services Limited
Contact	Vanya Chauhan Executive- Operations Email ID: vanya.chauhan@enkingint.org / registry@enkingint.org +91 7898102069 Address: Office no. 201, Plot 48, Scheme 78 part 2 Vijay Nagar, Near Brilliant Convention Centre Indore - 452010 (M.P, India) Website www.enkingint.org

CONTENTS

1	PROJECT DETAILS.....	4
1.1	Summary Description of the Implementation Status of the Project	4
1.2	Sectoral Scope and Project Type	5
1.3	Project Proponent	5
1.4	Other Entities Involved in the Project	5
1.5	Project Start Date	6
1.6	Project Crediting Period	6
1.7	Project Location	6
1.8	Title and Reference of Methodology	9
1.9	Participation under other GHG Programs.....	9
1.10	Other Forms of Credit.....	9
1.11	Sustainable Development Contributions	10
2	SAFEGUARDS.....	12
2.1	No Net Harm	12
2.2	Local Stakeholder Consultation	13
2.3	AFOLU-Specific Safeguards	14
3	IMPLEMENTATION STATUS	14
3.1	Implementation Status of the Project Activity	14
3.2	Deviations	18
3.3	Grouped Projects	19
4	DATA AND PARAMETERS.....	19
4.1	Data and Parameters Available at Validation	19
4.2	Data and Parameters Monitored.....	20
4.3	Monitoring Plan.....	22
5	QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS	25
5.1	Baseline Emissions	25
5.2	Project Emissions	26
5.3	Leakage.....	26
5.4	Net GHG Emission Reductions and Removals.....	26
	APPENDIX 1: CALIBRATION DETAILS	28

APPENDIX 1: BREAKDOWN DETAILS	31
--	-----------

1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The purpose of the project activity is to generate power using renewable energy source (wind energy) and sell the power generated to the state grid. The generated electricity is exported to the regional grid system which is under the purview of the Indian electricity grid of India. The wind power generated from the Project displaces the electricity generated from thermal power stations feeding into Indian grid (Indian Electricity Grid) and replaces the usage of diesel generators for meeting the power demand during shortage periods. Since, the wind power is Green House Gas (GHG) emissions free, the power generated prevents the anthropogenic GHG emissions generated by the fossil fuel based thermal power stations comprising coal, diesel, furnace oil and gas.

The project activity involves Wind Power Projects with total installed capacity of 60 MW; which involves operation of Wind Turbine Generators (WTGs) in multiple states of India. The details of the project are given below:

Sr. No.	Project Type	Project Capacity (in MW)	Owner of Project	Project Location	State
1	Wind	4.5 MW	D. J. Malpani	Dhar Site, Dhar	Madhya Pradesh
2	Wind	7.5 MW	D. J. Malpani	Ghatiya Site, Ujjain	Madhya Pradesh
3	Wind	6 MW	D. J. Malpani	Sadla Site, Surendranagar	Gujarat
4	Wind	26 MW	D. J. Malpani	Savarkundala Site, Amreli	Gujarat
5	Wind	16 MW	D. J. Malpani	Kinfra Site, Palakkad	Kerala

It is to be noted that, at the time of registration, the total capacity of the project activity was 66 MW. But now the capacity has been downsized to 60 MW. This is because, the earlier, 22 MW capacity wind project by D. J. Malpani at Kinfra site, Kerala has been downsized to capacity of 16 MW. The above deviation is approved during the 2nd monitoring period.

Total emission reductions achieved in this monitoring period:

During the Current Monitoring Period from 01-July-2021 to 31-March-2022 (First and last date included) the project activity has supplied 80,577 MWh of electricity, and thus contributing to the GHG reductions 77,781 tCO₂e.

1.2 Sectoral Scope and Project Type

The project activity falls under the following Sectoral scope and Project Type:

Sectoral Scope: 01 - Energy industries (renewable / non-renewable sources)

Project Type: I - Renewable Energy Projects

The project is not a grouped project activity.

1.3 Project Proponent

Organization name	D. J. Malpani
Contact person	Mr. Prafulla Khinvasara
Title	CEO-Renewable Power Projects
Address	Malpani House, New Nagar Road, Tal- Sangamner, Dist – Ahmednagar, Maharashtra, India
Telephone	+91-2425-433010
Email	kpraful@malpani.com

1.4 Other Entities Involved in the Project

Organization name	EKI Energy Services Limited
Role in the Project	Project Consultancy
Contact person	Vanya Chauhan
Title	Executive-Operations
Address	Office No 201, Plot No 48, Scheme 78, Part 2, Vijay Nagar, Indore- 452010, Madhya Pradesh, India
Telephone	+91 7898102069

Email vanya.chauhan@enkingint.org / registry@enkingint.org

1.5 Project Start Date

Project Start Date: 28-March-2016.

The project start date is the date of earliest commissioning date of WTG i.e., 28-March-2016.

1.6 Project Crediting Period

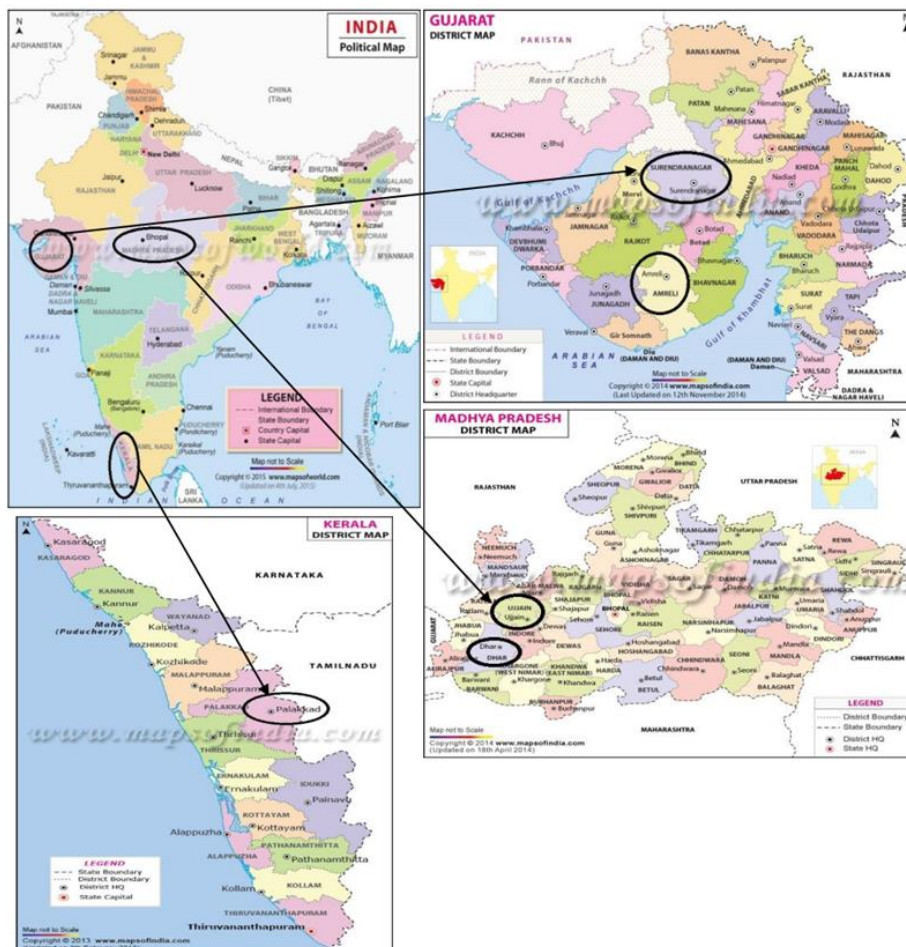
Crediting Period Start date: 28-March-2016

Crediting Period End date: 27-March-2026

The project activity adopts renewable crediting period of 10 years period which can be renewed for maximum 2 times.

