



BUNDLED WIND POWER PROJECT BY MYTRAH GROUP



Document Prepared by Infinite Solutions

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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The purpose of the project activity is to generate electrical energy using renewable energy source (wind) and selling the generated electrical energy to the respective state utility. The generated electricity is exported to the regional grid system which is under the purview of the Indian grid of India. The Project activity is a new facility (Greenfield) and the purpose of the project activity is to generate electricity by the utilization of wind velocity, and selling the generated electrical energy from the project to the respective state utilities under the Indian Grid. The total capacity of the project activity is 493.9 MW. The details of project bundle is given below-

S. No.	Project site	Location (State)	Name of SPVs	Project Capacity (MW)	Number of WTGs	DOC
1	Bhesada	Rajasthan	Mytrah Vayu (Indravati) Pvt. Ltd.	8.4	4	30-December-2015
2	Pottipadu	Andhra Pradesh	Mytrah Vayu (Indravati) Pvt. Ltd.	105	50	31-December-2015
3	Nidhi	Rajasthan	Mytrah Vayu (Som) Pvt. Ltd.	90	53	31-March-2016
4	Nipaniya	Madhya Pradesh	Mytrah Vayu (Som) Pvt. Ltd.	30	15	20-January-2016
5	Nazeerabad	Telangana	Mytrah Vayu (Godavari) Pvt. Ltd.	100.8	48	27-March-2016
6	Burgula-II	Andhra Pradesh	Mytrah Vayu (Krishna) Pvt. Ltd.	10.8	6	30-March-2017
7	Aspari-I	Andhra Pradesh	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	98.3	55	15-October-2016
8	Aspari-II	Andhra Pradesh	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	50.6	22	16-March-2017
	Total			493.9	253	

All the project sites are operational during current monitoring period which can be confirmed from regularly issued JMR/B-Form/credit noted.

In the Pre- project scenario the equivalent amount of electricity, either fetched (under captive cases) or delivered to the grid by the project activity, would have otherwise been generated by the operation of grid-connected fossil fuel based power plants and by the addition of new generation sources.

The power produced displaces an equivalent amount of power from the grid, which is fed mainly by fossil fuel fired power plants. Hence, it results in reduction of GHG emissions. Yearly GHG emission reductions from the project activity will be 921,296 MWh and total GHG emission reductions for the chosen 10-year crediting period from 30-December-2015 to 29-December-2025 will be 9,212,960 tons of CO₂ as mentioned in registered PD¹.

The total electricity generation during the current monitoring period of 01-April- 2022 to 30-June- 2023 (including both the dates) is 1,008,781.8 MWh and emission reductions achieved is 973,770 tCO₂e.

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. The technology is an 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 of WTG's of Suzlon Energy Limited Model No. S97, WTG's of GE India Industrial Pvt Limited GE 1.7 & 2.3, WTGs of Inox Wind Limited Model No. DF-100 and WTGs of Wind World India Limited Model No. WW-53. The details for location wise WTG specification is given in section 3.1

The audit history is given below- Audit Type	Period	Program	VVB Name	Number of years
Validation and Verification	30-December-2015 to 24-November-2017(including both the days)	VCS	LGAI Technological Center S.A.	1 year, 10 months, 26 days
Verification	25-Novemeber-2017 to 31-December-2019(including both the days)	VCS	Earthhood Services Private Limited	2 years, 1 month, 7 days
Verification	01-August-2019 to 31-March-2020 (including both days)(including both the days)	VCS	LGAI Technological Center S.A.	8 months,00 days

¹ <https://registry.verra.org/app/projectDetail/VCS/1728>

Verification	01-April-2020 to 31-May-2021(including both days)	VCS	KBS certification Pvt Ltd.	1 year, 2 months, 00 days
Verification	01-June-2021 to 28-February-2022(including both days)	VCS	LGAI Technological Center S.A.	9 months,00 days
Verification	01-March-2022 to 31-March-2022(including both days)	VCS	LGAI Technological Center S.A.	1 month,00 days
Ongoing Verification	01-April- 2022 to 30-June-2023(including both days)	VCS	VKU certifications	1 year,3 months,00 days
Total	30-December-2015 to 30-June-2023(including both days)	VCS		7 years, 6 months, 1 day

1.2 Sectoral Scope and Project Type

Sectoral scope 01: Energy Industries (renewable / non-renewable sources).

Project type: Renewable energy project (Wind)

The project activity is not a grouped project but a bundle project

This is not a AFLOU Project activity.

1.3 Project Proponent

Organization name	Mytrah Vayu(Indravati) Pvt. Ltd.
Contact person	Mr. Ramesh Kure
Title	Assistant Manager
Address	8001, 8th Floor, Q-City, Nanakramguda, Gachibowli, Hyderabad 500032, Telangana, India.
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Organization name	Mytrah Vayu (Som) Pvt. Ltd.
Contact person	Mr. Ramesh Kure
Title	Assistant Manager
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Telephone	+ 91 99075 34900
Email	ramesh.kurre@jsw.in

Organization name	Mytrah Vayu (Godavari) Pvt. Ltd.
Contact person	Mr. Ramesh Kure
Title	Assistant Manager
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Telephone	+ 91 99075 34900
Email	ramesh.kurre@jsw.in

Organization name	Mytrah Vayu (Krishna) Pvt. Ltd.
Contact person	Mr. Ramesh Kure
Title	Assistant Manager
Address	8001, 8th Floor, Q-City, Nanakramguda, Gachibowli, Hyderabad 500032, Telangana, India.
Telephone	+ 91 99075 34900
Email	ramesh.kurre@jsw.in

Organization name	Mytrah Vayu (Tungabhadra) Pvt. Ltd.
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Contact person	Mr. Ramesh Kure
Title	Assistant Manager
Address	8001, 8th Floor, Q-City, Nanakramguda, Gachibowli, Hyderabad 500032, Telangana, India.
Telephone	+ 91 99075 34900
Email	ramesh.kurre@jsw.in

1.4 Other Entities Involved in the Project

Organization name	Infinite Solutions
Role in the Project	Carbon Consultant
Contact person	Jimmy Sah
Title	Project Manager
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1.5 Project Start Date

Project Start date is 30-December-2015.

The project start date is the date on which first WTG was commissioned under the Project activity.
The total capacity of the project is 493.9 MW

1.6 Project Crediting Period

The crediting period is renewable and can be renewed twice

The start sate of First Crediting Period is : 30-December-2015²

²Start date of crediting period is 30/12/2015, as on this day 1st set of WTGs associated to the one of the bundle Bhesada project activity starts its commercial operations. Accordingly end date of the crediting period has also been revised.

The end date of first Crediting Period is : 29-December-2025

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 activity is located in the states of Rajasthan, Madhya Pradesh, Andhra Pradesh and Telangana. The site wise location details of the project are given below.

