



250 MW WIND POWER PROJECT BY MYTRAH ENERGY



Document Prepared by Infinite Solutions

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Project ID	2020
Monitoring Period	01-April-2022 to 30-June-2023 (Inclusive both the dates)
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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The main purpose of this project activity is to generate clean form of electricity through renewable wind energy sources. The project activity installed a 250 MW wind power project in Tamil Nadu state of India.

The project activity supports the development of new grid-connected renewable energy power plants in India and will cover the wind energy technologies. It seeks to enable investment in large scale grid connected plants that export their generated output to the regional / national electricity grid in India. This project activity follows methodology ACM0002 version 19.0.

Over the 10 years of first crediting period, the project will replace average anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 506,370 tCO₂e per year, thereon displacing average electricity generation about 540,531.5 MWh/year amount of electricity from the generation-mix of power plants connected to the Indian grid, which is mainly dominated by thermal/fossil fuel-based power plant.

The commissioning details of the project and their location of installation are mentioned in the table below: -

Name of Investor	Capacity in MW	COD	Connection with Grid	State	Usage
Mytrah Vayu (Sabarmati) Pvt. Ltd.	128.70 MW	30-January-2019	Indian Grid	Tamil Nadu	Supply to grid
	58.32 MW	16-April-2019			
	63.18 MW	11-May-2019			

Total emission reductions achieved in this monitoring period:

During the Current Monitoring Period from 01-April-2022 to 30-June-2023 (Inclusive of both the dates) the project activity has supplied 611,052.53 MWh of electricity, and thus contributing to the GHG reductions 572,433 tCO₂e. Further the project underwent continued operation except for scheduled maintenance and breakdowns.

The audit history is given below-

Audit Type	Period	Program	VVB Name	Number of years
Validation/ Verification	30-January-2019 to 30-November- 2019 (Inclusive of both the days)	<u>VCS</u>	<u>Earthhood Services Private Limited</u>	10 months,1 day
Verification	01-Decemeber- 2019 to 31-March- 2020(Inclusive of both the days)	<u>VCS</u>	<u>LGAI Technological Center S.A.</u>	04 months,00 days
Verification	01-April-2020 to 31-May- 2021(Inclusive of both the days)	<u>VCS</u>	<u>KBS Certification Services Pvt. Ltd</u>	01 year,02 months,00 days
Verification	01-June-2021 to 28-February- 2022(Inclusive of both the days)	<u>VCS</u>	<u>LGAI Technological Center S.A.</u>	09 months, 00 days
Verification	01-March-2022 to 31-March- 2022(Inclusive of both the days)	<u>VCS</u>	<u>LGAI Technological Center S.A.</u>	00 year, 1 month,31 days
Verification	01-April-2022 to 30-June-2023 (Inclusive both the dates)	<u>VCS</u>	<u>VKU Certifications</u>	01 year, 03 months,00 days
Total	<u>30-January-2019 to 30-June-2023 (Inclusive of both the days)</u>	<u>VCS</u>		4 years, 05 months, 01 day

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

Project Category : Grid-connected electricity generation from renewable sources
ACM0002- Version 19.0¹

Tools referred with above methodology are:

¹ <https://cdm.unfccc.int/UserManagement/FileStorage/58IAGB7SZUDEO2VN6LYM30K41HFPRQ>

- Tool to calculate the emission factor for an electricity system² - Version 07.0 (EB 100, Annex 04)
- Tool for the demonstration and assessment of additionality³ - Version 07.0.0 (EB 70, Annex 08)

1.3 Project Proponent

Organization name	Mytrah Vayu (Sabarmati) Pvt. Ltd.
Contact person	Mr. Ramesh Kure
Title	Assistant Manager
Address	1st Floor, 8001, 8th Floor, Q-City, Nanakramguda, Gachibowli, Hyderabad 500032, Telangana, INDIA
Telephone	+91 72888 75975
Email	ramesh.kurre@jsw.in

1.4 Other Entities Involved in the Project

Organization name	Infinite Solutions LLP
Role in the Project	Carbon Consultant
Contact person	Jimmy Sah
Title	Project Manager
Address	214-215 Milinda Manor, Opp. Next Treasure Island, 2 RNT Marg, Indore-452001
Telephone	+91-731-4050174
Email	Jimmy@infisolutions.org

² <http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v7.0.pdf>

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

1.5 Project Start Date

Start date of the project activity is the earliest date of interconnection with the grid i.e. 30-January-2019. This is the date of commissioning of first WTG of this project activity with ID MAN-058_377

The details of the commissioning dates of the individual project activity are mentioned in the section 1.1 of this report

1.6 Project Crediting Period

First Crediting Period start date: 30-January-2019 Crediting Period End date: 29-January-2029

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

1.7 Project Location

The details of the project locations are mentioned in the table below-

Name of Investor	Capacity (MW)	Village(s)	District	State
Mytrah Vayu (Sabarmati) Pvt.Ltd.	250 MW	Kadambur, Kuppanapuram, Ottarampatti, Vandanam, Kayathar, Akhilandapuram & Paneerkulam	Tuticorin	Tamil Nadu

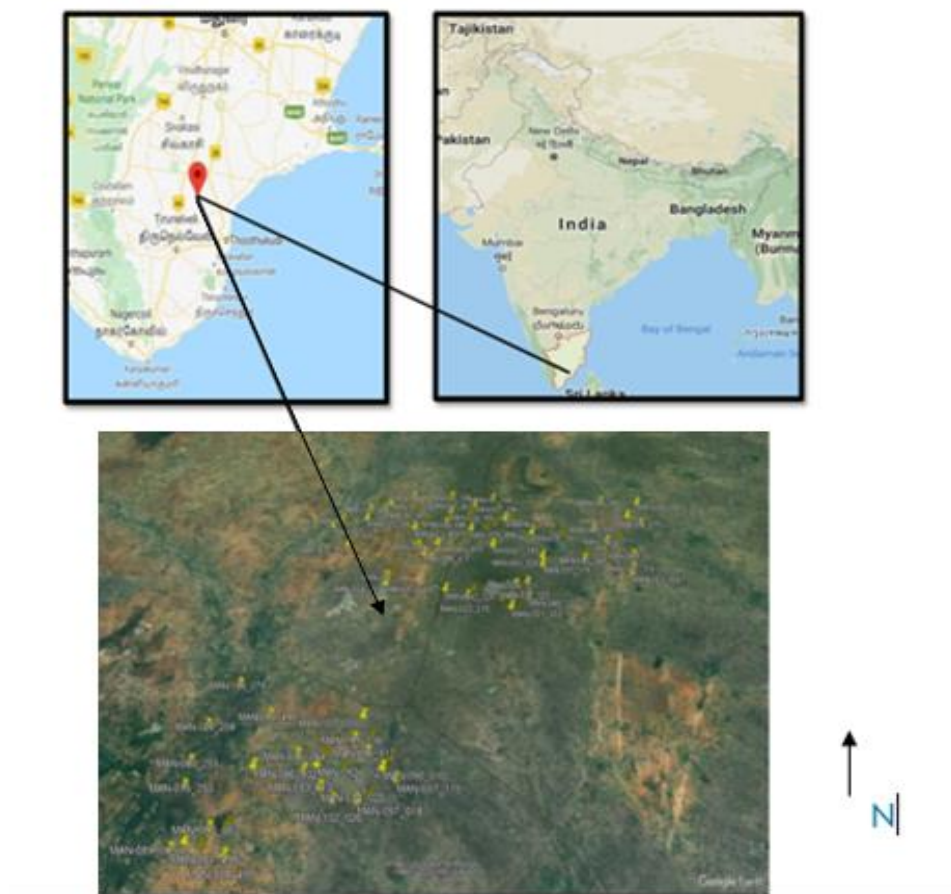
Respective WTG location along with coordinates are mentioned below.