1.7 Project Location

The project location has been highlighted in the geographical map shown below



The Geo Coordinates of the project location has been mentioned in the table below:

S. No.	Project Owner	Machine ID	District	State	Latitude (N)	Longitude (E)
1	D. J. Malpani	RGP2- 09	Ujjain	Madhya Pradesh	23° 21' 25"	75° 47' 38"
2		RGP2- 08			23° 22' 04"	75° 48' 13"
3		RGP2- 18			23° 20' 16"	75° 49' 10"
4		RGP2- 03			23° 20' 31"	75° 48' 57"
5		RGP2- 07			23° 22' 16"	75° 47' 48"
6	D. J. Malpani	IWISL/2000/ 16-17/3826	Surendranagar	Gujarat	22° 41' 51.9634"	71° 11' 45.4457"
7		IWISL/2000/ 16-17/3829			22° 42' 09.1591"	71° 12' 20.8237"
8		IWISL/2000/ 16-17/3830			22° 41' 59.8731"	71° 12' 31.8505"
9	D. J. Malpani	IWISL/2000/ 16-17/4060	Amreli	Gujarat	21° 18' 27.5358"	71° 25' 05.4767"
10		IWISL/2000/ 16-17/4061			21° 18' 21.8501"	71° 25' 30.1157"
11		IWISL/2000/ 16-17/4062			21° 18' 29.9265"	71° 26' 02.8202"
12		IWISL/2000/ 16-17/4063			21° 18' 18.5448"	71° 26' 03.1529"
13		IWISL/2000/ 16-17/4064			21° 18' 10.5525"	71° 26' 09.6116"
14		IWISL/2000/ 16-17/4065			21° 18' 21.4798"	71° 30' 27.9626"
15		IWISL/2000/ 16-17/4066			21° 19' 48.1147"	71° 27' 17.9010"
16		IWISL/2000/ 16-17/4067			21° 19' 59.6034"	71° 27' 03.5558"

17		IWISL/2000/ 16-17/40678			21° 20' 11.4744"	71° 27' 14.2307"
18		IWISL/2000/ 16-17/4350			21° 17' 09.9172"	71° 31' 36.7340"
19		IWISL/2000/ 16-17/4489			21° 18' 10.3896"	71° 26' 09.6792"
20		IWISL/2000/ 16-17/4490			21° 18' 18.4176"	71° 26' 03.2388"
21		IWISL/2000/ 16-17/4491			21° 18' 29.7756"	71° 26' 03.2064"
22	D. J. Malpani	DJM 01	Palakkad	Kerala	10° 47' 08.8350"	76° 47' 22.4161"
23		DJM 02			10° 47' 00.7304"	76° 47' 16.9701"
24		DJM 03			10° 46' 52.2401"	76° 47' 10.6991"
25		DJM 05			10° 46' 42.0601"	76° 47' 03.9574"
26		DJM 06			10° 46' 34.0199"	76° 46' 58.6108"
27		DJM 07			10° 46' 31.8877"	76° 47' 07.1889"
28		DJM 08			10° 46' 24.7089"	76° 47' 10.5038"
29		DJM 09			10° 46' 18.3974"	76° 47' 21.4268"
30	D. J. Malpani	ADD- 01	Dhar	Madhya Pradesh	22° 37' 50"	75° 16' 55"
31		ADD- 06			22° 37' 24"	75° 16' 29"
32		TIR- 11			22° 37' 11"	75° 16' 40"

1.8 Title and Reference of Methodology

Methodology: ACM0002: Grid-connected electricity generation from renewable sources - Version 17.0¹, Sectoral Scope: 01,

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 system - Version 06.0 (EB 97, Annex 07)²
- Methodological Tool- Tool for the demonstration and assessment of additionality- Version 07.0.0 (EB 70, Annex 08).³

1.9 Participation under other GHG Programs

The project is neither registered nor seeking registration under any other GHG programs and the project is registered only in the GHG program that under VERRA i.e., VCS program. The project proponent has also provided undertaking that it will not claim any GHG credits under any GHG program other than that under VERRA during the current monitoring period.

1.10 Other Forms of Credit

Emission Trading Programs and Other Binding Limits:

Net GHG emission reductions or removals generated by the Project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits.

Other Forms of Environmental Credit:

Not applicable, as the project is not registered in any other GHG mechanism other than VCS. Also, the project activity is not availing any REC benefits and the same can be confirmed from publicly available link of REC generators.

Web-link: https://www.recregistryindia.nic.in/index.php/publics/registered_regens

¹<https://cdm.unfccc.int/UserManagement/FileStorage/D5YFS9I3VKBT18MQNGX0LPZ6U7AWCO>

² <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v6.pdf>

³ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

The project proponent has also provided undertaking that it will not claim any REC or IREC benefits for the given monitoring period.

1.11 Sustainable Development Contributions

Contribution to sustainable development:

The project activity is responsible for sustainable economic growth and conservation of environment through use of wind as a renewable source. The Project activity involves total capacity of 60 MW which is installed in the states of Madhya Pradesh, Gujarat and Kerala.

The project supplies clean electricity from the wind power project to the Indian Grid, hence displacing the electricity generated from grid connected fossil fuel power plants and thereby avoiding the equivalent Carbon dioxide which is a Green House Gas.

For SDG-7, this project activity generates electricity from wind energy sources that ensures supply of electricity sources from clean energy sources at affordable rate. In this monitoring period, this project activity, has supplied 80,577 MWh clean electricity.

For SDG- 13, this project activity has led GHG emissions reductions by generating electricity using wind energy thus avoiding fossil-fuel electricity generation. In this monitoring period, this project activity has achieved GHG emission reductions of 77,781 tCO₂e

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	7.2.1: Renewable energy share in the total final energy consumption	Implemented activities to increase	80,577 MWh, of renewable electricity has been supplied to Indian grid during the reported period that helps to increase the renewable energy share in the energy mix.	$(79,128 + 146,973 + 110,149.91 + 94,538 + 45,849 + 80,577) = 557,214.91^4$ MWh renewable electricity has been supplied to Indian grid that helps to increase the renewable energy share in the energy mix.
2)	13.2	13.2.2 Total greenhouse gas emissions per year	Implemented activities to decrease	By supplying 80,577 MWh clean electricity to Indian grid, the project avoided release of 77,781 tCO ₂ e in to the atmosphere during the reporting period	Prevented the release of $(76.380 + 141,873 + 106,298 + 91,255 + 44,257 + 77,781) = 537,844^5$ tCO ₂ e into the atmosphere.

⁴ The previous electricity generation values have been updated from the corresponding monitoring reports present in: <https://registry.verra.org/app/projectDetail/VCS/1679>

⁵ The previous GHG removal values have been updated from the corresponding monitoring reports present in: <https://registry.verra.org/app/projectDetail/VCS/1679>

2 SAFEGUARDS

2.1 No Net Harm

According to Indian regulation, the implementation of the wind park does not require an environmental impact assessment. The Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India notification dated 14-September-2006 regarding the requirement of Environment Impact Assessment (EIA) studies as per the Environment Protection Rule, 1986 (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii) MINISTRY OF ENVIRONMENT AND FORESTS) states that any project developer in India needs to file an application to the Ministry of Environment, Forest and Climate Change (including a public hearing and an EIA) in case the industry or project is listed in a predefined list. Wind parks are not included in this list and thus an EIA is not required.

There are no negative impacts on air, water, soil quality and ambience envisaged due to the project activity and no potential negative environmental and socio-economic impacts in this monitoring period. There was no harm identified from the project and hence no mitigations measures are applicable.

Being a renewable resource, using wind energy to generate electricity contributes to natural resource conservation. Thus, the project causes no negative impact on the surrounding environment contributing to environmental well-being.

The potential negative impacts by the project activity are identified as below:

During construction

Impact on air

Movement of construction material during construction will have some impact on the air. As the transportation is quite less for the project activity, the impacts will be negligible.

Impact on water

Not much water discharge takes place during construction. However, proper sanitary arrangements will be provided by project proponents.

Impact on Land use

The land on which the project activity takes place is largely unproductive. Prior to the project activity, most of the land had no beneficial use. The project proponents had bought the land for a worthwhile application and obtained necessary approvals for installation of windmills. No dislocation of people is involved in the course of the project activity. The magnitude of the impacts during the construction phase is negligible and exists for a temporary period of time till the end of construction phase. Therefore, it would not affect the environment

considerably. The impacts on the environment due to construction activities of wind turbines are negligible.

Operation and Maintenance Phase

Suzlon/Enercon maintains highest level of safety standards. Systematic and scientific maintenance of all equipment has been undertaken to ensure the best safety standards.

Impact on air

Wind energy plants are known to contribute to zero atmospheric pollution as no fuel combustion is involved during any stage of the operation.