The location details for the Bhesada project site:

S,No	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1	RSA 126	Naya luna kalan	Jaisalmer	26.6985	71.4897	Rajasthan
2	RSA 128	Naya luna kalan	Jaisalmer	26.6859	71.4923	Rajasthan
3	RSA 286	Pratap pura	Jaisalmer	26.5989	71.6356	Rajasthan
4	RSA 280	Khuda	Jaisalmer	26.6027	71.6137	Rajasthan

The location details for the Pottipadu project site:

S.No	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1.	PPD-045	Pottipadu	Anantapur	15.0403	77.3681	Andhra Pradesh
2.	PPD-046	Pottipadu	Anantapur	15.0442	77.3645	Andhra Pradesh
3.	PPD-047	Pottipadu	Anantapur	15.0483	77.3662	Andhra Pradesh
4.	PPD-058	Pottipadu	Anantapur	15.0478	77.3818	Andhra Pradesh
5.	PPD-076	Pottipadu	Anantapur	15.0515	77.4067	Andhra Pradesh
6.	PPD-077	Pottipadu	Anantapur	15.0559	77.3951	Andhra Pradesh
7.	PPD-078	Pottipadu	Anantapur	15.0602	77.3949	Andhra Pradesh
8.	PPD-081	Pottipadu	Anantapur	15.0731	77.3780	Andhra Pradesh
9.	PPD-082	Pottipadu	Anantapur	15.0793	77.3781	Andhra Pradesh
10.	PPD-084	Pottipadu	Anantapur	15.0720	77.4075	Andhra Pradesh

11.	PPD-085	Pottipadu	Anantapur	15.0673	77.4060	Andhra Pradesh
12.	PPD-052	Gulyapalyam	Anantapur	15.0712	77.3578	Andhra Pradesh
13.	PPD-055	Gulyapalyam	Anantapur	15.0603	77.3668	Andhra Pradesh
14.	PPD-056	Vajrakarur	Anantapur	15.0567	77.3694	Andhra Pradesh
15.	PPD-057	Vajrakarur	Anantapur	15.0532	77.3721	Andhra Pradesh
16.	PPD-001	Gadehothur	Anantapur	15.0324	77.3214	Andhra Pradesh
17.	PPD-002	Gadehothur	Anantapur	15.0274	77.3169	Andhra Pradesh
18.	PPD-005	Gadehothur	Anantapur	15.0123	77.3205	Andhra Pradesh
19.	PPD-006	Gadehothur	Anantapur	15.0086	77.3231	Andhra Pradesh
20.	PPD-011	Pottipadu	Anantapur	15.0308	77.3411	Andhra Pradesh
21.	PPD-012	Pottipadu	Anantapur	15.0354	77.3414	Andhra Pradesh
22.	PPD-013	Pottipadu	Anantapur	15.0393	77.3407	Andhra Pradesh
23.	PPD-014	Pottipadu	Anantapur	15.0442	77.3287	Andhra Pradesh
24.	PPD-015	Pottipadu	Anantapur	15.0520	77.3317	Andhra Pradesh
25.	PPD-016	Vajrakarur	Anantapur	15.0378	77.3228	Andhra Pradesh
26.	PPD-038	Ganjikunta	Anantapur	15.0150	77.3756	Andhra Pradesh
27.	PPD-039	Tatrakallu	Anantapur	15.0078	77.3709	Andhra Pradesh
28.	PPD-040	Vajrakarur	Anantapur	15.0014	77.3654	Andhra Pradesh
29.	PPD-060	Vajrakarur	Anantapur	15.0378	77.3899	Andhra Pradesh
30.	PPD-061	Vajrakarur	Anantapur	15.0347	77.3933	Andhra Pradesh
31.	PPD-062	Vajrakarur	Anantapur	15.0266	77.3957	Andhra Pradesh
32.	PPD-063	Vajrakarur	Anantapur	15.0304	77.3946	Andhra Pradesh
33.	PPD-064	Vajrakarur	Anantapur	15.0206	77.3980	Andhra Pradesh

34.	PPD-073	Vajrakarur	Anantapur	15.0366	77.4091	Andhra Pradesh
35.	PPD-074	Vajrakarur	Anantapur	15.0416	77.4102	Andhra Pradesh
36.	PPD-075	Kamalapadu	Anantapur	15.0462	77.4074	Andhra Pradesh
37.	PPD-049	Konakondla	Anantapur	15.0811	77.3511	Andhra Pradesh
38.	PPD-050	Konakondla	Anantapur	15.0768	77.3517	Andhra Pradesh
39.	PPD-053	Gulyapalyam	Anantapur	15.0669	77.3609	Andhra Pradesh
40.	PPD-054	Gulyapalyam	Anantapur	15.0659	77.3696	Andhra Pradesh
41.	PPD-027	Gulyapalyam	Anantapur	15.0637	77.3432	Andhra Pradesh
42.	PPD-028	Gulyapalyam	Anantapur	15.0577	77.3453	Andhra Pradesh
43.	PPD-029	Vajrakarur	Anantapur	15.0537	77.3471	Andhra Pradesh
44.	PPD-030	Vajrakarur	Anantapur	15.0492	77.3496	Andhra Pradesh
45.	PPD-031	Vajrakarur	Anantapur	15.0446	77.3500	Andhra Pradesh
46.	PPD-032	Vajrakarur	Anantapur	15.0361	77.3539	Andhra Pradesh
47.	PPD-033	Vajrakarur	Anantapur	15.0319	77.3562	Andhra Pradesh
48.	PPD-034	Vajrakarur	Anantapur	15.0272	77.3528	Andhra Pradesh
49.	PPD-035	Vajrakarur	Anantapur	15.0207	77.3548	Andhra Pradesh
50.	PPD-044	Vajrakarur	Anantapur	15.0322	77.3748	Andhra Pradesh

The location details for the Nidhi project site for all 53 WTGs:

S.No	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1	NDH-001	Habur	Jaisalmer	27.1770	70.6009	Rajasthan
2	NDH-002	Habur	Jaisalmer	27.1712	70.6035	Rajasthan
3	NDH-003	Habur	Jaisalmer	27.1687	70.6069	Rajasthan

4	NDH-004	Habur	Jaisalmer	27.1646	70.6093	Rajasthan
5	NDH-005	Habur	Jaisalmer	27.1606	70.6123	Rajasthan
6	NDH-006	Habur	Jaisalmer	27.1562	70.6147	Rajasthan
7	NDH-007	Habur	Jaisalmer	27.1520	70.6182	Rajasthan
8	NDH-008	Habur	Jaisalmer	27.1480	70.6210	Rajasthan
9	NDH-009	Habur	Jaisalmer	27.1426	70.6231	Rajasthan
10	NDH-010	Habur	Jaisalmer	27.1403	70.6258	Rajasthan
11	NDH-011	Habur	Jaisalmer	27.1340	70.6296	Rajasthan
12	NDH-012	Habur	Jaisalmer	27.1306	70.6328	Rajasthan
13	NDH-013	Habur	Jaisalmer	27.1264	70.6457	Rajasthan
14	NDH-014	Habur	Jaisalmer	27.1303	70.6428	Rajasthan
15	NDH-015	Habur	Jaisalmer	27.1401	70.6367	Rajasthan
16	NDH-016	Habur	Jaisalmer	27.1439	70.6337	Rajasthan
17	NDH-017	Habur	Jaisalmer	27.1484	70.6290	Rajasthan
18	NDH-018	Habur	Jaisalmer	27.1540	70.6268	Rajasthan
19	NDH-019	Habur	Jaisalmer	27.1575	70.6242	Rajasthan
20	NDH-020	Habur	Jaisalmer	27.1616	70.6214	Rajasthan
21	NDH-021	Habur	Jaisalmer	27.1657	70.6191	Rajasthan
22	NDH-022	Habur	Jaisalmer	27.1701	70.6160	Rajasthan
23	NDH-023	Habur	Jaisalmer	27.1741	70.6130	Rajasthan
24	NDH-024	Habur	Jaisalmer	27.1792	70.6095	Rajasthan
25	NDH-025	Habur	Jaisalmer	27.1827	70.6066	Rajasthan