S.No	WTG Label	Latitude	Longitude
1.	MAN 002	N 8.809	E77.84998
2.	MAN 003	N 8.778367	E77.85313
3.	MAN 004	N8.772347	E77.85593
4.	MAN 005	N 8.76965	E77.84825
5.	MAN 010	N8.837225	E77.90158
6.	MAN 011	N8.830439	E77.87491
7.	MAN 012	N8.823836	E77.87463
8.	MAN 013	N8.818242	E77.87136
9.	MAN 015	N8.848419	E77.88881
10.	MAN 016	N8.842678	E77.88212
11.	MAN 017	N8.840242	E77.89114
12.	MAN 018	N8.818681	E77.90023
13.	MAN 019	N8.828872	E77.88701
14.	MAN 020	N8.815636	E77.88268
15.	MAN 022	N8.843161	E77.90273

16.	MAN 026	N8.813792	E77.89095
17.	MAN 055	N8.855319	E77.87854
18.	MAN 079	N8.839344	E77.81342
19.	MAN 082	N8.783961	E77.85901
20.	MAN 115	N8.835708	E77.90985
21.	MAN 125	N8.964742	E77.77809
22.	MAN 126	N9.030178	E 77.83171
23.	MAN 127	N9.026264	E 77.83206
24.	MAN 136	N9.004758	E 77.79832
25.	MAN 146	N8.998322	E 77.81055
26.	MAN 158	N8.992817	E 77.81932
27.	MAN 159	N8.996278	E77.82852
28.	MAN 160	N9.003544	E77.82821
29.	MAN 161	N9.007456	E 77.8177
30.	MAN 162	N 9.011506	E77.80806
31.	MAN 184	N 9.009011	E77.84106
32.	MAN 185	N 9.015131	E77.83923
33.	MAN 189	N 9.019819	E77.851
34.	MAN 194	N 9.033147	E77.87633
35.	MAN 196	N 9.018553	E77.87088
36.	MAN 197	N 9.012342	E77.8682
37.	MAN 199	N 8.999214	E77.8787
38.	MAN 201	N 8.983278	E77.86006
39.	MAN 215	N 8.951119	E77.88529
40.	MAN 222	N 8.963753	E77.91006
41.	MAN 253	N 8.786503	E77.83001
42.	MAN 255	N 8.7963	E77.82353
43.	MAN 258	N 8.814097	E77.81644
44.	MAN 264	N 8.82305	E77.86397
45.	MAN 280	N 8.982508	E77.79321
46.	MAN 297	N 9.03345	E77.83153
47.	MAN 299	N 9.031314	E77.8496
48.	MAN 301	N 8.972153	E77.78008
49.	MAN 304	N 9.042364	E77.85759
50.	MAN 305	N 9.037522	E77.86536
51.	MAN 311	N 9.023358	E77.89529
52.	MAN 312	N 9.031442	E77.91377
53.	MAN 314	N9.022422	E77.96278
54.	MAN 319	N 8.998128	E 77.91341
55.	MAN 320	N 8.978619	E77.91156
56.	MAN 321	N 8.9734	E 77.906
57.	MAN 322	N 8.968036	E77.91684
58.	MAN 323	N 8.958469	E 77.8858

59.	MAN 324	N 8.949781	E77.87146
60.	MAN 326	N 9.004964	E77.91043
61.	MAN 328	N 9.028475	E77.89494
62.	MAN 340	N 9.0148	E77.93431
63.	MAN 341	N 9.022247	E77.93379
64.	MAN 345	N 9.04025	E77.92408
65.	MAN 349	N 9.051353	E77.92259
66.	MAN 350	N 9.045958	E77.92956
67.	MAN 351	N 9.033719	E77.95983
68.	MAN 353	N 8.956272	E77.91134
69.	MAN 356	N 9.018386	E77.9637
70.	MAN 361	N 9.047047	E77.94705
71.	MAN 362	N 9.052819	E77.93588
72.	MAN 366	N 9.076294	E77.92414
73.	MAN 370	N 9.070608	E77.94486
74.	MAN 377	N 9.066478	E77.95506
75.	MAN 378	N 9.088472	E77.94624
76.	MAN 379	N 9.02785	E77.87427
77.	MAN 380	N 8.958842	E77.90397
78.	MAN 388	N 8.953858	E77.79786
79.	MAN 398	N 8.941672	E77.83564
80.	MAN 405	N 8.989708	E77.82627
81.	MAN 412	N 8.974625	E77.83758
82.	MAN 415	N8.983044	E77.84712
83.	MAN 416	N8.975169	E 77.85367
84.	MAN 417	N 8.971194	E 77.84426
85.	MAN 437	N 9.038525	E 77.94094
86.	MAN 443	N 9.020061	E 77.81988
87.	MAN 444	N 8.945711	E 77.83807
88.	MAN 480	N 8.969283	E 77.78793
89.	MAN 481	N 8.97375	E 77.78521
90.	MAN 483	N 8.991119	E 77.78938
91.	MAN 485	N 8.995136	E 77.79921
92.	MAN 486	N8.998583	E 77.79025
93.	MAN 488	N 9.006783	E77.85913
94.	MAN 490	N 8.832925	E 77.83889
95.	MAN 492	N 8.939364	E 77.844914
96.	MAN 493	N 9.019844	E 77.851033
97.	MAN 494	N 9.034158	E 77.84158
98.	MAN 497	N 9.017219	E 77.80858
99.	MAN 498	N 8.764122	E 77.8456
100.	MAN 499	N 8.773289	E 77.86659
101.	MAN 495	N 9.038792	77.886015

102.	MAN 496	N 9.041891	E 77.897636
103.	MAN 504	N 9.003203	E 77.842199
104.	MAN 505	N 8.9978	E 77.848941
105.	MAN 024	N 8.8243	E 77.9042



1.8 Title and Reference of Methodology

Title : Grid-connected electricity generation from renewable sources

Reference : The project activity meets the eligibility criteria of large scale project as estimated average annual GHG emission reductions or removals greater than 300,000 tonnes of CO₂e per year

Methodology : ACM0002: Grid-connected electricity generation from renewable sources - Version 19.0⁴

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

Category : Approved Consolidated Methodology (ACM0002)

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

⁴ <https://cdm.unfccc.int/UserManagement/FileStorage/58IAGB7SZUDEO2VN6LYM30K41HFPRQ>

- Tool to calculate the emission factor for an electricity system⁵ - Version 07.0 (EB 100, Annex 04)
- Tool for the demonstration and assessment of additionality⁶ - Version 07.0.0 (EB 70, Annex 08),

1.9 Participation under other GHG Programs

The project has neither been registered nor seeking registration under any other GHG programs. The project is seeking registration only in VCS program.