Impact on water

There is absolutely no effluent discharge during operation of wind turbine generators.

Impact on ecology.

There are no known migratory birds/endangered species in the region of project activity. Therefore, no harm on the ecological environment is envisaged.

Socio-Economic Impacts

There is no inconvenience to the local community due to the transmission lines. The project activity helps upliftment of skilled and unskilled manpower in the region. The project will be providing employment opportunities not only during the construction phase, but also during its operational lifetime. The project activity improves employment rate and livelihood of local populace in the vicinity of the project. Moreover, the project generates eco-friendly, GHG free power which contributes to sustainable development of the region.

Conclusion

The net impact under environmental pollution category is positive as all necessary abatement measures are adopted and periodically monitored. The project activity does not have any major adverse impacts on environment during its construction or operational phase. The human-interest parameter shows positive impacts due to increased job opportunities at the facility as well as other ancillary units coming up.

2.2 Local Stakeholder Consultation

The local stakeholder meeting was carried out for the project activity and the details of the same are mentioned below:

Sl. No.	Project Investor	Project Site	State	Notice Date	Meeting Date
1.		Dhar	Madhya	08/02/2016	15/02/2016

2.	D. J. Malpani	Ghatiya	Pradesh	08/02/2016	16/02/2016
3.		Sadla	Gujarat	04/10/2016	12/10/2016
4.		Savarkundla			
5.		Kinfara	Kerala	12/01/2017	20/01/2017

As a part of continuous feedback from stakeholders, feedback from the associated stakeholders is vital, therefore a dedicated Visitor register cum grievance register has been placed at the project site which is accessible to stakeholders to provide their feedback on the project. It is appropriate publicly accessible location at which local stakeholders can provide their feedback on the project. This location is also conducive to continuous and regular checks for stakeholder comments.

The stakeholders are also requested to share their experiences and grievances on continuous basis. Registers is used to records the grievances and feedback. Grievance register is placed at the main gate of site office and is accessible to everyone. During the current monitoring period, no grievances have been received and thus, no mitigation measures were required. In case of grievances, the nature of probable resolution is discussed with the plant head office and implemented by the site in-charge.

2.3 AFOLU-Specific Safeguards

Not Applicable, as this is not an AFOLU project.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The project activity involves Wind Power Projects in different location of India. The total installed capacity of the project is 60 MW; which involves operation of 1.5 MW and 2 MW capacity of WTGs for the wind projects located in Gujarat, Kerala and Madhya Pradesh state of India.

The project has already been commissioned and the commissioning details of the project activity has been mentioned in section 1.5 of this report.

Wind Power Project Technology Details –

The technology employed, converts wind energy to electrical energy. In wind power generation, energy of wind is converted into mechanical energy and subsequently into electrical energy. Wind power generation technology is environment friendly technology since there are no GHG emissions associated with the electricity generation. There is no transfer of technology involved in the project activity.

The project activity comprises WTG's of ReGen Power Tech make and of INOX make.

Technical details for VENSYS 87, 1500 KW Machine

Particulars	Details
Make	ReGenPowertech
Rated power	1500 kW
Cut-in wind speed	3 m/s
Cut-out wind speed	22 m/s
Survival wind speed	52.5 m/s
Generator	Variable Speed Multi Pole Synchronous
Rotor Diameter	87 m
Swept area	5942 m ²
Speed Range	9 to 17.3 rpm
Hub Height	85 m
Design	Tubular, Four Sections
Foundation Type	Floating
Control of Output	Pitch Regulation
Speed Control	Variable, micro controller based
Low Voltage Ride Through (LVRT)	3 seconds
Primary Brake system	Aerodynamic
Pitch System	Electromechanical
Remote Monitoring	VPN
Wind Turbine type class	GL III B
Design Lifetime	25 years

Technical details for WT 2000 DF/100- 2 MW WTG by Inox

Sr. No.	Particulars	Details
1.	Rated power	2 MW
2.	Cut-in wind speed	3 m/s
3.	Rated wind speed	11 m/s

4.	Cut-out wind speed	20 m/s
5.	Hub height	80m
6.	Diameter	100.3 m
7.	Swept area	7894 m ²
8.	Estimated design Life time	25 years

The individual project activity details along with commissioning dates are mentioned below:-

S. No.	Project Owner	Machine ID	DOC6	Village	Taluka	District	State
1	D. J. Malpani	RGP2- 09	28-March-2016	Tulaheda	Ghatiya	Ujjain	Madhya Pradesh
2		RGP2- 08	29-March-2016	Tulaheda	Ghatiya		
3		RGP2- 18		Tulaheda	Ghatiya		
4		RGP2- 03		Tajpur	Mahidpur		
5		RGP2- 07		Ranaheda	Ghatiya		
6	D. J. Malpani	IWISL/2000/16-17/3826	31-March-2017	Ranipat	Muli	Surendranagar	Gujarat
7		IWISL/2000/16-17/3829					
8		IWISL/2000/16-17/3830					
9	D. J. Malpani	IWISL/2000/16-17/4060	31-March-2017	Pithavadi	Savarkundla	Amreli	Gujarat
10		IWISL/2000/16-17/4061		Bhenkara			
11		IWISL/2000/16-17/4062		Bhenkara			
12		IWISL/2000/16-17/4063		Bhenkara			
13		IWISL/2000/16-17/4064		Bhenkara			
14		IWISL/2000/16-17/4065		Senjal			

⁶Date Of commissioning

15		IWISL/2000/ 16-17/4066		Piyava			
16		IWISL/2000/ 16-17/4067	31- March- 2017	Piyava			
17		IWISL/2000/ 16- 17/40678	31- March- 2017	Piyava			
18		IWISL/2000/ 16-17/4350	31- March- 2017	Piyava			
19		IWISL/2000/ 16-17/4489		Piyava			
20		IWISL/2000/ 16-17/4490		Piyava			
21		IWISL/2000/ 16-17/4491		Piyava			
22	D. J. Malpani	DJM 01	28- March- 2017	Kanjikode	Palakkad	Palakkad	Kerala
23		DJM 02					
24		DJM 03					
25		DJM 05					
26		DJM 06					
27		DJM 07					
28		DJM 08					
29		DJM 09					
30	D. J. Malpani	ADD- 01	31- March- 2016	Navagaon	Dhar	Dhar	Madhya Pradesh
31		ADD- 06		Navagaon			
32		TIR- 11		Athar			

During the Current Monitoring Period, all the WTGs were operational and the project activity has supplied 80,577 MWh of electricity, and thus contributing to the GHG reductions 77,781 tCO₂e GHG reductions.

Plant Breakdown has occurred during the current monitoring period, total breakdown duration is calculated as 284.15 hours for Dhar site, 261.24 hours for Ghatiya site, 1413 hours 42 minutes for Sadla site, 2679 hours 49 minutes for Savarkundla site and 2341 hours 21 minutes for Kinfra site this can be checked from Appendix 2 of the monitoring report wherein the breakdown details have been mentioned. These plant breakdowns are contributing to the lower GHG emission reduction from the project activity. The major cause for lower GHG emission reduction is attributed to lower PLF which is affected by factors like wind flow pattern, grid availability, plant breakdowns and delay in calibration of monitoring equipment of Sadla and Kerala site.

3.2 Deviations

3.2.1 Methodology Deviations

Not Applicable, as there are no methodological deviations.

3.2.2 Project Description Deviations

Deviation 1

This deviation is related to total capacity of the project. At the time of registration, the total capacity of the project envisaged was 66 MW. Till 3rd verification the capacity of the project was downsized to 60 MW. This is because of following reasons-

The earlier, 22 MW capacity wind project by D. J. Malpani at Kinfara site, Kerala has been downsized to capacity of 16 MW

The above deviation which is permanent in nature is already approved during the 2nd monitoring period.

Deviation 2

The registered PD mentioned three parameters like net electricity supplied to grid, electricity export by project and electricity import by project and net electricity is difference of export and import. Since PP have only one parameter data available i.e. data of net electricity supplied to grid through share certificate issued by state electricity board. Hence only single parameter of net electricity supplied to grid is considered for Gujarat plant. This does not have any impact on emission reductions. The deviation has already been approved during the 4th verification (Monitoring Period - 01-March-2020 to 31-December-2020) and have no impacts on the applicability of the methodology, additionality or the appropriateness of baseline scenario.