26	NDH-026	Habur	Jaisalmer	27.1856	70.6040	Rajasthan
27	NDH-027	Habur	Jaisalmer	27.1531	70.6382	Rajasthan
28	NDH-028	Habur	Jaisalmer	27.1490	70.6412	Rajasthan
29	NDH-029	Habur	Jaisalmer	27.1437	70.6439	Rajasthan
30	NDH-030	Habur	Jaisalmer	27.1409	70.6470	Rajasthan
31	NDH-031	Habur	Jaisalmer	27.1359	70.6493	Rajasthan
32	NDH-032	Habur	Jaisalmer	27.1321	70.6526	Rajasthan
33	NDH-033	Habur	Jaisalmer	27.1283	70.6552	Rajasthan
34	NDH-034	Habur	Jaisalmer	27.1242	70.6571	Rajasthan
35	NDH-035	Habur	Jaisalmer	27.1139	70.6741	Rajasthan
36	NDH-036	Habur	Jaisalmer	27.1174	70.6718	Rajasthan
37	NDH-037	Habur	Jaisalmer	27.1216	70.6693	Rajasthan
38	NDH-038	Habur	Jaisalmer	27.1256	70.6667	Rajasthan
39	NDH-039	Habur	Jaisalmer	27.1287	70.6636	Rajasthan
40	NDH-040	Habur	Jaisalmer	27.1337	70.6390	Rajasthan
41	NDH-041	Habur	Jaisalmer	27.1331	70.6707	Rajasthan
42	NDH-042	Habur	Jaisalmer	27.1289	70.6744	Rajasthan
43	NDH-043	Habur	Jaisalmer	27.1266	70.6777	Rajasthan
44	NDH-044	Habur	Jaisalmer	27.1192	70.6606	Rajasthan
45	NDH-045	Habur	Jaisalmer	27.1351	70.6808	Rajasthan
46	NDH-046	Habur	Jaisalmer	27.1407	70.6771	Rajasthan

47	NDH-047	Habur	Jaisalmer	27.1431	70.6942	Rajasthan
48	NDH-048	Habur	Jaisalmer	27.1398	70.6974	Rajasthan
49	NDH-049	Habur	Jaisalmer	27.1357	70.7002	Rajasthan
50	NDH-050	Habur	Jaisalmer	27.1306	70.7023	Rajasthan
51	NDH-051	Habur	Jaisalmer	27.1267	70.7054	Rajasthan
52	NDH-052	Habur	Jaisalmer	27.1358	70.7070	Rajasthan
53	NDH-053	Habur	Jaisalmer	27.1430	70.7026	Rajasthan

The location details for the Nipaniya project site:

S.No	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1)	NPY-P-58	Jamuniya	Mandsaur	24.2041	75.6108	Madhya Pradesh
2)	NPY-P3-41	Dhamniya Diwan	Mandsaur	24.1484	75.6209	Madhya Pradesh
3)	NPY-P3-114	Nariya Bujurg	Mandsaur	24.2625	75.6194	Madhya Pradesh
4)	NPY-P3-116	Manpura	Mandsaur	24.2537	75.6161	Madhya Pradesh
5)	NPY-P3-117	Nariya Bujurg	Mandsaur	24.2484	75.6159	Madhya Pradesh
6)	NPY-P3-120	Aakli Shivdas	Mandsaur	24.2349	75.6133	Madhya Pradesh
7)	NPY-P3-127	Sagoriya	Mandsaur	24.2197	75.6075	Madhya Pradesh
8)	NPY-P-59	Sagoriya	Mandsaur	24.2145	75.6107	Madhya Pradesh
9)	NPY-P3-157	Jamuniya	Mandsaur	24.2073	75.6093	Madhya Pradesh
10)	NPY-P3-112	Bardiya Amra	Mandsaur	24.2740	75.6223	Madhya Pradesh
11)	NPY-P3-124	Jamuniya	Mandsaur	24.2257	75.5991	Madhya Pradesh
12)	NPY-P3-154	Guradiyamata	Mandsaur	24.2361	75.6432	Madhya Pradesh

13)	NPY-P3-119	Manpura	Mandsaur	24.2300	75.5993	Madhya Pradesh
14)	NPY-P-51	Barkheda Uda	Mandsaur	24.1654	75.6055	Madhya Pradesh
15)	NPY-P3-128	Sagoriya	Mandsaur	24.2174	75.6098	Madhya Pradesh

The location details for the Nazeerabad project site:

S.No	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1)	NRB01	Nazeerabad	Rangareddy	17.2224	77.9471	Telangana
2)	NRB02	Nazeerabad	Rangareddy	17.2187	77.9479	Telangana
3)	NRB03	Nazeerabad	Rangareddy	17.2162	77.9491	Telangana
4)	NRB04	Nazeerabad	Rangareddy	17.2129	77.9502	Telangana
5)	NRB05	Nazeerabad	Rangareddy	17.2099	77.9513	Telangana
6)	NRB06	Nazeerabad	Rangareddy	17.2068	77.9510	Telangana
7)	NRB07	Nazeerabad	Rangareddy	17.2040	77.9518	Telangana
8)	NRB11	Nazeerabad	Rangareddy	17.1909	77.9314	Telangana
9)	NRB14	Nazeerabad	Rangareddy	17.1886	77.9362	Telangana
10)	NRB15	Nazeerabad	Rangareddy	17.1844	77.9300	Telangana
11)	NRB16	Nazeerabad	Rangareddy	17.1788	77.9233	Telangana
12)	NRB17	Nazeerabad	Rangareddy	17.1752	77.9234	Telangana
13)	NRB18	Nazeerabad	Rangareddy	17.1716	77.9242	Telangana
14)	NRB19	Nazeerabad	Rangareddy	17.1700	77.9295	Telangana
15)	NRB20	Nazeerabad	Rangareddy	17.1675	77.9230	Telangana
16)	NRB22	Nazeerabad	Rangareddy	17.1617	77.9171	Telangana
17)	NRB23	Nazeerabad	Rangareddy	17.1598	77.9247	Telangana
18)	NRB24	Nazeerabad	Rangareddy	17.1554	77.9300	Telangana
19)	NRB26	Nazeerabad	Rangareddy	17.1506	77.9221	Telangana
20)	NRB27	Nazeerabad	Rangareddy	17.1480	77.9295	Telangana
21)	NRB28	Nazeerabad	Rangareddy	17.1473	77.9220	Telangana
22)	NRB29	Nazeerabad	Rangareddy	17.1442	77.9128	Telangana
23)	NRB30	Nazeerabad	Rangareddy	17.1443	77.9282	Telangana
24)	NRB31	Nazeerabad	Rangareddy	17.1420	77.9208	Telangana
25)	NRB34	Nazeerabad	Rangareddy	17.1352	77.9174	Telangana
26)	NRB35	Nazeerabad	Rangareddy	17.1328	77.9273	Telangana
27)	NRB36	Nazeerabad	Rangareddy	17.1299	77.9436	Telangana
28)	NRB39	Nazeerabad	Rangareddy	17.1307	77.9328	Telangana
29)	NRB40	Nazeerabad	Rangareddy	17.1247	77.9443	Telangana