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

Include the following information, as applicable:

- Emission Trading Programs and Other Binding Limits: The PP has not applied this project in any Emission Trading Programs and other Binding Limits.
- Other Forms of Environmental Credit: The PP has not applied this project in any other form of environmental credits or for REC or iREC benefits. PP not participating for REC benefits can be verified from this link- https://www.recregistryindia.nic.in/index.php/publics/accredited_regens

1.11 Sustainable Development Contributions

The wind Project is located at Tuticorin District of Tamil Nadu, India. The Wind power or wind energy describes the process by which the wind is used to generate electricity. Wind turbines convert the kinetic energy in the wind into mechanical power.

The project is contributing in sustainable development by generating electricity and reduction of CO₂ emissions due to implementation of project activity and generates employment to the local stakeholders. Through Project activity economic development has been achieved in the project location by creating opportunities of employment during the project lifetime. Project owner monitors the carbon emission with help of the record of electricity generated.

⁵ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf>

⁶ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

Table 1: Sustainable Development Contributions

The project is wind power project, it has generated 611,052.53 MWh electricity and avoided 572,433 tonnes of greenhouse gas emissions in the atmosphere during the current monitoring period. Also 10 peoples were employed and 2 trainings were provided to them during current monitoring period. So, the project contributes to SDG 7, SDG8 and SDG 13.

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	About 611,052.53 MWh, renewable electricity has supplied to Indian grid during the reported period that helps to increase the renewable energy share in the energy mix.	Since Commissioning, about 1,978,949 MWh ⁷ renewable electricity has supplied to Indian grid that helps to increase the renewable energy share in the energy mix	
					Monitoring period	Contribution in MWh
					30-January-2019 to 30-November-2019 (including both the days)	308,957
					01-Decemeber-2019 to 31-March-2020(including both	107,139.04

⁷ Can ben checked from previous verification reports available on <https://registry.verra.org/app/projectDetail/VCS/2020>

					the days)	
					01-April-2020 to 31-May-2021 (including both the days)	538,540.73
					01-June-2021 to 28-February-2022(including both the days)	390,802
					01-March-2022 to 31-March-2022(including both the days)	22,458
					01-April-2022 to 30-June-2023(including both the days)	611,052.53

2)	8.6	8.6.1 Proportion of youth (aged 15-24) not in education, employment or training	Implemented activities to increase	Total- 10 employees are employed during this reporting period. Employee details are mentioned in Appendix-3Total 2 trainings were provided during the current monitoring period- Trainings provided are as follows- <table><thead><tr><th>S.NO</th><th>Topic</th><th>date</th><th>Attendees</th></tr></thead><tbody><tr><td>1</td><td>HIRA Safety training</td><td>10-August-2022</td><td>10</td></tr><tr><td>2</td><td>Road Safety</td><td>18-January-2022</td><td>10</td></tr></tbody></table>	S.NO	Topic	date	Attendees	1	HIRA Safety training	10-August-2022	10	2	Road Safety	18-January-2022	10	The lifetime contribution for the project is <table><thead><tr><th>Monitoring period</th><th>Contribution</th></tr></thead><tbody><tr><td>01-March-2022 to 31-March-2022(including both the days)</td><td>1 training and 97 employees</td></tr><tr><td>01-April-2022 to 30-June-2023(including both the days)</td><td>2 trainings and 10 employees</td></tr></tbody></table> Before the mentioned monitoring period contribution of SDG 8 was not monitored.	Monitoring period	Contribution	01-March-2022 to 31-March-2022(including both the days)	1 training and 97 employees	01-April-2022 to 30-June-2023(including both the days)	2 trainings and 10 employees
S.NO	Topic	date	Attendees																				
1	HIRA Safety training	10-August-2022	10																				
2	Road Safety	18-January-2022	10																				
Monitoring period	Contribution																						
01-March-2022 to 31-March-2022(including both the days)	1 training and 97 employees																						
01-April-2022 to 30-June-2023(including both the days)	2 trainings and 10 employees																						
3)	13.0	Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase	By supplying 611,052.53 MWh clean electricity to Indian grid, the project avoided release of 572,433 tCO₂ in to the atmosphere during the reporting period.	Prevented the release of 1,853,869⁸ Tonnes of carbon in the atmosphere <table><thead><tr><th>Monitoring period</th><th>Contribution in tCO₂</th></tr></thead><tbody><tr><td>30-January-2019 to 30-</td><td>289,425</td></tr></tbody></table>	Monitoring period	Contribution in tCO ₂	30-January-2019 to 30-	289,425														
Monitoring period	Contribution in tCO ₂																						
30-January-2019 to 30-	289,425																						

⁸ can ben checked from previous verification reports available on <https://registry.verra.org/app/projectDetail/VCS/2020>

					November-2019 (including both the days)	
					01-Decemeber-2019 to 31-March-2020(including both the days)	100,366
					01-April-2020 to 31-May-2021 (including both the days)	504,504
					01-June-2021 to 28-February-2022(including both the days)	366,103
					01-March-2022 to 31-March-2022(including both the days)	21,038
					01-April-2022	572,433

					to 30-June-2023(including both the days)	
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2 SAFEGUARDS

2.1 No Net Harm

The project activity does not involve any harm to the local ecology. It primarily requires the installation of the WTGs, interfacing the generators with the State Electricity Board by setting up HT transmission lines and installation of other accessories.

The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013⁹. This report clearly mentioned that wind project activity operations do not result in direct air pollution, noise pollution. Please refer below web link for the same. During the current monitoring period there is no any significant impacts due to implementation of project activity on air, water, soil quality and ambience are envisaged due to the project activity and project is implemented as per VCS approved PD, hence there is no negative environmental and socio-economic impacts.

2.2 Local Stakeholder Consultation

The stakeholders identified for the project were: the usual occupants of the villages around and the local communities, NGOs, governmental agencies, employees, contractors. Local population is considered to be a major stakeholder with respect to the project activity. The stakeholders of the project activity were invited to attend the stakeholder meeting. Personal invitations were also sent to the prominent members (villagers, local community people) of the regions in the vicinity.

A discussion was held in which the views of the local stakeholders were addressed. The stakeholder meeting was at the time of validation of this project activity.