Deviation 3

This deviation is related to the corrected Geo Coordinates of the project locations. At the time of registration, Latitude and Longitude were mentioned in registered VCS PD. But during the time of project verification, some errors were observed in Latitude and Longitude. A revised table of Geo coordinates was updated in section 1.7 of MR during the 2nd monitoring period (24-December-2017 to 31-March-2019).

This deviation is of permanent nature and does not have any impact on the project applicability, baseline scenario and additionality.

The deviation was approved during the second monitoring period (24-December-2017 to 31-March-2019).

3.3 Grouped Projects

Not Applicable, as this is not a grouped project activity.

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 in year y
Source of data	Calculated from CEA database, Version 12, May 2017 ⁷
Value applied	0.9843
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 06.0.0” as 3-year generation weighted average using data for the years 2013-2014, 2014-2015 & 2015- 2016. 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.
Purpose of Data	For the calculation of the baseline emission
Comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	$EF_{grid,BM,y}$
Data unit	tCO ₂ /MWh
Description	Build Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database, Version 12, May 2017 ⁸
Value applied	0.9083
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 06.0.0” BM is calculated ex-ante based on the most recent information available at the time of submission of PDD and is fixed for the entire crediting period. The data is obtained from “CO ₂ Baseline Database for Indian

⁷https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver12.pdf

⁸https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver12.pdf

	Power Sector” version 12.0, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of Data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	EF_{grid,CM,y}
Data unit	tCO ₂ /MWh
Description	Combined Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database, Version 12, May 2017 ⁹
Value applied	0.9653
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,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) 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 the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire crediting period

4.2 Data and Parameters Monitored

Data / Parameter	EG_{PJ,y}
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y
Source of data	Joint meter readings
Description of measurement methods and procedures to be applied	The value of net electricity generation supplied to the grid as per Joint Meter Reading Report forms the basis for calculation of the emission reductions; which can be cross checked from the invoice raised to DISCOM. Net electricity supplied to grid is calculated as the difference of the measured values of “export” and “import” of electricity

⁹https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver12.pdf

	through the dedicated SEB energy meter installed at the delivery point (i.e., the connected substation). Net electricity generated and supplied by the project (Wind) plant/unit to the grid = Electricity Export to the grid – Electricity Import from the grid Monthly meter readings are taken from the main and check meter installed at the substation and certified by the representatives of SEB Officials and the representatives of the project proponent.																																		
Frequency of monitoring/recording	Continuous monitoring, hourly measurement and at least monthly recording																																		
Value monitored	Vintage Wise Generation details: <table><tr><th rowspan="2">Year</th><th colspan="2">Site Wise Generation</th><th rowspan="2">Net Generation for all sites</th></tr><tr><th>Site</th><th>Generation</th></tr><tr><td rowspan="5">2021</td><td>Dhar</td><td>4622.64</td><td rowspan="5">57,348</td></tr><tr><td>Ghatiya</td><td>6220.584</td></tr><tr><td>Sadla</td><td>5035.132</td></tr><tr><td>Savarkundla</td><td>23595.54</td></tr><tr><td>Kinfra</td><td>17874.6</td></tr><tr><td rowspan="5">2022</td><td>Dhar</td><td>1999.55</td><td rowspan="5">23,229</td></tr><tr><td>Ghatiya</td><td>2716.236</td></tr><tr><td>Sadla</td><td>1845.947</td></tr><tr><td>Savarkundla</td><td>10641.65</td></tr><tr><td>Kinfra</td><td>6026.424</td></tr><tr><td>Total</td><td colspan="2"></td><td>80,577</td></tr></table>	Year	Site Wise Generation		Net Generation for all sites	Site	Generation	2021	Dhar	4622.64	57,348	Ghatiya	6220.584	Sadla	5035.132	Savarkundla	23595.54	Kinfra	17874.6	2022	Dhar	1999.55	23,229	Ghatiya	2716.236	Sadla	1845.947	Savarkundla	10641.65	Kinfra	6026.424	Total			80,577
Year	Site Wise Generation		Net Generation for all sites																																
	Site	Generation																																	
2021	Dhar	4622.64	57,348																																
	Ghatiya	6220.584																																	
	Sadla	5035.132																																	
	Savarkundla	23595.54																																	
	Kinfra	17874.6																																	
2022	Dhar	1999.55	23,229																																
	Ghatiya	2716.236																																	
	Sadla	1845.947																																	
	Savarkundla	10641.65																																	
	Kinfra	6026.424																																	
Total			80,577																																
Monitoring equipment	Monitoring: Tri vector meter are used Data type: Measured Type of meter: Static type meter (Main & Check). Both are Bidirectional meters. Class of meter: 0.2s The Calibration details of the Energy Meter has been mentioned in Appendix-1 of the Monitoring Report.																																		
QA/QC procedures to be applied	• The energy meter reading is taken on monthly basis • Energy meters will be calibrated once in a five year¹⁰ and faulty meters will be duly replaced immediately. • All the energy meters are under the control of state utility and calibration of energy meters is also under the jurisdiction of state utility. • The Net electricity exported to the grid can be cross checked against the invoice raised by the PP towards the DISCOM for Kerala and Gujarat site while for Madhya Pradesh site electricity export value can be																																		

¹⁰As per CEA regulation

	cross checked against invoice raised by PP to DISCOM and the electricity import can be cross checked against the import HT bill received from DISCOM.
Purpose of the data	Calculation of baseline emissions
Calculation method	Not Applicable
Comments	The data would be archived electronically and maintained for the entire crediting period plus two years.

4.3 Monitoring Plan

Aim of monitoring

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, would form the baseline for the project activity.

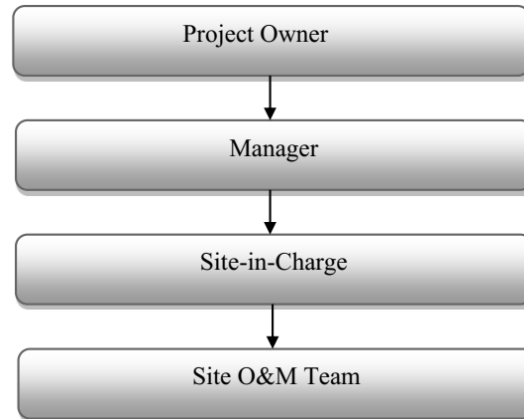
Since the baseline emission factor is based on an ex-ante determination, monitoring of this parameter is not required. The sole parameter for monitoring is the net electricity exported to the grid.

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 CDM/VCS project activities and is proposed for grid-connected wind power project being implemented in respective states in India. 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 registration, 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:



PP has assigned the responsibility of operation and maintenance of WTGs to respective EPC contractor of wind turbines for each site.

Responsibilities of Head: Overall functioning and maintenance of the project activity.

Responsibilities of Plant In-charge: Responsibility to maintain the data records, ensures completeness of data, and reliability of data (calibration of equipments).

Responsibilities of Shift In-charge: Responsibility for day-to-day data collection and maintains day to day log book for monitored data.

QA/QC procedures

The energy meters at the feeders are maintained and owned by DISCOM. 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 Discom/third party. The meters are calibrated by DISCOM at-least once in five years.

Data Archiving

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

Training and maintenance requirements

Training on the machine is an essential pre-requisite, to ensure necessary safety of man and machine. Further, in order to maximize the output from the WTGs, it is extremely essential, that the engineers and technicians understand the machines and keep them in good health. In order to ensure, that O&M team is deft at handling technical snags on top of the turbine, the necessity of ensuring that they are capable of climbing the tower with absolute ease and comfort has been established. 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.

Apportioning Procedure

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

- Apportioning the net electricity exported to grid, as recorded in the consolidated Share Certificate/JMR Report/Credit Notes certified by the respective state DISCOM, based on the number of days in the monitoring period and the number of days for which Share Certificate/JMR Report/Credit Notes was prepared. This process is elaborated below:

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 is calculated as follows:

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

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 is used for calculation of emission reductions during that period.

During the current monitoring period, apportioning has not been done as there is no mismatch between the monitoring period and the billing period

If any common metering is involved for project activity, then apportioning procedure will be involved which is under control of state electricity board. Based on the break-up sheets Project investor raises invoice to DISCOM/ third party which forms the basis of cross-check for the net electricity generated. The Project investor has no role in the entire procedure of apportioning.