30	NRB41	Nazeerabad	Rangareddy	17.1267	77.9321	Telangana
31	NRB43	Nazeerabad	Rangareddy	17.1223	77.9303	Telangana
32	NRB44	Nazeerabad	Rangareddy	17.1203	77.9405	Telangana
33	NRB48	Nazeerabad	Rangareddy	17.1189	77.9478	Telangana
34	NRB49	Nazeerabad	Rangareddy	17.1155	77.9566	Telangana
35	NRB54	Nazeerabad	Rangareddy	17.1047	77.9537	Telangana
36	NRB56	Nazeerabad	Rangareddy	17.0990	77.9548	Telangana
37	NRB57	Nazeerabad	Rangareddy	17.0960	77.9551	Telangana
38	NRB58	Nazeerabad	Rangareddy	17.0895	77.9509	Telangana
39	NRB60	Nazeerabad	Rangareddy	17.1978	77.9525	Telangana
40	NRB62	Nazeerabad	Rangareddy	17.1431	77.9875	Telangana
41	NRB63	Nazeerabad	Rangareddy	17.1390	77.9877	Telangana
42	NRB64	Nazeerabad	Rangareddy	17.1354	77.9894	Telangana
43	NRB66	Nazeerabad	Rangareddy	17.1292	77.9909	Telangana
44	NRB67	Nazeerabad	Rangareddy	17.1248	77.9920	Telangana
45	NRB68	Nazeerabad	Rangareddy	17.1214	77.9941	Telangana
46	NRB69	Nazeerabad	Rangareddy	17.1153	77.9932	Telangana
47	NRB71	Nazeerabad	Rangareddy	17.1042	77.9862	Telangana
48	NRB72	Nazeerabad	Rangareddy	17.0866	77.9500	Telangana

The location details for the Burgula-II project site:

S.NO	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1	BRG-552	Burugula	Kurnool	15.19516	77.93793	Andhra Pradesh
2	BRG-553	Burugula	Kurnool	15.19682	77.93758	Andhra Pradesh
3	BRG-506	Burugula	Kurnool	15.14936	77.925586	Andhra Pradesh
4	BRG-556	Burugula	Kurnool	15.233479	77.96228	Andhra Pradesh
5	BRG-558	Burugula	Kurnool	15.236606	77.96491	Andhra Pradesh
6	BRG-559	Burugula	Kurnool	15.240287	77.96884	Andhra Pradesh

The location details for the Aspari-I project site:

S.NO	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1	ASP-005	Aspari	Kurnool	15.4721	77.3977	Andhra Pradesh
2	ASP-006	Aspari	Kurnool	15.4685	77.3975	Andhra Pradesh
3	ASP-007	Aspari	Kurnool	15.4651	77.3981	Andhra Pradesh

4	ASP-008	Aspari	Kurnool	15.4613	77.3984	Andhra Pradesh
5	ASP-009	Aspari	Kurnool	15.4561	77.3998	Andhra Pradesh
6	ASP-010	Aspari	Kurnool	15.4527	77.3985	Andhra Pradesh
7	ASP-011	Aspari	Kurnool	15.4491	77.4002	Andhra Pradesh
8	ASP-012	Aspari	Kurnool	15.4455	77.4004	Andhra Pradesh
9	ASP-013	Aspari	Kurnool	15.4424	77.3998	Andhra Pradesh
10	ASP-014	Aspari	Kurnool	15.4383	77.3990	Andhra Pradesh
11	ASP-015	Aspari	Kurnool	15.4350	77.3975	Andhra Pradesh
12	ASP-016	Aspari	Kurnool	15.4315	77.3978	Andhra Pradesh
13	ASP-017	Aspari	Kurnool	15.4280	77.3981	Andhra Pradesh
14	ASP-018	Aspari	Kurnool	15.4228	77.4094	Andhra Pradesh
15	ASP-019	Aspari	Kurnool	15.4191	77.4079	Andhra Pradesh
16	ASP-021	Aspari	Kurnool	15.4149	77.4068	Andhra Pradesh
17	ASP-022	Aspari	Kurnool	15.4093	77.4092	Andhra Pradesh
18	ASP-023	Aspari	Kurnool	15.4057	77.4099	Andhra Pradesh
19	ASP-024	Aspari	Kurnool	15.4011	77.4110	Andhra Pradesh
20	ASP-025	Aspari	Kurnool	15.4455	77.4124	Andhra Pradesh
21	ASP-026	Aspari	Kurnool	15.4413	77.4126	Andhra Pradesh
22	ASP-027	Aspari	Kurnool	15.4369	77.4140	Andhra Pradesh
23	ASP-028	Aspari	Kurnool	15.4319	77.4140	Andhra Pradesh
24	ASP-029	Aspari	Kurnool	15.4266	77.4136	Andhra Pradesh
25	ASP-061	Aspari	Kurnool	15.3893	77.4220	Andhra Pradesh
26	ASP-062	Aspari	Kurnool	15.3856	77.4186	Andhra Pradesh
27	ASP-063	Aspari	Kurnool	15.3826	77.4137	Andhra Pradesh
28	ASP-064	Aspari	Kurnool	15.3792	77.4111	Andhra Pradesh
29	ASP-065	Aspari	Kurnool	15.3754	77.4103	Andhra Pradesh
30	ASP-066	Aspari	Kurnool	15.3721	77.4079	Andhra Pradesh
31	ASP-030	Aspari	Kurnool	15.4416	77.4269	Andhra Pradesh
32	ASP-031	Aspari	Kurnool	15.4379	77.4272	Andhra Pradesh
33	ASP-032	Aspari	Kurnool	15.4339	77.4278	Andhra Pradesh
34	ASP-033	Aspari	Kurnool	15.4305	77.4279	Andhra Pradesh
35	ASP-035	Aspari	Kurnool	15.4242	77.4302	Andhra Pradesh
36	ASP-036	Aspari	Kurnool	15.4200	77.4328	Andhra Pradesh
37	ASP-037	Aspari	Kurnool	15.4165	77.4356	Andhra Pradesh
38	ASP-038	Aspari	Kurnool	15.4124	77.4365	Andhra Pradesh
39	ASP-039	Aspari	Kurnool	15.4089	77.4376	Andhra Pradesh
40	ASP-042	Aspari	Kurnool	15.4211	77.4504	Andhra Pradesh