Date of Invitation	Meeting date
25-July-2017	01-August-2017

Representative of the project proponent explained the purpose of the meeting and detailed each question in the questionnaire. He further explained about the advantages of the wind energy generation and explained how the project would help in reducing demand supply gap in environment friendly manner.

According to the feedback received from the stakeholders, due to the erection of wind farms the socioeconomic situation in the area and the village people’s living standard has been improved. It has not only provided employment but also significantly contributed to the infrastructure

⁹ https://odishainnovationcell.nic.in/Content/SIC/Articles/RE_Development_Impacts_in_India.pdf

development likes roads. Local Stakeholder consultation had been carried out during VCS registration of this project activity. There were no comments that required follow up action from PP. The PP also placed maintained grievance record where the stakeholder complains are recorded and the same if found genuine will be addressed immediately. During the current monitoring period, no negative comments are received from the local stakeholders. Thus, no any mitigations have been applied.

2.3 AFOLU-Specific Safeguards

Not applicable as this is not AFLOU project.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The project activity involves the installation of Wind project. The total installed capacity of the project is 250 MW Wind project located at Tamil Nadu state in India. The project is promoted by Mytrah Vayu (Sabarmati) Pvt. Ltd.

The Project activity is a new facility (Greenfield) and the electricity generated by the project will be exported to the Indian electricity grid. The project will therefore displace an equivalent amount of electricity which would have otherwise been generated by fossil fuel dominant electricity grid. The Project Proponent plans to avail the VCS benefits for the project. The project has been under operation since commissioning without any major breakdowns. Though normal breakdowns due to O&M measures are continuously being worked upon by the dedicated O&M contractor for the project's WTGs. There has been no event that may have an impact on the GHG emissions or removals during the current monitoring period.

The technical specification for 250 MW Wind project is provided below: -

The Company is using GE make, 2.43 MW¹⁰ rated capacity WTG having rotor diameter of 116 meters and hub height of 94 Meters, at Tamil Nadu. The technical specifications given below:

Parameter	Specification
Installed electrical output	2.43 MW
Number of blades	3
Diameter	116 m
Swept area	10,568 m ²

¹⁰ <https://en.wind-turbine-models.com/turbines/1837-ge-general-electric-ge-2.0-2.7-116#:~:text=The%20rated%20power%20of%20GE,area%20amounts%20to%2010.660%20m%C2%B2.>

Hub height	94 m
Rated wind speed	11 m/s
Rotor speed	15.68 rpm
Rotational Direction	Clockwise looking downwind
Generator	Doubly fed asynchronous generator
Tip speed @ rated power	85.4 m/s
Orientation	upwind
Speed regulation	Pitch control
Voltage	690.0 V
Aerodynamics brakes	Full feathering
Certifications	IEC 61400-1; IEC class S

Power Evacuation Procedure:

The voltage generated at the rotor is stepped up from 690 V ac to 33 kv ac. Further at Mytrah Pooling substation voltage is stepped up from 33kv to 230 KV having Indo tech transformer of capacity 2.6 MVA and then transmitted to GSS (PGCL). Internally SCADA is installed for automatic monitoring. The project is connected by 230 kV and the site substation is connected to PGCL and further transmitted to Indian grid. The GSS transformer capacity is 2X 150 MVA and make is Prime Meidem. There is only dedicated feeder i.e. BAY 220 connected to the project activity.

Power will be evacuated through 230KV transmission line is connected to PGCL Tuticorin GIS PS (230/400 Kv) at District Tuticorin. Connectivity and LTA Permission have been received from PGCL in the name of the Company for 250 MW capacity. There is no change from the previous monitoring scenario

3.2 Deviations

3.2.1 Methodology Deviations

No methodological deviation applicable in current monitoring period.

3.2.2 Project Description Deviations

Deviation 1:

This deviation is a permanent monitoring deviation. The meter reading practice in India is upgrading to optimum level which based on robust technology and requires minimum human intervention. Currently in this monitoring period, the deviation is for Tamil Nadu state project having Project Investor name Mytrah Vayu (Sabarmati) Pvt. Ltd. but not limited to further upgradation at another states of India.

The monitoring practice is updated (October 2018) and it's shifted to Deviation Settlement Mechanism (DSM) in order to more strengthen the national grid. The export and import values are omitted and no longer provided, only net export values are being provided for the invoicing

to respective boards/government institutions. In DSM, PP have to forecast electrical energy generation in day time blocks (In India, 15 minutes each block, total 96 blocks) well in advance.

The invoicing is done on the forecasted value. The actual generation deviation from the forecasted values is penalized, it depends upon the deviation magnitude. Therefore, instead of export and import values, the net values is directly obtained (either by including deviation to the schedule values or directly considering the actual values from the SRPC report) for the emission reduction calculation. The approach doesn't effect the VCU calculation

For Southern Region, Total Energy schedule and the Actual values (which is the actual Net delivered) is maintained by the Southern Regional Power Committee (SRPC) Secretariat, Central Electricity Authority, Government of India. Regional Energy Account (monthly net export) for every month in respect of Southern Region has been uploaded on the SRPC website, www.srpc.kar.nic.in. Since the document is provided by government nodal agency, therefore no any cross-checking is required.

The nature of deviation is permanent.

The above deviation is approved in 2nd periodic verification for monitoring period 01-Decemeber-2019 to 31-March-2020(Inclusive of both the days)

There is no deviation required for the current and present verification.

Deviation 2:

PP has requested for deviation regarding the change in feeder from the registered VCS PD. During the time of validation PP was using two feeders i.e Bay-222 and Bay-223. Bay-223 is now being transferred to M/s orange power. The feeder details are provided below:-

Feeder number	Meter serial numbers
Bay-222	SA0016A, SA0014A, SA0013A
Bay-223	SA0015A, SA0011A, SA0012A

The above change does not have any impact on emission reductions, applicability of the methodology, additionality or the appropriateness of baseline scenario. And, therefore deviation is sought for the same from the registered PD. This deviation is a permanent applicable in current monitoring period.

This deviation was approved in 3rd Verification for monitoring period 01-April-2020 to 31-May-2021(Inclusive of both the days)

Deviation -3

Due to typo error geo-coordinates of following WTGs were mentioned incorrect.

The correct geo-coordinates along with WTG label are as follows-

		Old Geo coordinates		Correct geo coordinates	
S.No	WTG label	Latitude	Longitude	Latitude	Longitude
1)	MAN 321	N 8.9734	E77.92288	N8.9734	E77.9062

2)	MAN 492	N9.0387	E77.88599	N8.939364	E77.844914
3)	MAN 493	N9.0147	E77.84943	N9.019844	E77.851033

The geo coordinates and WTG labels of below mentioned WTG were mentioned incorrect in registered PD due to typographic error.