The project activity is located in Madhya Pradesh, Gujarat and Kerala states of India. In Indian scenario the monitoring, metering arrangement, apportioning procedure, calibration frequency and feeder arrangement is under control of respective state electricity board and PP do not have any control on it. Herein the apportioning procedure mentioned is applicable in case of Madhya Pradesh sites only as in Gujarat and Kerala there is no apportioning. Furthermore, for this monitoring period, the billing cycle and monitoring period matches; so there is no need for apportioning for this monitoring period in neither of three sites. Thus, there is possibility of changes in meters, feeders for the project activity. PP is getting the net electricity supplied to grid and based on this value invoice will be raised by PP. Hence feeder

wise details of WTGs, metering arrangement, monitoring procedure etc. are not mentioned in VCS PD.

Emergency Preparedness and Uncertainty Procedure:

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 calibration, the check meter will be used. In case both the main and check meter are found to be outside the acceptable limits of accuracy or faulty or not functioning properly, both the meters shall be calibrated immediately and the error percentage found in the main meter during its calibration shall be applied to its metered energy data for the entire period since its last calibration to obtain the corrected value of net electricity exported to the grid.

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

- Apportioning the net electricity exported to grid, as recorded in the consolidated Share Certificate/JMR Report/Credit Notes certified by the respective state DISCOM, based on the number of days in the monitoring period and the number of days for which Share Certificate/JMR Report/Credit Notes was prepared. This process is elaborated under the heading Apportioning Procedure mentioned above.

The calculated value after apportioning would be used for calculation of emission reductions during that period. During the current monitoring period, apportioning has not been done.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

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

Where:

BE_y : Baseline emissions in year y (tCO₂e/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 VCS project activity in year y (MWh/yr)

$EF_{grid,CM,y}$: Combined margin CO₂ 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" (tCO₂e/MWh)

$$BE_y = 80,577 * 0.9653$$

$$= 77,781.00 \text{ (Round down value)}$$

5.2 Project Emissions

$PE_{FF,y} = 0$, As per para 37 of ACM0002 version 17, “For all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected”. Hence, $PE_{FF,y} = 0$.

5.3 Leakage

As per para 60 of ACM0002 version 17, No leakage emissions need to be considered for the project activity. Hence, $LE_y = 0$.

5.4 Net GHG Emission Reductions and Removals

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
Year 2021 (01-Jul-2021 to 31-December-2021)	55,358	0	0	55,358
Year 2022 (01-January-2022 to 31-March-2022)	22,423	0	0	22,423
Total	77,781	0	0	77,781

The actual emission reductions achieved during the monitoring period are 77,781 tCO₂e, which is approximately 10.71% lower than the estimated emission reductions. The lower generation is also attributed to facts like variation in wind speed, grid availability, plant breakdown etc. which are beyond the scope of PP.

The breakdown that occurred during the current monitoring period is for a total duration of 284.15 hours for Dhar site, 261.24 hours for Ghatiya site, 1413 hours 42 minutes for Sadla site, 2679 hours 49 minutes for Savarkundla site and 2341 hours 21 minutes for Kinfra site this can be checked from Appendix 2 of the monitoring report wherein the breakdown details have been mentioned.

APPENDIX 1: CALIBRATION DETAILS

The Main and Check Meter details for Dhar Site, Madhya Pradesh are as follows: -

Meter Details for WTG ID: TIR- 11			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter SI. No	XD500605	Meter SI. No	XD500606
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	01-March-2021	Calibration Date	01-March-2021
Due Date of Calibration	28-February-2026	Due Date of Calibration	28-February-2026

Meter Details for WTG ID: ADD- 01 & ADD- 06			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter SI. No	XD500602	Meter SI. No	XD500603
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	01-March-2021	Calibration Date	01-March-2021
Due Date of Calibration	28-February-2026	Due Date of Calibration	28-February-2026

For Dhar site, the frequency of calibrating the energy meters is once in 5 years. There is no gap in calibration. Hence, during the current Monitoring Period, the calibration certificates of the Main Meter & Check Meter are valid and therefore no error factor is applicable.

The Main and Check Meter details for Ghatiya Site, Madhya Pradesh are as follows: -

Meter Details for WTG ID: RGP2- 08 & RGP2- 09 at Feeder-1			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter SI. No	XD500608	Meter SI. No	XD500609
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	14-September-2018	Calibration Date	14-September-2018
Due Date of Calibration	13-September-2023	Due Date of Calibration	13-September-2023
Meter Details for WTG ID: RGP2- 18, RGP2- 03 & RGP2- 07 at Feeder-2			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter SI. No	Y0056943	Meter SI. No	Y0056944

Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	14-September-2018	Calibration Date	14-September-2018
Due Date of Calibration	13-September-2023	Due Date of Calibration	13-September-2023

For Ghatiya site, the frequency of calibrating the energy meters is once in 5 years. There is no gap in calibration. Hence, during the current Monitoring Period, the calibration certificates of the Main Meter & Check Meter are valid and therefore no error factor is applicable.

The Main Meter details for Sadla sites are as follows:

Meter details for feeder -1		Meter details for feeder -2	
Main Meter		Main Meter	
Make	Secure	Make	Secure
Meter SI. No	GJ 3819 A	Meter SI. No	GJ 3820A
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	30-January-2017 22-April-2022	Calibration Date	30-January-2017 22-April-2022
Due Date of Calibration	29-January-2022 21-April-2027	Due Date of Calibration	29-January-2022 21-April-2027

For Sadla site, the frequency of calibrating the energy meter is once in 5 years. There has been a gap in the calibration i.e., from 30-January-2022 to 21-April-2022 for which error factor has been applied during the current monitoring period i.e., for the months of January, February and March 2022. Since the energy meter is of accuracy class 0.2s and also Export, Import value is not given in Net Energy share certificate, so in place of subtracting 0.2% from Export and adding 0.2% in Import value, 0.4% has been subtracted from the Net generation value.

The Main and Check Meter details for Savarkundla sites are as follows:

Meter-1		Meter-2	
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter SI. No	GJ3856A	Meter SI. No	GJ3857A
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	18-May-2017	Calibration Date	18-May-2017
Due Date of Calibration	17-May-2022	Due Date of Calibration	17-May-2022

For Savarkundla site, the frequency of calibrating the energy meters is once in 5 years There is no gap in calibration. Hence, during the current Monitoring Period, the calibration certificates of the Main Meter & Check Meter are valid and therefore no error factor is applicable.

The Main and Check Meter details for Kinfra site, Kerala are as follows:

Meter Details for Feeder- 1			
Main Meter		Check Meter	
Make	L & T	Make	L & T
Meter Sl. No	16088079	Meter Sl. No	16088085
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	25-March-2017 14-May-2022	Calibration Date	25-March-2017 14-May-2022
Due Date of Calibration	24-March-2022 13-May-2027	Due Date of Calibration	24-March-2022 13-May-2027
Meter Details for Feeder- 2			
Main Meter		Check Meter	
Make	L & T	Make	L & T
Meter Sl. No	16088074	Meter Sl. No	16088092
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	27-March-2017 17-May-2022	Calibration Date	27-March-2017 17-May-2022
Due Date of Calibration	26-March-2022 16-May-2027	Due Date of Calibration	26-March-2022 16-May-2027

For Kinfra site, the frequency of calibrating the energy meter is once in 5 years. There has been a delay in calibration i.e., from 25-March-2022 to 13-May-2022 and 27-March-2022 to 16-May-2022. Hence, for current monitoring period an error factor of 0.2% has been applied for month of March 2022, since the meter is of accuracy class 0.2s.