41	ASP-043	Aspari	Kurnool	15.4159	77.4571	Andhra Pradesh
42	ASP-087	Aspari	Kurnool	15.4340	77.4495	Andhra Pradesh
43	ASP-088	Aspari	Kurnool	15.4406	77.4480	Andhra Pradesh
44	ASP-089	Aspari	Kurnool	15.4444	77.4465	Andhra Pradesh
45	ASP-090	Aspari	Kurnool	15.4474	77.4443	Andhra Pradesh
46	ASP-091	Aspari	Kurnool	15.4518	77.4434	Andhra Pradesh
47	ASP-092	Aspari	Kurnool	15.4553	77.4430	Andhra Pradesh
48	ASP-001	Aspari	Kurnool	15.4834	77.4121	Andhra Pradesh
49	ASP-002	Aspari	Kurnool	15.4791	77.4161	Andhra Pradesh
50	ASP-003	Aspari	Kurnool	15.4745	77.4177	Andhra Pradesh
51	ASP-093	Aspari	Kurnool	15.4658	77.4388	Andhra Pradesh
52	ASP-094	Aspari	Kurnool	15.4705	77.4381	Andhra Pradesh
53	ASP-095	Aspari	Kurnool	15.4740	77.4383	Andhra Pradesh
54	ASP-139	Aspari	Kurnool	15.4758	77.3987	Andhra Pradesh
55	ASP-044	Aspari	Kurnool	15.4117	77.4612	Andhra Pradesh

The location details for the Aspari-II project site:

S.NO	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1.	ASP-040	Aspari	Kurnool	15.3942	77.4422	Andhra Pradesh
2.	ASP-046	Aspari	Kurnool	15.4053	77.4667	Andhra Pradesh
3.	ASP-047	Aspari	Kurnool	15.3907	77.4695	Andhra Pradesh
4.	ASP-048	Aspari	Kurnool	15.3969	77.4698	Andhra Pradesh
5.	ASP-050	Aspari	Kurnool	15.4208	77.4773	Andhra Pradesh
6.	ASP-052	Aspari	Kurnool	15.4161	77.4829	Andhra Pradesh
7.	ASP-053	Aspari	Kurnool	15.4096	77.4789	Andhra Pradesh
8.	ASP-054	Aspari	Kurnool	15.4059	77.4797	Andhra Pradesh
9.	ASP-055	Aspari	Kurnool	15.3993	77.4840	Andhra Pradesh
10.	ASP-071	Aspari	Kurnool	15.3902	77.4451	Andhra Pradesh
11.	ASP-072	Aspari	Kurnool	15.3864	77.4443	Andhra Pradesh

12.	ASP-073	Aspari	Kurnool	15.3826	77.4443	Andhra Pradesh
13.	ASP-074	Aspari	Kurnool	15.3779	77.4442	Andhra Pradesh
14.	ASP-081	Aspari	Kurnool	15.3792	77.4878	Andhra Pradesh
15.	ASP-082	Aspari	Kurnool	15.3758	77.4913	Andhra Pradesh
16.	ASP-083	Aspari	Kurnool	15.3722	77.4924	Andhra Pradesh
17.	ASP-084	Aspari	Kurnool	15.3688	77.4934	Andhra Pradesh
18.	ASP-086	Aspari	Kurnool	15.3616	77.4953	Andhra Pradesh
19.	ASP-130	Aspari	Kurnool	15.4631	77.4228	Andhra Pradesh
20.	ASP-131	Aspari	Kurnool	15.4528	77.4126	Andhra Pradesh
21.	ASP-132	Aspari	Kurnool	15.4492	77.4123	Andhra Pradesh
22.	ASP-138	Aspari	Kurnool	15.4570	77.4138	Andhra Pradesh

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 it is more than 15 MW

Methodology: ACM0002: Grid-connected electricity generation from renewable sources - Version 17.0³

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 07- Tool to calculate the emission factor for an electricity system - Version 06.0 (EB 97, Annex 07)⁴

³ <https://cdm.unfccc.int/methodologies/DB/8W400U6E7LFHHYH2C4JR1RJWWO4PVN>

⁴ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v6.pdf>

- TOOL 01- Tool for the demonstration and assessment of additionality- Version 07.0.0 (EB 70, Annex 08)⁵

1.9 Participation under other GHG Programs

The Project activity has not applied for any other GHG programs and same can be confirmed by No double counting declaration provided by PP.

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

Emissions 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

The Project has no intend to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program as confirmed by the project proponent through the declaration of no double counting.

- Furthermore, the project activity is not availing any benefits from CDM/GS/GCC/UCR/RECs mechanism which can be confirmed from the links below:

https://www.recregistryindia.nic.in/index.php/publics/accredited_regens

[CDM: CDM-Home \(unfccc.int\)](http://cdm.unfccc.int)

<https://www.goldstandard.org/>

<https://projects.globalcarboncouncil.com/>

<https://www.ucarbonregistry.io/>

[Registries | I-REC Standard \(irecstandard.org\)](https://www.irecstandard.org/)

- The project Activity is a wind power project and does not involve any supply chain in the project such as manufacturers, wholesalers, distributors and retailers. So, no indirect upstream and downstream GHG emissions are involved in the project activity. Thus, the Scope 3 emissions are not applicable in this project activity.

1.11 Sustainable Development Contributions

Contribution to sustainable development

Ministry of Environment and Forests, Govt. of India has specified the social well-being, economic well-being, environmental well-being and technological well-being as the four

⁵ <http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-01-v7.0.0.pdf>

indicators for sustainable development in host country approval eligibility criteria for Clean Development Mechanism (CDM) projects. The project contributes to sustainable development using the following ways.

- a). Social and Economic well-being
- b). Environmental well-being
- c). Technological well-being
- d). Environmental well-being

The project activity would contribute to the above indicators in the following manner:

- ⌚ Social well-being: The project helps in generating employment opportunities during the construction and operation phases. The project activity leads to development in infrastructure in the region like development of roads, telecommunication and also may promote business with improved power generation.
- ⌚ Economic well-being: The project is a clean technology investment in the region, which would not have been taken place in the absence of the VCS benefits the project activity also helps to reduce the demand supply gap in the state. The project activity generates power using zero emissions Wind-based power generation which helps to reduce GHG emissions and specific pollutants like SO_x, NO_x, and SPM associated with the conventional thermal power generation facilities.
- ⌚ Technological well-being: The successful operation of project activity is leading to promotion of Wind based power generation and would encourage other entrepreneurs to participate in similar projects
- ⌚ Environmental well-being: The project activity being a renewable source of energy, it reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emission the project activity also helps in avoiding significant amount of GHG emissions

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 renewable energy share in the total final energy consumption	About 1,008,781.85, 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 MWh (554,193+1,808,485+609,924+872,848+45,429+1,062,432+1,008,781.8) ⁶ renewable electricity has supplied to INDIAN Grid that helps to increase the renewable energy share in the energy mix.
2)	8.6.	8.6.1 Proportion of youth (aged 15-24) not in education, employment or training	Implemented activities to increase employment and trainings	Total- 215 employees are employed during this reporting period. Out of which 52 are permanent employees and 163 are on contractual basis ⁷ . Declaration for the same is provided to auditor Total 5 training was provided during the current monitoring period. Training details are mentioned in Annexure -2	Employment to 215 peoples and 5 training is provided.