Old WTG label and Geo coordinates as per registered VCS PD				Correct WTG labels and geo coordinates		
S.No	WTG Label	Latitude	Longitude	Correct WTG label	Latitude	Longitude
1)	MAN 204	N8.8243	E77.90424	Man 024	N8.8243	E77.9042
2)	MAN 355	N9.0387	E77.88599	MAN 495	N9.0387	E77.8860
3)	MAN 491	N9.0147	E77.84943	MAN 496	N9.0418	E77.8976
4)	MAN 500	N8.909861	E77.82761	MAN-505	N8.9978	E77.848941
5)	MAN 501	N8.902567	E77.8362	MAN 504	N9.003203	E77.842199

Hence, the deviation is requested as the correction in the WTG label and geo-coordinates. Same is incorporated in section 1.7.

This deviation is requested in current monitoring period.

Deviation -4

In section A.1 the capacity in MW were mentioned incorrect due to typographical error. The correct details are as follows-

Name of Investor	Capacity in MW	COD	Connection with Grid	State	Usage
Mytrah Vayu (Sabarmati) Pvt. Ltd.	128.70 MW	30-January-2019	Indian Grid	Tamil Nadu	Supply to grid
	58.32 MW	16-April-2019			
	63.18 MW	11-May-2019			

This deviation is requested in current monitoring period.

3.3 Grouped Projects

The project is not a grouped project.

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 14, December 2018 ¹¹
Value applied	0.9610
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 3-year generation weighted average using data for the years 2015-2016, 2016-2017 & 2017-2018. The data are obtained from “CO ₂ Baseline Database for Indian Power Sector” version 14, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of Data	For the calculation of the Baseline Emission
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 14, December 2018
Value applied	0.8644
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 2018. The data is obtained from “CO ₂ Baseline Database for Indian Power Sector” version 14, published by the Central Electricity Authority, Ministry of Power, Government of India.
Purpose of Data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire crediting period.

¹¹ https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver14.pdf

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 14, December 2018 ¹²
Value applied	0.9368
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% Calculated as per “Tool to calculate the emission factor for an electricity system, version 07.0.0”. The data is obtained from “CO₂ Baseline Database for Indian Power Sector” Version 14, December 2018, 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.

4.2 Data and Parameters Monitored

Data / Parameter	$EG_{PJ,y}$
Data unit	MWh/y
Description	Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid during the monitoring period
Source of data	Regional Energy Account
Description of measurement methods and procedures to be applied	Data Type: Measured Monitoring equipment: Energy Meters are used for monitoring. Recording Frequency: Continuous monitoring and Monthly recording from Energy Meters, Summarized Annually Archiving Policy: Paper & Electronic

¹² http://cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver14.pdf

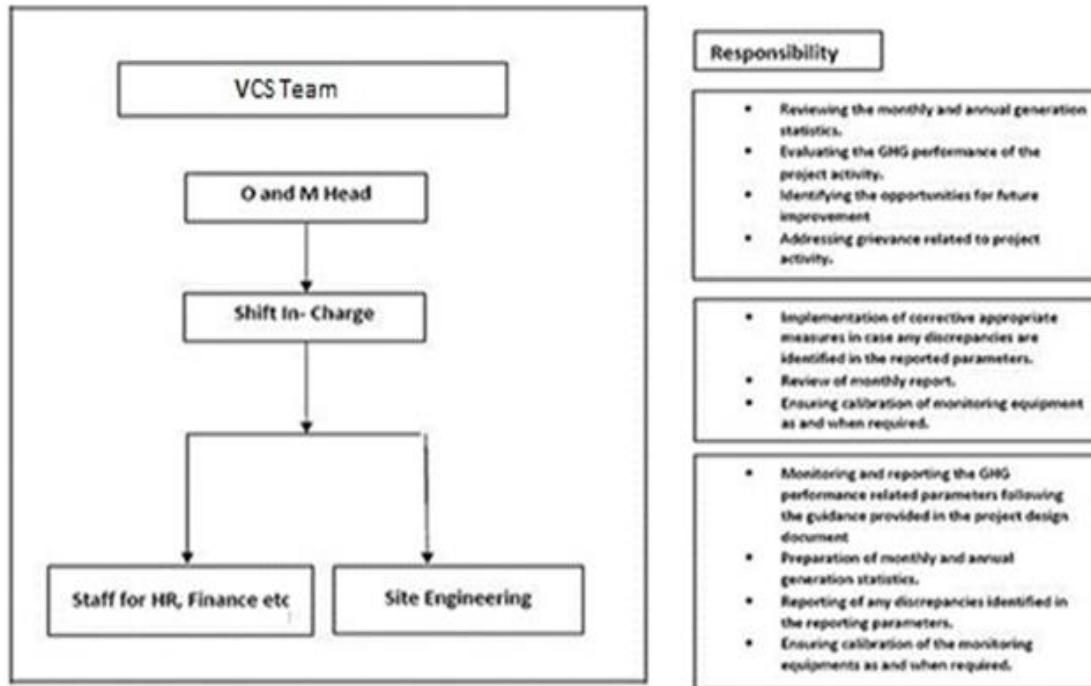
	Class of meter: 0.2s. Calibration frequency: Once in five years¹³ The value of net electricity generation supplied to the grid as per Regional Energy Account statement issued by SRPC forms the basis for calculation of the emission reductions; For Southern Region, Total Energy schedule and the Actual values (which is the actual Net delivered) is maintained by the Southern Regional Power Committee (SRPC) Secretariat, Central Electricity Authority, Government of India. Regional Energy Account (monthly net export) for every month in respect of Southern Region is uploaded on the SRPC website, www.srpc.kar.nic.in . Since the document is provided by government nodal agency, therefore no any cross-checking is required.
Frequency of monitoring/recording	Continuous monitoring and monthly recording
Value monitored	611,052.53
Monitoring equipment	Special Energy Meters (SEMs) of 0.2s accuracy class. .
QA/QC procedures to be applied	Main and standby meter is present as PGCIL (GSS)Whereas the check meter is present at the mytrah pooling substation. In the unlikely event of failure of all Main and Standby meter installed at PPGCIL Substation, where all the faulty meters are required to be repaired or replaced simultaneously, the export & import readings from Check Meter installed at the inter-connection point (Pooling Point) at the project site will be used for monitoring of net electricity exported to the grid.
Purpose of the data	Calculation of Baseline emissions
Calculation method	N/A
Comments	The data would be archived electronically and maintained for the entire crediting period plus two years.

4.3 Monitoring Plan

The monitoring plan is developed in accordance with the modalities and procedures for VCS project activities and is proposed for wind energy power project. The monitoring plan, which will be implemented by the project participant describes about the monitoring organization, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving.

¹³ https://cea.nic.in/wp-content/uploads/2020/02/meter_reg.pdf

The authority and responsibility for registration, monitoring, measurement, reporting and reviewing of the data rests with the project participant. 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:



Monitoring Plan

Data Type: Measured

Monitoring equipment: Energy Meters are used for monitoring. Recording Frequency: Continuous monitoring and Monthly recording from Energy Meters, Summarized Annually

Archiving Policy: Paper & Electronic Class of meter: 0.2s.