APPENDIX 2: BREAKDOWN DETAILS

For Dhar, Madhya Pradesh Site

Date	WTG No.	Breakdown Description	Duration
05-July-2021	DJMDR-01	error_safety_system_prog_ts_gr1_com_error	4.93
06-July-2021	DJMDR-01	Preventive Action : Failure Rectification	4.83
20-July-2021	DJMDR-01	Preventive Action : Failure Rectification	4.19
29-July-2021	DJMDR-01	Error_safety_system_safety_system_ok_from_pitch	3.32
08-September-2021	DJMDR-01	Preventive Action : Failure Rectification	5.09
25-September-2021	DJMDR-01	Preventive Action : Failure Rectification	7.79
02-October-2021	DJMDR-01	Force Majeure	20.07
03-October-2021	DJMDR-01	Force Majeure	23.88
04-October-2021	DJMDR-01	Force Majeure	24
05-October-2021	DJMDR-01	Force Majeure	24
06-October-2021	DJMDR-01	Force Majeure	24
07-October-2021	DJMDR-01	Force Majeure	22.86
23-October-2021	DJMDR-03	Half Yearly Maintenance	7.9
27-October-2021	DJMDR-02	Half Yearly Maintenance	6.61
28-October-2021	DJMDR-01	Half Yearly Maintenance	6.75
30-December-2021	DJMDR-01	error_safety_system_safety_system_ok_from_pitch	6.35
15-January-2022	DJMDR-01	Electrical Yearly Maintenance	7.09
16-January-2022	DJMDR-02	Electrical Yearly Maintenance	7.45
18-January-2022	DJMDR-03	Electrical Yearly Maintenance	7.38

28-January-2022	DJMDR-01	Electrical Yearly Maintenance	5.98
29-January-2022	DJMDR-02	Electrical Yearly Maintenance	6.63
30-January-2022	DJMDR-03	Electrical Yearly Maintenance	6.72
20-March-2022	DJMDR-03	error_converter_step_up_IGBT	4.02
21-March-2022	DJMDR-01	error_profi_node_20_diag	5.09
21-March-2022	DJMDR-03	Preventive Action : Failure Rectification	3.09
27-March-2022	DJMDR-01	error_safety_system_safety_system_ok_from_pitch	8.63
28-March-2022	DJMDR-01	error_safety_system_safety_system_ok_from_pitch	10.24
29-March-2022	DJMDR-01	error_safety_system_safety_system_ok_from_pitch	8.73
30-March-2022	DJMDR-01	error_safety_system_safety_system_ok_from_pitch	6.53
Total Breakdown Hours			284.15

For Ghatiya, Madhya Pradesh Site

Date	WTG No.	Breakdown Description	Duration
26-July-2021	DJMGT-04	EL Tripped at Substation	5.39
26-July-2021	DJMGT-05	EL Tripped at Substation	5.39
27-August-2021	DJMGT-01	Half Yearly Maintenance	5.94
28-August-2021	DJMGT-02	Half Yearly Maintenance	7.08
29-August-2021	DJMGT-03	Half Yearly Maintenance	6.47
31-August-2021	DJMGT-04	Half Yearly Maintenance	6.28
01-September-2021	DJMGT-05	Half Yearly Maintenance	7.24
09-September-2021	DJMGT-01	EL Tripped at Substation	5.11
09-September-2021	DJMGT-02	EL Tripped at Substation	5.09
09-September-2021	DJMGT-03	EL Tripped at Substation	5.08
15-September-2021	DJMGT-01	LC Taken by Electricity Board (Post monsoon maintenance work)	6.49
15-September-2021	DJMGT-02	LC Taken by Electricity Board (Post monsoon maintenance work)	6.49

15-September-2021	DJMGT-03	LC Taken by Electricity Board (Post monsoon maintenance work)	6.49
15-September-2021	DJMGT-04	LC Taken by Electricity Board (Post monsoon maintenance work)	6.49
15-September-2021	DJMGT-05	LC Taken by Electricity Board (Post monsoon maintenance work)	6.49
01-October-2021	DJMGT-02, DJMGT-01, DJMGT-03	EL Tripped at Substation (External Line pin Insulator failure)	7
02-October-2021	DJMGT-02, DJMGT-01, DJMGT-03	EL Tripped at Substation	13.17
22-October-2021	DJMGT-01	LC Taken by ReGen_O&M Dept	5.88
22-October-2021	DJMGT-02	LC Taken by ReGen_O&M Dept	5.88
22-October-2021	DJMGT-03	LC Taken by ReGen_O&M Dept	5.88
22-October-2021	DJMGT-04	LC Taken by ReGen_O&M Dept	8.29
22-October-2021	DJMGT-05	LC Taken by ReGen_O&M Dept	8.29
10-November-2021	DJMGT-01	Electrical Yearly Maintenance	7.78
11-November-2021	DJMGT-01	Electrical Yearly Maintenance	5.35
12-November-2021	DJMGT-02	Electrical Yearly Maintenance	6.01
13-November-2021	DJMGT-02	Electrical Yearly Maintenance	5.03
14-November-2021	DJMGT-03	Electrical Yearly Maintenance	5.94
16-November-2021	DJMGT-04	Electrical Yearly Maintenance	5.7
17-November-2021	DJMGT-04	Electrical Yearly Maintenance	5.47
18-November-2021	DJMGT-05	Electrical Yearly Maintenance	7.37
28-January-2022	DJMGT-01	Mechanical Yearly Maintenance	5.93
29-January-2022	DJMGT-02	Mechanical Yearly Maintenance	7.09
30-January-2022	DJMGT-01	Mechanical Yearly Maintenance	6.76
31-January-2022	DJMGT-02	Mechanical Yearly Maintenance	6.77
01-February-2022	DJMGT-03	Mechanical Yearly Maintenance	7.07
02-February-2022	DJMGT-03	Mechanical Yearly Maintenance	7.03
04-February-2022	DJMGT-04	Mechanical Yearly Maintenance	6.33
06-February-2022	DJMGT-04	Mechanical Yearly Maintenance	6.44
07-February-2022	DJMGT-05	Mechanical Yearly Maintenance	7.03
08-February-2022	DJMGT-05	Mechanical Yearly Maintenance	6.23
Total Breakdown Hours			261.24

For Sadla, Gujarat Site

Date	WTG No.	Breakdown Description	Duration
------	---------	-----------------------	----------

01-July-2021	SDLT05	Yaw teeth lubrication is in maintenance state.	0:31:12
08-July-2021	SDLT06	Converter water input temperature is above limit.	23:59:59
09-July-2021	SDLT02	Earth Fault	17:30:00
09-July-2021	SDLT06	Converter water input temperature is above limit.	17:35:00
26-July-2021	SDLT05	Converter water input temperature is above limit.	13:39:00
12-September-2021	SDLT06	Earth Fault	10:39:59
12-September-2021	SDLT02	Earth Fault	10:39:59
12-September-2021	SDLT05	Earth Fault	10:39:59
14-September-2021	SDLT06	Internal shutdown by project	14:43:00
14-September-2021	SDLT02	Internal shutdown by project	14:43:00
14-September-2021	SDLT05	Internal shutdown by project	14:43:00
15-September-2021	SDLT05	Generator cooling water pressure low alarm.	23:59:59
16-September-2021	SDLT05	Generator cooling water pressure low alarm.	14:42:00
21-November-2021	SDLT02	Converter water input temperature is above limit.	9:14:59
22-November-2021	SDLT02	Converter water input temperature is above limit.	23:59:59
23-November-2021	SDLT02	Converter water input temperature is above limit.	23:59:59
24-November-2021	SDLT02	Converter water input temperature is above limit.	9:33:00
01-December-2021	SDLT06	Deviation between active and demanded power is too high.	13:50:59
02-December-2021	SDLT06	Deviation between active and demanded power is too high.	23:59:59
03-December-2021	SDLT06	Deviation between active and demanded power is too high.	23:59:59
04-December-2021	SDLT06	Deviation between active and demanded power is too high.	23:59:59
05-December-2021	SDLT06	Deviation between active and demanded power is too high.	13:37:38
17-December-2021	SDLT06	SLC: Yaw control device twist protection switch tripped.	22:30:59

18-December-2021	SDLT06	SLC: Yaw control device twist protection switch tripped.	23:59:59
19-December-2021	SDLT06	SLC: Yaw control device twist protection switch tripped.	23:59:59
20-December-2021	SDLT06	SLC: Yaw control device twist protection switch tripped.	23:59:59
21-December-2021	SDLT06	SLC: Yaw control device twist protection switch tripped.	15:01:00
23-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
24-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
25-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
26-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
27-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
28-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
29-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
30-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
31-December-2021	SDLT05	Converter system communication handshake fault.	23:59:59
01-January-2022	SDLT05	Converter system communication handshake fault.	23:59:59
02-January-2022	SDLT05	Converter system communication handshake fault.	23:59:59
03-January-2022	SDLT05	Converter system communication handshake fault.	14:01:00
03-January-2022	SDLT05	Converter system communication handshake fault.	9:49:59
04-January-2022	SDLT05	Converter system communication handshake fault.	23:59:59
05-January-2022	SDLT05	Converter system communication handshake fault.	23:59:59
06-January-2022	SDLT05	Converter system communication handshake fault.	23:59:59
07-January-2022	SDLT05	Converter system communication handshake fault.	23:59:59
08-January-2022	SDLT05	Converter system communication handshake fault.	18:46:00
01-February-2022	SDLT02	Internal shutdown	9:49:59