⁶ Can be crosschecked from verification reports available on <https://registry.verra.org/app/projectDetail/VCS/1728>

⁷ The entire SPVs as transferred to JSW. Priorily the project SPVs were owned by Mytrah energy India limited. So the employees are employed by JSW now

3)	13.0	13.2.2 Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase tonnes of greenhouse gas emissions avoided	By installation of 493.9MW wind Energy Power Plant, project has prevented the release of 973,770tons of carbon into the atmosphere during the monitoring period	Prevented the release of 4,781,404tons of carbon (534,957+1,745,723+588,760+842,554+43,848+1,025,562+973,770) ⁸ into the atmosphere.
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⁸ Can be crosschecked from verification reports available on <https://registry.verra.org/app/projectDetail/VCS/1728>

2 SAFEGUARDS

2.1 No Net Harm

The project activity does not involve any major construction activity. 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 is no negative environmental and socio-economic impacts.

2.2 Local Stakeholder Consultation

The project has already been registered under VCS mechanism. The local stakeholder consultation for all the project activity instances have been carried out. The details of which are as follows:

Sr. no	Project Activity Name	Notice date	Stakeholder Consultation date
1	Mytrah Vayu (Indravati) Pvt. Ltd.	10/11/2015	21/11/2015
2	Mytrah Vayu (Indravati) Pvt. Ltd.	11/08/2015	22/08/2015
3	Mytrah Vayu (Som) Pvt. Ltd.	08/02/2016	20/02/2016
4	Mytrah Vayu (Som) Pvt. Ltd.	28/01/2016	06/02/2016
5	Mytrah Vayu (Godavari) Pvt. Ltd.	15/02/2016	22/02/2016
6	Mytrah Vayu (Krishna) Pvt. Ltd.	10/01/2017	18/01/2017
7	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	12/09/2016	20/09/2016

The meeting was attended by local villagers, panchayat members, shopkeepers, suppliers, vendors and representatives of PPs. The stakeholders were explained about the project activity and the

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

various benefits arising out of the project activity. A discussion was held in which the views of the local stakeholders were addressed.

Nevertheless, PP is open for the continuous stakeholder interaction and formed a grievance/suggestion register and a grievance box placed at each project site for the comments at any point of time during the project crediting period. PP has explained this mechanism to the local stakeholders and transparently kept the notice mentioning the grievance register and box at each project site separately. No issues and grievance for the project activity has been identified during the current monitoring period

2.3 AFOLU-Specific Safeguards

Not applicable to this as this is not an AFOLU project activity

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The project activity involves the installation of Wind Power Projects. The total installed capacity of the project is 493.9 MW. The project is promoted by Mytrah Energy (India) Pvt. Limited with different SPVs. Details of the installation of project in respective state is as follows:

Sl. No.	Name of the SPVs	Project Site	Location (State)	Registered Capacity (MW)	Operational Capacity
1	Mytrah Vayu (Indravati) Pvt. Ltd.	Bhesada	Rajasthan	8.4	8.4
2	Mytrah Vayu (Indravati) Pvt. Ltd.	Pottipadu	Andhra Pradesh	105	105
3	Mytrah Vayu (Som) Pvt. Ltd.	Nidhi	Rajasthan	90	90
4	Mytrah Vayu (Som) Pvt. Ltd.	Nipaniya	Madhya Pradesh	30	30
5	Mytrah Vayu (Godavari) Pvt. Ltd.	Nazeerabad	Telangana	100.8	100.8
6	Mytrah Vayu (Krishna) Pvt. Ltd.	Burgula-II	Andhra Pradesh	10.8	10.8
7	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	Aspari-I	Andhra Pradesh	98.3	98.3
8	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	Aspari-II	Andhra Pradesh	50.6	50.6

	Total			493.9	499.9
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The Project activity is a new facility (Greenfield) and the electricity generated by the Project is be exported to the Indian Grid. The Project, 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. With the total commissioned capacity of 493.9 MW till date, the wind plant is operating smoothly with scheduled maintenance. No events or situations happened during the reported monitoring period that can alter the applicability of the applied methodology or impact the GHG emission reductions or removals except breakdown of 553931 hours which is 19.84% of total operating 2790720 hours. The major breakdown details that occurred during the monitoring period has been provided in the Appendix-II 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. The technology is an 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 of WTG's of Suzlon Energy Limited Model No. S97, WTG's of GE India Industrial Pvt Limited GE 1.7 & 2.3, WTGs of Inox Wind Limited Model No. DF-100 and WTGs of Wind World India Limited Model No. WW-53. The commissioning of these WTGs of the project activity is completed and details are mentioned in Appendix 4.

Sl. No.	Name of the SPVs	Project Site	WTG model	Capacity	Number	Total Capacity
1	Mytrah Vayu (Indravati) Pvt. Ltd.	Bhesada	Suzlon Energy Limited's model S-97	2100 KW	4	8.4
2	Mytrah Vayu (Indravati) Pvt. Ltd.	Pottipadu	Suzlon Energy Limited's model S-97	2100 KW	50	105
3	Mytrah Vayu (Som) Pvt. Ltd.	Nidhi	GE India Industrial Pvt. Ltd	1700kW	53	90
4	Mytrah Vayu (Som) Pvt. Ltd.	Nipaniya	Inox Wind Ltd. model: DF 100	2000 KW	15	30
5	Mytrah Vayu (Godavari) Pvt. Ltd.	Nazeerabad	Suzlon Energy Limited's	2100 KW	48	100.8

			model S-97			
6	Mytrah Vayu (Krishna) Pvt. Ltd.	Burgula-II	GE India Industrial Pvt. Ltd. model- GE 2.3	2300 KW	4	10.8
			Wind World India Limited's model: WW-53	800 KW	2	
7	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	Aspari-I	GE India Industrial Pvt. Ltd	1700.kW	47	98.3
				2300 KW	8	
8	Mytrah Vayu (Tungabhadra) Pvt. Ltd.	Aspari-II	GE India Industrial Pvt. Ltd. model- GE 2.3	2300 KW	22	50.6
	Total				253	493.9

The Specification of Suzlon Energy Limited's model: S-97/2100 kW are as follows:

Power	
Rated power:	2,100.0 kW
Cut-in wind speed:	3.5 m/s
Rated wind speed:	11.0 m/s
Cut-out wind speed:	20.0 m/s
Survival wind speed:	60.0 m/s
Rotor	
Diameter:	97.0 m
Swept area:	7,386.0 m ²
Number of blades:	3
Power density 1:	284.3 W/m ²
Power density 2:	3.5 m ² /kW
Generator	
Type:	Asynchronous

Number:	1
Voltage:	690.0 V
Grid connection:	DFIG
Grid frequency:	50/60 Hz
Tower	
Hub height:	80/90/100/120 m
Type:	Steel tube
Shape:	Conical
Corrosion protection:	Painted

The Specification of GE India Industrial Pvt. Ltd. model: GE 1.7 are as follows:

Power	
Rated power:	1,700.0 kW
Cut-in wind speed:	3.0 m/s
Rated wind speed:	10.0 m/s
Cut-out wind speed:	23.0 m/s
Wind class (IEC):	S
Rotor	
Diameter:	103.0 m
Swept area:	8,332.0 m ²
Number of blades:	3
Type:	50.2m
Material:	GFRP
Power density 1:	204.0 W/m ²
Power density 2:	4.9 m ² /kW
Gear box	
Type:	spur/planetary
Generator	
Type:	Double Fed Asyn
Number:	1
Grid connection:	IGBT
Grid frequency:	50/60 Hz
Tower	
Hub height:	80/96 m
Type:	Steel tube