Calibration frequency: One in five years¹⁴ as per CEA regulation.

Monitoring consists of metering the net electricity supplied to the grid ($EG_{pi,y}$) on monthly basis. This parameter is based on the monthly Regional Energy Account undertaken by Southern Regional Power Committee, CEA, Ministry of Power, Govt. of India. To the meters at the GSS, there are WTGs of PP and other project connected. Hence, the REA report reflects the total generation from all the WTGs from the project alone, managed by the SECI personal and project representatives. It is to be noted that though the PP or their representatives are available during meter reading, the calculations of net electricity supplied to grid is completely under purview of SECI and PP does not have any control on it.

¹⁴ https://cea.nic.in/wp-content/uploads/2020/02/meter_reg.pdf

The metering system comprises of two individual special energy meters (SEMs) installed at the Government Power substation (PGCIL) and check meter installed at pooling substation. These are connected via four transmission lines of 230 kV. In case, any one transmission line is not in service than complete load will be shifted to other transmission line which is in operation.

In DSM, PP have to forecast energy generation in day time blocks (In India, 15 minutes each block, total 96 blocks) well in advance. The electricity supplied or transmitted is sourced from “Regional Energy Account” which is publicly available document issued by the ‘Southern Regional Power Committee’.

The total Energy schedule and the Actual values (which is the actual Net delivered) is maintained by the Southern Regional Power Committee (SRPC) Secretariat, Central Electricity Authority, Government of India. Regional Energy Account (monthly net export) for every month in respect of Southern Region is uploaded on the SRPC website, www.srpc.kar.nic.in. Since the document is provided by government nodal agency, therefore no any cross-checking is required. The invoicing is done on the forecasted value. The actual generation deviation from the forecasted values is penalized, it depends upon the deviation magnitude.

.Data collection and archiving

Copies of the monthly break-up sheet, invoices raised on DISCOM and sales receipts will be retained and archived for the entire crediting period plus two years by the project investor.

QA/QC procedures:

Energy meters are calibrated once in a five year and faulty meter will be duly replaced immediately. The entire responsibility of this task lies with the state utility. The meter have an accuracy class of at least 0.2s. TNEB has an on-site testing & calibration arrangement; hence there is no need to dismantle the meter for calibration. In case the meters are found faulty and hard to calibrate against the prescribed accuracy class the meter will be replaced by the state utility.

If during any of monthly measurement, main meter is found to be beyond permissible limit of error, then meter shall be calibrated immediately for the period there after the measurements shall be continued in accordance with the calibrated main meter.

Emergency preparedness

The project activity has not resulted in any unidentified activity that can result in substantial emissions from the project activity. No need for emergency preparedness in data monitoring is visualized. In the unlikely event of failure of all Main and Standby meter installed at PGCIL Substation, where all the faulty meters are required to be repaired or replaced simultaneously, the export & import readings from Check Meter installed at the inter-connection point (Pooling Point) at the project site will be used for monitoring of net electricity exported to the grid.

Personnel training

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

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).

Parameter	Unit	Value
$EG_{PJ, y}$	MWh	611,052.53
$EF_{grid, CM, y}$	tCO ₂ e	0.9368
BE_y	=	611,052.53*0.9368
	=	572,433 (Round down value)

5.2 Project Emissions

$PE_y = 0$, As per para 36 of ACM0002 methodology “For all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected”. Hence, $PE_y = 0$

5.3 Leakage

As per para 56 of ACM0002 methodology, No leakage emissions need to be considered for the project activity. Hence, $LE_y = 0$

5.4 Net GHG Emission Reductions and Removals

$$ER_y = BE_y - PE_y - LE_y$$

$$= 572,433 - 0 - 0$$

Where:

ER_y : Net GHG emission reductions or removal (tCO₂e)

BE_y : Baseline emissions (tCO₂e)

PE_y : Project emissions (tCO₂e)

LE_y : Leakage emissions(tCO₂e)

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)
2022	385,720	0	0	385,720
2023	186,713	0	0	186,713
Total	572,433	0	0	572,433

<u>Ex-ante emissions reductions /removals</u>	<u>Achieved emissions reductions/removals</u>	<u>Percent difference</u>	<u>Justification for the difference</u>
419,662tCO ₂ e (Vintage 2022)	385,720 tCO ₂ e	-8.09%%	During the current monitoring period, the plant underwent some minor breakdowns which is 3.71% of operating hours of 105 WTGs. The generation is also less due to lower PLF of 24.95% achieved during this vintage of current monitoring period which is lower as compared to registered PLF of 27.15%. This is also due to variation in climate conditions such as wind pattern and flow rate throughout the year which are beyond the control of the Project Proponent . Hence the actual emission reductions are 8.09% lower as compared to estimated ERs for this vintage
276,214.tCO ₂ e (Vintage 2023)	186,713 tCO ₂ e	-32.40%	During the current monitoring period, the plant underwent some minor breakdowns which is 3.71% of operating hours of 105 WTGs. The generation is also less due to lower PLF of 17.19% achieved during this vintage of current monitoring period which is lower as compared to registered PLF of 27.15%. This is also due to variation in climate conditions such as wind pattern and flow rate throughout the year which are beyond the control of the Project Proponent . Hence the actual emission reductions are 32.40% lower as compared to estimated ERs for this vintage

APPENDIX 1: CALIBRATION DETAILS

Meter Sl.No.	Make	Model	Class	Initial Meter calibration date	Due date of calibration
SA0013A(Main meter)	Secure	Premier	0.2 s	26-June-2021	25-June -2026
SA0014A (check meter)	Secure	Premier	0.2 s	26-June-2021	25-June -2026
SA0016A (standby meter)	Secure	Premier	0.2 s	26-June-2021	25-June -2026

APPENDIX 2: BREAKDOWN DETAILS

Row Labels	Sum of Total Down time
MAN-001_498	19
IGBT Desat, Rotor Bridge	19
MAN-002_492	327.2
Manual Stop	215.95
Pitch Conv. motor field current/voltage not OK axis 1	111.25
MAN-003_125	2304
Battery charging voltage not OK	72
Battery charging voltage not OK Axis1	24
Battery charging voltage not OK Axis2	216
Battery voltage not OK axis 2	168
Battery voltage not OK axis 3	48
Battery voltage not ok in axis 3	24
Generator brush wear shutdown	384
Manual Stop	1368
MAN-004_126	23.91666667
Ground Fault, Rotor	23.91666667
MAN-005_127	475.91666667
Cable supervision pitch motor	91.91666667
Manual Stop	384
MAN-006_184	1392.066667
IGBT Desat, Line Bridge	15
IGBT or Diode Junction Under-temperature, Rotor Converter	48
Manual Stop	1080
Pitch Conv. motor field current/voltage not OK axis 1	249.0666667
MAN-007_115	72
Ground Fault, Line converter	48
Manual Stop	24
MAN-008_499	63
Blown Fuses	15
UPS fault	48
MAN-009_146	216
Battery charging voltage not OK	24
IGBT Desat, Rotor Bridge	120
Manual Stop	72
MAN-011_159	60.25