01-February-2022	SDLT05	Internal shutdown	9:39:59
08-February-2022	SDLT06	Preventive Maintenance	8:39:00
28-February-2022	SDLT05	Crowbar test failed 2 times in HealthCheck	8:20:59
01-March-2022	SDLT05	Crowbar test failed 2 times in HealthCheck	9:25:00
04-March-2022	SDLT05	Emergency Button TB100 pressed	11:08:00
05-March-2022	SDLT02	Internal shutdown	9:11:00
05-March-2022	SDLT05	Emergency Button TB100 pressed	9:49:00
05-March-2022	SDLT05	Internal shutdown	9:11:00
05-March-2022	SDLT06	Internal shutdown	9:11:00
06-March-2022	SDLT02	Internal shutdown	8:03:00
06-March-2022	SDLT05	Crowbar test failed 2 times in HealthCheck	9:59:00
06-March-2022	SDLT05	Internal shutdown	8:03:00
06-March-2022	SDLT06	Internal shutdown	8:03:00
07-March-2022	SDLT05	Emergency Button TB100 pressed	16:20:59
07-March-2022	SDLT06	Emergency Button TB100 pressed	14:09:59
08-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
08-March-2022	SDLT06	Emergency Button TB100 pressed	13:50:59
09-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
10-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
11-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
12-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
13-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
14-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
15-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
16-March-2022	SDLT05	Internal shutdown	23:59:59
17-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
18-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
19-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
20-March-2022	SDLT05	Emergency Button TB100 pressed	23:59:59
21-March-2022	SDLT05	Emergency Button TB100 pressed	15:39:00
22-March-2022	SDLT06	Internal shutdown	12:45:54
23-March-2022	SDLT06	Stator breaker failed in closing when demanded to close.	13:55:00
26-March-2022	SDLT05	Emergency Button TB100 pressed	8:11:59
27-March-2022	SDLT05	Emergency Button TB100 pressed	11:13:59
31-March-2022	SDLT06	Pitch is started but the Capacitor State is not hysteresis Charge	0:30:12
Total Breakdown Hours			1413:42:03

For Savarkundla, Gujarat Site

Date	WTG No.	Breakdown Description	Duration
02-July-2021	SVRT138	Blade 2: IPS was not active in feathering position.	23:59:59
04-July-2021	SVRT138	Blade 2: IPS was not active in feathering position.	23:59:59
05-July-2021	SVRT138	Blade 2: IPS was not active in feathering position.	23:59:59
07-July-2021	SVRT138	Blade 2: IPS was not active in feathering position.	23:59:59
10-July-2021	SVRT123	Blade 2: Can Communication failure (Slave or Master not in operational state or Guarding error).	23:59:59
10-July-2021	SVRT138	Blade 2: IPS was not active in feathering position.	23:59:59
11-July-2021	SVRT123	Blade 2: Can Communication failure (Slave or Master not in operational state or Guarding error).	23:59:59
11-July-2021	SVRT138	Blade 2: IPS was not active in feathering position.	23:59:59
15-July-2021	SVRT138	Blade 2: IPS was not active in feathering position.	18:17:00
17-July-2021	SVRT37	Breakdown Maintenance	16:45:00
18-July-2021	SVRT37	Breakdown Maintenance	23:59:59
19-July-2021	SVRT37	Breakdown Maintenance	15:55:00
20-July-2021	SVRT37	Breakdown Maintenance	23:59:59
21-July-2021	SVRT37	Breakdown Maintenance	23:59:59
22-July-2021	SVRT37	Breakdown Maintenance	21:09:59
12-August-2021	SVRT36	Blade 1: Blade angle greater allowed maximum.	23:59:59
13-August-2021	SVRT36	Blade 1: Blade angle greater allowed maximum.	16:55:00
14-August-2021	SVRT36	Blade 1: Blade angle greater allowed maximum.	23:59:59
14-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	23:59:59
15-August-2021	SVRT36	Blade 1: Blade angle greater allowed maximum.	23:59:59
15-August-2021	SVRT69	Blade 1: Blade angle greater allowed maximum.	18:25:00
15-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	23:59:59

16-August-2021	SVRT36	Blade 1: Blade angle greater allowed maximum.	22:15:00
16-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	22:15:00
17-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	23:59:59
17-August-2021	SVRT37	GSC IGBT temperature above error limit.	23:59:59
18-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	23:59:59
18-August-2021	SVRT138	Blade 3: IPS was active in wrong area.	23:59:59
18-August-2021	SVRT37	GSC IGBT temperature above error limit.	23:59:59
19-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	23:59:59
19-August-2021	SVRT137	Stator breaker tripped.	15:30:00
19-August-2021	SVRT37	GSC IGBT temperature above error limit.	18:00:00
21-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	23:59:59
22-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	15:59:59
24-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	23:59:59
25-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	23:59:59
26-August-2021	SVRT136	Blade 1: Blade angle greater allowed maximum.	20:31:00
26-September-2021	SVRT34	Special Activity	15:50:00
27-September-2021	SVRT33	Yaw teeth lubrication is in maintenance state.	15:24:00
28-September-2021	SVRT35	Special Activity	15:38:00
29-September-2021	SVRT36	Special Activity	16:32:00
02-October-2021	SVRT123	Special Activity	17:04:00
03-October-2021	SVRT36	Blade 1: IPS was not active in feathering position.	17:25:00
04-October-2021	SVRT138	Special Activity	15:28:00
05-October-2021	SVRT137	Special Activity	17:11:00
06-October-2021	SVRT136	ROW	16:21:00
07-October-2021	SVRT137	ROW	17:15:00
07-October-2021	SVRT138	ROW	17:15:00
07-October-2021	SVRT34	ROW	17:15:00
07-October-2021	SVRT35	ROW	17:15:00

07-October-2021	SVRT36	ROW	17:15:00
07-October-2021	SVRT67	ROW	17:15:00
07-October-2021	SVRT69	ROW	17:15:00
07-October-2021	SVRT136	ROW	17:15:00
07-October-2021	SVRT139	ROW	17:15:00
07-October-2021	SVRT33	ROW	17:15:00
07-October-2021	SVRT37	ROW	17:15:00
07-October-2021	SVRT73	ROW	17:15:00
07-October-2021	SVRT123	ROW	17:15:00
09-October-2021	SVRT137	ROW	16:22:00
09-October-2021	SVRT138	ROW	16:22:00
09-October-2021	SVRT34	ROW	16:22:00
09-October-2021	SVRT35	ROW	16:22:00
09-October-2021	SVRT36	ROW	16:22:00
09-October-2021	SVRT67	ROW	16:22:00
09-October-2021	SVRT69	ROW	16:22:00
09-October-2021	SVRT136	ROW	16:22:00
09-October-2021	SVRT139	ROW	16:22:00
09-October-2021	SVRT33	ROW	16:22:00
09-October-2021	SVRT37	ROW	16:22:00
09-October-2021	SVRT73	ROW	16:22:00
09-October-2021	SVRT123	ROW	16:22:00
23-October-2021	SVRT123	ROW	23:59:59
23-October-2021	SVRT136	ROW	23:59:59
23-October-2021	SVRT137	ROW	23:59:59
23-October-2021	SVRT138	ROW	23:59:59
23-October-2021	SVRT139	ROW	23:59:59
23-October-2021	SVRT33	ROW	23:59:59
23-October-2021	SVRT34	ROW	23:59:59
23-October-2021	SVRT35	ROW	23:59:59
23-October-2021	SVRT36	ROW	23:59:59
23-October-2021	SVRT37	ROW	23:59:59
23-October-2021	SVRT67	ROW	23:59:59
23-October-2021	SVRT69	ROW	23:59:59
23-October-2021	SVRT73	ROW	23:59:59
24-October-2021	SVRT123	ROW	23:59:59
24-October-2021	SVRT136	ROW	23:59:59
24-October-2021	SVRT137	ROW	23:59:59
24-October-2021	SVRT138	ROW	23:59:59