Shape:	Conical
Corrosion protection:	Painted

The Specification GE India Industrial Pvt. Ltd. model- GE 2.3 are as follows:

Rated Power (MW):	2.3
Wind Class:	IIIs
Cut-In Wind Speed:	3
Nominal Wind speed (8 m/s):	14m/s
Cut-Out Wind Speed:	23
Annual Output (8 m/s) in MWh:	10,887 @ 8.5m/s
Nominal Rotor Diameter (m):	107
Hub Height (m):	80,94
Swept Area (m ²):	8,992
Gearbox Ratio :	130.4 (50hz)
Generator Type:	DFIG
Turbine Output (V):	690
Frequency (HZ):	50

The Specification of Inox Wind Ltd. model: DF 100 are as follows:

Power	
Rated power:	2,000.0 kW
Cut-in wind speed:	3.0 m/s
Rated wind speed:	11.0 m/s
Cut-out wind speed:	20.0 m/s
Survival wind speed:	52.5 m/s
Wind class (IEC):	IIIb
Rotor	
Diameter:	100.0 m
Swept area:	7,894.0 m ²
Number of blades:	3
Rotor speed, max:	15.7 U/min
Tipspeed:	82 m/s
Material:	Epoxy glass fibre
Power density 1:	253.4 W/m ²
Power density 2:	3.9 m ² /kW
Gear box	

Type:	spur/planetary
Stages:	3
Ratio:	0.121528
Generator	
Type:	doubly fed induction
Number:	1
Speed, max:	1,800.0 U/min
Voltage:	690.0 V
Grid connection:	IGBT
Grid frequency:	50.0 Hz
Tower	
Hub height:	80/92 m
Type:	Steel tube
Shape:	Conical
Corrosion protection:	Painted

The Specification of Wind World India Limited's model: WW-53 are as follows:

Power	
Rated power:	800.0 kW
Cut-in wind speed:	3.0 m/s
Rated wind speed:	11.5 m/s
Cut-out wind speed:	28.0 m/s
Rotor	
Diameter:	52.9 m
Swept area:	2,007.0 m ²
Number of blades:	3
Rotor speed, max:	29.5 U/min
Tip speed:	82 m/s
Material:	fiberglass-epoxy resin
Power density 1:	398.6 W/m ²
Power density 2:	2.5 m ² /kW
Gear box	
Type:	direct drive

Generator	
Type:	Synchronous
Number:	1
Speed, max:	29.5 U/min
Grid connection:	Inverters
Grid frequency:	Wind World India
Tower	
Hub height:	74 m
Type:	Concrete
Shape:	Conical

Emission Reductions from anthropogenic sources:

The wind power generated from the Project is displacing the electricity generated from thermal power stations feeding into Indian grid and replacing 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 estimation of GHG reductions by this project is limited to carbon dioxide (CO₂) only

3.2 Deviations

3.2.1 Methodology Deviations

No methodology deviation is applied during current or previous monitoring period.

3.2.2 Project Description Deviations

The deviation requested in current monitoring period are as follows-

Deviation 1: For Burgula -2, There are 6 WTGs in this site and only 2 were mentioned in registered PDMR, hence rest 4 are added during current verification along with the geo-coordinates¹⁰. However, this doesn't change the project capacity i.e 10.8 MW. The WTGID along with geo-coordinates for remaining added 4 WTGs are as follows-

S.NO	WTG Location No	Village	District	Latitude (N)	Longitude (E)	State
1	BRG-506	Burugula	Kurnool	15.14936	77.925586	Andhra Pradesh
2	BRG-556	Burugula	Kurnool	15.233479	77.96228	Andhra Pradesh

¹⁰ The WTGs were added during previous monitoring period but the deviation was not requested. Hence, to maintain consistency deviation is requested in current monitoring period for added WTGs

3	BRG-558	Burugula	Kurnool	15.236606	77.96491	Andhra Pradesh
4	BRG-559	Burugula	Kurnool	15.240287	77.96884	Andhra Pradesh

The same has been corrected in section 1.7

This deviation doesn't impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario

The deviation approved in previous monitoring period are as follows-

Deviation-2: During the time of registration, project capacity for Burgula-II is registered as 10.4 MW which is a typo-error. The actual capacity for this site is 10.8 MW. This deviation doesn't impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

The actual capacity can be verified by commissioning certificates provided as well as PPAs signed for this project activity and deviation regarding the same has been approved during the monitoring period This deviations was approved in monitoring period of 01-June-2021 to 28-February-2022.

Deviation-3: For Nidhi site the PPA is only for 23.8 MW and 39.1 MW. The electricity generated from rest 27.1 MW is sold through open access. But the invoices are generated for only the sites having PPA. Thus PP is considering the JMR value for net electricity supplied to grid and for emission reduction calculations. There is no cross check possible due to difference in JMR and invoice values due to absence of invoice for 27.1 MW, hence only JMR value is considered for ER calculations. Hence month wise JMR and invoice is not matching. Since JMRs are issued by state electricity board and authentic, JMR values are considered for ER calculations. There is no material impact on ER calculations as primary source of data are correctly applied for ER calculations.

Deviation 4: For Bhesada site, the JMR is issued for 50.40 MW wind power project but the site in this project activity includes only 8.4 MW, hence the export and import values are apportioned for 8.4 MW using apportioning ratio 0.17.

This deviations was approved in monitoring period of 01-June-2021 to 28-February-2022.

3.3 Grouped Projects

The project is not a grouped project thus this is not applicable.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	EF _{grid, OM, y}
Data unit	tCO ₂ /MWh
Description	Operating margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database, Version 12, May 2017
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 ¹¹ ” as 3-year generation weighted average using data for the years 2013-14, 2014-15 & 2015-16. The data are obtained from “CO ₂ Baseline Database for Indian Power Sector” version 12 ¹² , 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
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” ¹³ as per the latest data available for the most recent year 2015-16. The data is obtained from “CO ₂ Baseline Database for Indian Power Sector” version 12 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://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v6.pdf>

¹² http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver12.pdf

¹³ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v6.pdf>

¹⁴ http://www.cea.nic.in/reports/others/thermal/tpece/cdm_co2/user_guide_ver12.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	Central Electricity Authority(CEA) of India Database Version 12, May 2017 ¹⁵
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 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	Credit note/ JMR/Form B reports/ monthly generation report from respective state electricity board/Distribution Companies
Description of measurement methods and procedures to be applied	The value of net electricity generation supplied to the grid as per Monthly electricity form B /Credit Note or 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 through the dedicated SEB energy meter installed at the delivery point. Monthly meter readings are taken from the main and check meter installed at metering point and certified by the representatives of SEB Officials and the representatives of the project proponent for apportioning procedure refer section 4.3