Battery charging voltage not OK Axis3	15.18333333
Gearbox oil pressure too low	45.06666667
MAN-013_161	5612.2
Generator failure	24
Ground Fault, Line converter	240
Manual Stop	5348.2
MAN-014_020	72
Battery voltage not OK axis 2	24
Manual Stop	48
MAN-015_253	44.68333333
Pitch controller communications fault	44.68333333
MAN-016_264	378.7666667
Ground Fault, Line converter	18.76666667
Restart time delay	24
UPS fault	336
MAN-019_196	455.2
Gearbox oil pressure too low	47.2
Manual Stop	408
MAN-021_199	18.16666667
Battery charging voltage not OK Axis2	18.16666667
MAN-023_215	126.6333333
Battery charging voltage not OK	48
Battery voltage not OK axis 2	48
Gearbox oil pressure too low	30.63333333
MAN-024_222	278.7666667
Manual Stop	192
Safety chain	42.06666667
Safety Chain Trip	44.7
MAN-027_299	23.71666667
DC Link under-voltage	23.71666667
MAN-028_258	96
UPS fault	96
MAN-029_488	24
IGBT Desat, Line Bridge	24
MAN-030_494	307.3166667
Absolute yaw encoder station not ready	96
Communication fault pitch controller Axis 2	67.31666667
Manual Stop	120
Pitch Converter not ready axis 2	24
MAN-031_304	48
Manual Stop	48
MAN-032_305	1673.95

Battery charging voltage not OK Axis3	48
Estop Activated on Axis 2	72
Manual Stop	1512
Pitch control deviation axis 1	17.95
Top Box Fuse or Motor protection alarm	24
MAN-035_311	138.3666667
Cable supervision pitch motor	114.3666667
Manual Stop	24
MAN-036_312	187.6333333
Manual Stop	168
UPS fault	19.63333333
MAN-037_319	24
Cable supervision pitch motor	24
MAN-039_321	360
Gearbox bearing A over temperature	144
Manual Stop	216
MAN-040_322	96
Manual Stop	96
MAN-041_323	1728
Battery charging voltage not OK Axis2	24
Battery voltage not OK axis 2	24
Gearbox oil pressure too low	48
Manual Stop	1632
MAN-049_350	48
Pitch control deviation Axis 2	48
MAN-051_353	223.4
DC Link over-voltage	15.13333333
IGBT damage	20.18333333
Manual Stop	168
Top Box Fuse or Motor protection alarm	20.08333333
MAN-053_356	634.6833333
Contactor or Breaker	139.6166667
HSSL / HSLA, Line converter	39.06666667
Manual Stop	456
MAN-054_361	93.65
Contactor or Breaker	69.65
Manual Stop	24
MAN-060_379	9694.066667
Generator failure	24
Ground Fault, Line converter	24
Ground Fault, Rotor	1582.066667
Ground Fault, Stator	144

Load shutdown	48
Manual Stop	7872
MAN-061_380	153.6
Battery charging voltage not OK	129.6
Cable supervision pitch motor	24
MAN-063_388	68.58333333
Gearbox oil pressure too low	68.58333333
MAN-064_412	15.1
Pitch First Fault_Axis 3_DC Link voltage is less than 80% for more than 5 minutes - check fuses	15.1
MAN-067_314	43.76666667
Cable supervision pitch motor	24
Pitch Converter not ready axis 2	19.76666667
MAN-069_416	90.28333333
Cable supervision pitch motor	72
Pitch Converter not ready axis 3	18.28333333
MAN-070_437	6572.4
Ground Fault, Line converter	744
Ground Fault, Rotor	308.4
Ground Fault, Stator	48
Manual Stop	5472
MAN-071_370	1748.483333
Cable supervision pitch motor	20.48333333
Contact or Breaker	72
Manual Stop	1656
MAN-072_341	264
Manual Stop	168
Tower vibration sensor failure	24
UPS fault	72
MAN-073_405	168
Blown Fuses	24
Manual Stop	120
Vibration Monitor Timeout	24
MAN-076_185	1540.3
C to C Communication	24
Converter communication fault	111.05
Manual Stop	925.25
Pitch Conv. phase loss axis 3	480
MAN-077_443	15.13333333
C to C Communication	15.13333333
MAN-078_444	138.0333333
Manual Stop	138.0333333

MAN-080_485	144
Manual Stop	144
MAN-083_255	24
UPS fault	24
MAN-087_003	192
Thermal Turbine Shutdown	48
Wait for Converter to be ready	144
MAN-088_004	72
UPS fault	72
MAN-089_005	168
Battery charging voltage not OK Axis2	24
Battery voltage not OK axis 2	24
Gearbox oil pressure too low	48
Manual Stop	72
MAN-092_012	804.4666667
Manual Stop	234.4666667
Pitch controller communications fault	18
Vibration Monitor Timeout	552
MAN-093_013	135.35
Absolute yaw encoder station not ready	39.35
HSSL / HSLA, Rotor converter	48
Manual Stop	24
Pitch Conv. marker loss axis 1	24
MAN-094_015	24
IGBT Desat, Line Bridge	24
MAN-097_018	138
Battery voltage not OK axis 1	18
UPS fault	120
MAN-098_019	1728
Manual Stop	984
Top Box Fuse or Motor protection alarm	744
MAN-099_022	229.7833333
Battery charging voltage not OK Axis3	19.81666667
Battery voltage not OK axis 1	17.96666667
Battery voltage not OK axis 3	72
Manual Stop	120
MAN-102_026	48
Absolute yaw encoder station not ready	48
MAN-103_055	264
Cable supervision pitch motor	240
Manual Stop	24
MAN-104_079	524.1833333

Battery charging voltage not OK Axis2	72
Manual Stop	288
Pitch controller communications fault	24
Pitch Converter not ready axis 1	140.1833333
MAN-105_082	65.98333333
Manual Stop	24
Pitch controller communications fault	17.98333333
UPS fault	24
MAN-13_161	24
Manual Stop	24
Grand Total	42744

1) APPENDIX 3: SDG CONTRIBUTION

- 1) For SDG 7- By supplying 611,052.53 MWh clean electricity to Indian grid, the project avoided release of 572,433 tCO₂ in to the atmosphere during the reporting period. The supporting sample JMR are shown below-