24-October-2021	SVRT139	ROW	23:59:59
24-October-2021	SVRT33	ROW	23:59:59
24-October-2021	SVRT34	ROW	23:59:59
24-October-2021	SVRT35	ROW	23:59:59
24-October-2021	SVRT36	ROW	23:59:59
24-October-2021	SVRT37	ROW	23:59:59
24-October-2021	SVRT67	ROW	23:59:59
24-October-2021	SVRT69	ROW	23:59:59
24-October-2021	SVRT73	ROW	23:59:59
25-October-2021	SVRT123	ROW	23:59:59
25-October-2021	SVRT136	ROW	23:59:59
25-October-2021	SVRT137	ROW	23:59:59
25-October-2021	SVRT138	ROW	23:59:59
25-October-2021	SVRT139	ROW	23:59:59
25-October-2021	SVRT33	ROW	23:59:59
25-October-2021	SVRT34	ROW	23:59:59
25-October-2021	SVRT35	ROW	23:59:59
25-October-2021	SVRT36	ROW	23:59:59
25-October-2021	SVRT37	ROW	23:59:59
25-October-2021	SVRT67	ROW	23:59:59
25-October-2021	SVRT69	ROW	23:59:59
25-October-2021	SVRT73	ROW	23:59:59
09-December-2021	SVRT35	Blade 3: RMS Pitch Motor torque overload not plausible (greater than maximum allowed).	23:28:00
12-January-2022	SVRT123	Feeder tripped E/F	20:30:00
12-January-2022	SVRT136	Feeder tripped E/F	20:30:00
12-January-2022	SVRT137	Feeder tripped E/F	20:30:00
12-January-2022	SVRT138	Feeder tripped E/F	20:30:00
12-January-2022	SVRT139	Feeder tripped E/F	20:30:00
12-January-2022	SVRT33	Feeder tripped E/F	20:30:00
12-January-2022	SVRT34	Feeder tripped E/F	20:30:00
12-January-2022	SVRT35	Feeder tripped E/F	20:30:00
12-January-2022	SVRT36	Feeder tripped E/F	20:30:00
12-January-2022	SVRT37	Feeder tripped E/F	20:30:00
12-January-2022	SVRT67	Feeder tripped E/F	20:30:00
12-January-2022	SVRT69	Feeder tripped E/F	20:30:00
12-January-2022	SVRT73	Feeder tripped E/F	20:30:00

31-January-2022	SVRT123	Yaw converter is in state Error external fault.	23:59:59
01-February-2022	SVRT123	Yaw converter is in state Error external fault.	23:59:59
Total Breakdown Hours			2679:48:52

For Kinfra, Kerela Site

18-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:44:00
19-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
20-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
21-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
22-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
23-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	21:18:00
24-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	18:43:00
25-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
26-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:59
27-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
28-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	14:22:00
29-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
30-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	17:20:00
31-July-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
01-August-2021	DJM02	Converter GSA: Encoder error persistence fault.	23:59:00
02-August-2021	DJM02	Converter GSA: Encoder error persistence fault.	16:10:00
19-August-2021	DJM07	Blade 2: IPS was active in wrong area.	22:54:00
20-August-2021	DJM07	Blade 2: IPS was active in wrong area.	23:59:00
21-August-2021	DJM07	Blade 2: IPS was active in wrong area.	23:59:00
22-August-2021	DJM07	Blade 2: IPS was active in wrong area.	23:59:00

23-August-2021	DJM07	Blade 2: IPS was active in wrong area.	23:59:00
24-August-2021	DJM07	Blade 2: IPS was active in wrong area.	15:46:00
10-November-2021	DJM07	Breakdown Maintenance	18:14:00
12-November-2021	DJM07	Breakdown Maintenance	23:59:00
13-November-2021	DJM07	Breakdown Maintenance	23:59:00
15-November-2021	DJM07	Breakdown Maintenance	23:59:00
16-November-2021	DJM05	Preventive Maintenance	22:05:00
16-November-2021	DJM07	Breakdown Maintenance	23:59:00
17-November-2021	DJM07	Breakdown Maintenance	23:59:00
18-November-2021	DJM07	Breakdown Maintenance	23:59:00
19-November-2021	DJM07	Breakdown Maintenance	23:59:00
20-November-2021	DJM07	Breakdown Maintenance	23:59:00
21-November-2021	DJM07	Breakdown Maintenance	23:59:00
22-November-2021	DJM07	Breakdown Maintenance	23:59:00
23-November-2021	DJM07	Breakdown Maintenance	23:59:00
24-November-2021	DJM07	Breakdown Maintenance	23:59:00
25-November-2021	DJM07	Breakdown Maintenance	23:59:00
26-November-2021	DJM01	Yaw converter is in state "Error ! overvoltage"	23:59:00
26-November-2021	DJM07	Breakdown Maintenance	23:59:00
27-November-2021	DJM07	Breakdown Maintenance	23:59:00
28-November-2021	DJM07	Breakdown Maintenance	23:59:00
29-November-2021	DJM05	Breakdown Maintenance	14:23:00
29-November-2021	DJM07	Preventive Maintenance	23:59:00

30-November-2021	DJM05	Breakdown Maintenance	23:59:00
01-December-2021	DJM05	Breakdown Maintenance	23:59:00
02-December-2021	DJM05	Breakdown Maintenance	23:59:00
03-December-2021	DJM05	Preventive Maintenance	23:59:00
04-December-2021	DJM05	Preventive Maintenance	23:59:00
05-December-2021	DJM05	Preventive Maintenance	23:59:00
06-December-2021	DJM05	Preventive Maintenance	23:59:00
07-December-2021	DJM05	Breakdown Maintenance	16:56:00
21-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above.GloPar.SpeMea.RotSpeDevErr	15:29:00
22-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
23-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
24-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
25-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
26-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
27-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
28-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and	23:59:00

		generator speed is above .GloPar.SpeMea.RotSpeDevErr	
29-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
30-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
31-December-2021	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
01-January-2022	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
02-January-2022	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
03-January-2022	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:59:00
04-January-2022	DJM07	Speed measurement plausibility: Speed deviation between rotor speed and generator speed is above .GloPar.SpeMea.RotSpeDevErr	23:20:00
28-January-2022	DJM01	Control release of yaw converter is switched off.	23:59:00
29-January-2022	DJM01	Yaw converter is in state "Error ! overvoltage"	23:59:00
30-January-2022	DJM01	Yaw converter is in state "Error ! overvoltage"	23:59:00
31-January-2022	DJM01	Control release of yaw converter is switched off.	22:34:59
01-February-2022	DJM01	Yaw converter is in state "Error ! overvoltage"	23:59:00
02-February-2022	DJM01	Yaw converter is in state "Error ! overvoltage"	23:59:00
03-February-2022	DJM01	Yaw converter is in state "Error ! overvoltage"	23:59:00
04-February-2022	DJM01	Yaw converter is in state "Error ! overvoltage"	15:35:00

08-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
09-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
10-February-2022	DJM08	Grid voltage is not OK.	23:59:00
11-February-2022	DJM08	Grid frequency from Sineax below operation range.	20:09:00
12-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
13-February-2022	DJM08	Grid voltage is not OK.	23:59:00
14-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
15-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
16-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
17-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
18-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
19-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
20-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
21-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
22-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
23-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
24-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
25-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
26-February-2022	DJM08	Grid frequency from Sineax below operation range.	23:59:00
27-February-2022	DJM08	Grid frequency from Sineax below operation range.	21:57:00
10-March-2022	DJM08	Software Updation& Modification	15:47:00
11-March-2022	DJM08	Software Updation& Modification	23:59:00
12-March-2022	DJM08	Software Updation& Modification	23:59:00
13-March-2022	DJM08	Software Updation& Modification	23:59:00
14-March-2022	DJM08	Software Updation& Modification	23:59:00

15-March-2022	DJM08	Software Updation& Modification	23:59:00
16-March-2022	DJM08	Software Updation& Modification	23:59:00
17-March-2022	DJM08	Software Updation& Modification	17:55:00
Total Breakdown Hours			2341:20:58