Entity	Total Energy Schedule	Total Actual data	Net Deviation for the purpose of REC
SPRNG,NPKUNTA	43226985	45578000	2351015
SBG,PAVAGADA	38620115	37324888	-1295227
AVAADA Solar,PAVAGADA	26124098	26990978	866881
TATA,PAVAGADA	70254833	71572921	1318089
AMPLUS Pavagada,PAVAGADA	8602113	8992900	390787
AMPLUS Tumkur,PAVAGADA	8582565	8960150	377585
Fortum Finnsurya,PAVAGADA	15795850	15363689	-432161
Parmapujya,PAVAGADA	24997383	26561326	1563943
Renew-TN2,PAVAGADA	8865293	8930887	65594
Yarrow,PAVAGADA	8533560	8953503	419943
SBG, NPKUNTA	49205745	48499984	-705761
ADYAH ,PAVAGADA	53180190	56017219	2837029
Fortum Solar,PAVAGADA	42427488	45175643	2748155
KREDL,PAVAGADA	8253813	8406543	152731
Azure Earth,PAVAGADA	17978610	19349805	1371195
Avaada Solarise,PAVAGADA	25884843	26532404	647561
NTPC,RSTPS FSPP	12523475	12310495	-212980
NTPC,Simhadri FSPP	2069500	1811903	-257571
GRT JIPL Solar, Tuticorin	9656088	10280548	624461
NON SOLAR ENTITY			
GIREL,TUTICORIN	75388023	75512931	124908
MYTRAH,TUTICORIN	66781265	66432046	-349219
ORANGE,TUTICORIN	59055385	57292197	-1763188
BETAM,TUTICORIN	69218980	70769712	1550732
SPRNG,PUGULUR	95861858	94832563	-1029295
OSTRO, HIRIYUR	51604860	53447321	1842461
Total Solar Deviation for the purpose of REC		18121258	
Total Non Solar Deviation for the purpose of REC		376399	

Entity	Total Energy Schedule	Total Actual data	Net Deviation for the purpose of REC
Parmapuja,PAVAGADA	29972195	30428506	456311
Renew-TN2,PAVAGADA	10083068	10136909	53842
Yarrow,PAVAGADA	10069638	10334232	264594
SBG, NPKUNTA	0	0	0
Adani Solar,NPKUNTA	51480893	52131760	650868
ADYAH ,PAVAGADA	63297600	64921679	1624079
Fortum Solar,PAVAGADA	48802588	51808478	3005891
KREDL,PAVAGADA	8672938	9403109	730172
Azure Earth,PAVAGADA	21052140	21833782	781642
Avaada Solarise,PAVAGADA	31086325	30864164	-222161
NTPC,RSTPS FSPP	17524918	17465692	-59226
NTPC,Simhadri FSPP	4099700	4021795	-77905
GRT JIPL Solar, Tuticorin	28073020	26889191	-1183829
NTPC-Ettayapuram,(Solar PV), Tuticorin	41465500	42397213	931713
NON SOLAR ENTITY			
GIREL,TUTICORIN	46335440	44182582	-2152858
MYTRAH,TUTICORIN	28172555	24505823	-3666732
ORANGE,TUTICORIN	34631070	32600167	-2030903
BETAM,TUTICORIN	34054158	29805558	-4248600
SPRNG,PUGULUR	29497270	23146464	-6350806
OSTRO, HIRIYUR	37453633	29826144	-7627489
JSW Renew Energy Two Ltd, Tuticorin	8698455	7875802	-822653
Total Solar Deviation for the purpose of REC		12857634	
Total Non Solar Deviation for the purpose of REC		-26900041	

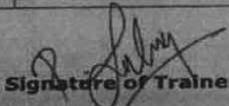
2) For SDG -8- Contribution for SDG 8 is mentioned below-

1) Training records-2 trainings occurred during current monitoring period and the evidence for same is mentioned below


ATTENDANCE SHEET


Format Number	MEIPL/QSHE/Format-7/Attendance Sheet/2018/01
Format Title	TRAINING ATTENDANCE SHEET
Format Revision	01
Project & Location	Maniyachi PES
Date	10-08-22
Time	15:30
Duration	00:45 mins
Venue	Maniyachi PES.
Topic	Safety Solution
Trainer	R. Raveendran

Sl. No.	Name	Designation	Company	Signature
1	Venkatasamy	Sr. Engineer	Andromeda	[Signature]
2	M. Periyasamy	Technician	"	[Signature]
3	Sudhakar	"	"	[Signature]
4	Tranaji Mahareja	"	"	[Signature]
5	Thanasewar	"	Andromeda	[Signature]
6	Panraj	"	"	[Signature]
7	Mahendhiran	Engineer	"	[Signature]
8	Manimandhiram	Technician	"	[Signature]
9	Paramasivan	"	"	[Signature]
10	P. Raveendran	Manager	Hire Safety Solution	[Signature]



Signature of Trainer

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- | S,No | Name of the Employee | Designation |
|------|-----------------------|-------------------|
| 1. | Sandeep Balakrishnan | Manager |
| 2. | Vaikunda Raja R | Assistant Manager |
| 3. | S. Kalidass | Senior Officer |
| 4. | Arul S Dhas | Assistant Manager |
| 5. | M. Hariharasundarraaj | Senior Officer |
| 6. | Arun Kumar Maddela | Senior Officer |
| 7. | M. Vishnu Vardhan | Senior Officer |
| 8. | Mathanraji V | Senior Manager |

9.	Veerabadran Sankaranarayanan	Officer
10	Dhaveedu Arulselvam	Deputy Manager

- 3) SDG 13- By supplying 611,052.53 MWh clean electricity to Indian grid, the project avoided release of 572,433 tCO₂ in to the atmosphere during the reporting period. The emission reduction calculation based on generation are as follows-

Month		Generation (MWh)	Emission factor	Baseline emissions(tCO ₂ e)
01-04-2022	30-04-2022	10,404.87	0.9368	9,747.28
01-05-2022	31-05-2022	66,432.05	0.9368	62,233.54
01-06-2022	30-06-2022	71,136.02	0.9368	66,640.23
01-07-2022	31-07-2022	71,994.85	0.9368	67,444.78
01-08-2022	31-08-2022	69,191.33	0.9368	64,818.44
01-09-2022	30-09-2022	61,586.11	0.9368	57,693.87
01-10-2022	31-10-2022	24,080.63	0.9368	22,558.74
01-11-2022	30-11-2022	7,065.83	0.9368	6,619.27
01-12-2022	31-12-2022	29,850.54	0.9368	27,963.98
Vintage 2022		4,11,742.23		3,85,720.00
01-01-2023	31-01-2023	33,354.94	0.9368	31,246.90
01-02-2023	28-02-2023	24,505.82	0.9368	22,957.05
01-03-2023	31-03-2023	24,561.68	0.9368	23,009.38
01-04-2023	30-04-2023	12,255.10	0.9368	11,480.58
01-05-2023	31-05-2023	20,182.07	0.9368	18,906.57
01-06-2023	30-06-2023	84,450.70	0.9368	79,113.41
Vintage 2023		1,99,310.31		1,86,713.00
Total		6,11,052.53		5,72,433