¹⁵ As per approved VCS PD

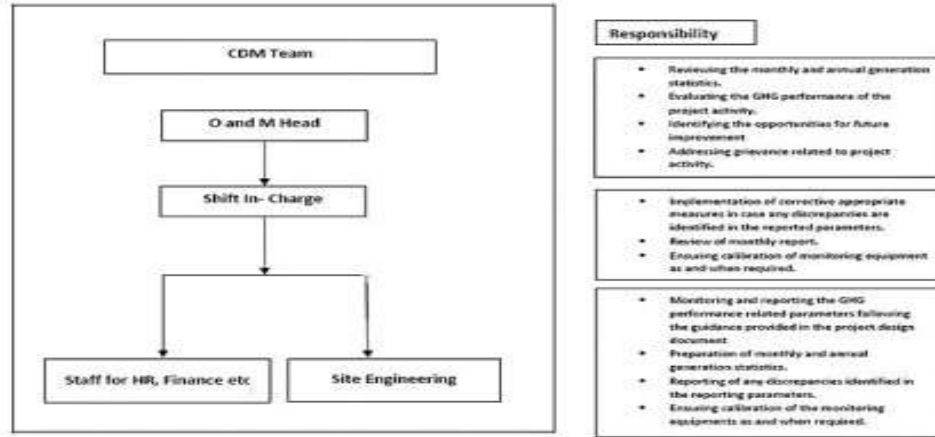
Frequency of monitoring/recording	Continuous monitoring, hourly measurement and at least monthly recording
Value monitored	1,008,781.8MWh
Monitoring equipment	Monitoring: Bidirectional Tri vector meter is used Data type: Measured Type of meter: Static type meter (Main & Check). Both are Bidirectional meters. Class of meter: 0.2s.
QA/QC procedures to be applied	The calibration of all the meters are undertaken at required intervals (once in five years as per CEA notification) and faulty meters if detected will be duly replaced immediately. The meters are of accuracy class 0.2s. The meter accuracy class and calibration interval is under purview of state electricity board and PP do not have any control on it. It is also noted that apportioning procedure is under control of state electricity board and PP do not have any control on it. The available parameter to PP is the net electricity supplied to grid and same parameter is mentioned as monitoring parameter For all sites(except nidhi)- The Net electricity exported to the grid is cross checked against the invoice raised by the PP towards the DISCOM. For Nidhi site- The JMR is issued by state utility and includes generation for 23.8 MW and 39.1 MW. The electricity generated from rest 27.1 MW is sold through open access. But the invoices are generated for only the sites having PPA. Hence the JMR Value cannot be cross checked with Invoices.
Purpose of the data	Calculation of baseline emission Calculation of baseline emissions
Calculation method	-
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 grid-connected wind power project. The monitoring plan, which 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. The monitoring includes all the equipment's that contribute towards reduction in GHG emissions. Since the project activity focuses mainly on the generation of renewable power from the WTGs, it is important to monitor all the equipment's involved in the metering of all the necessary instruments.

The monitoring plan has been prepared in accordance with the applied methodology, ACM0002 Version 17.0. The project investor has a well-defined management structure for monitoring the project activity.

The authority and responsibility for registration, monitoring, measurement, reporting and reviewing of the data rests with the project participant. PP follows the following structure for data monitoring, collection, data archiving and calibration of equipment for this project activity. The team comprises of the following members:



Data Measurement

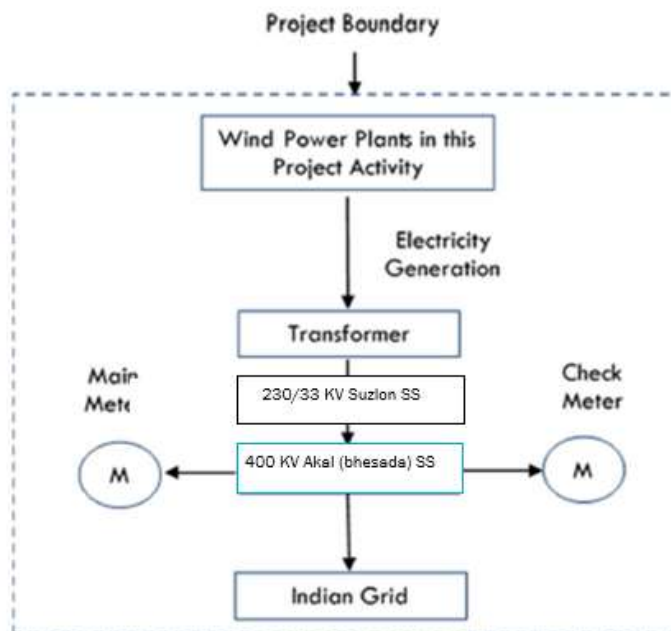
For Rajasthan site (Bhesada)-

WTGs are connected feeder wise as follows-

Feeder	WTG ID
Feeder no.4	RSA 286, RSA 280
Feeder no .2	RSA 126 ,RSA 128

The voltage generated at WTG is 690 V and stepped to 33 KV. Further at substation voltage is stepped up to 220 KV. The export and import energy is measured continuously using Main and Check meters located at the 400 KV substations Akal (Bhesada). Readings of meters are taken on monthly basis by authorized officer of State Electricity Board in the presence of PP or representative of PP. Based on the Meter Reading Statement, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity. The JMR is issued for 50.40 MW wind power project but the site in this project activity includes only 8.4 MW, hence the export and import values are apportioned for 8.4 MW using apportioning ratio 0.17 (based on DGR readings and approved deviation 03).

Net electricity supplied to grid is calculated as the difference of the measured values of "export" and "import" of electricity through the dedicated energy meter installed at 400 KV Akal (Bhesada) Substation.

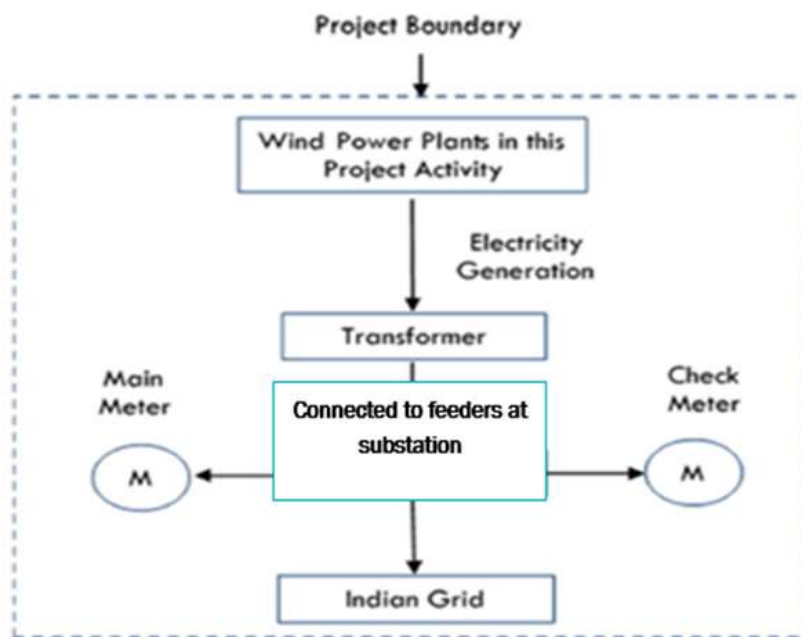


For Nidhi Site-

The WTGs are connected feeder wise at substation. The voltage generated at WTG is 690 Kv and is stepped up to 33 KV. The details for feeder wise connection are as follows.

Feeders	WTG Location
Feeder -9	NDH-27,NDH-28, NDH-29, NDH-30,NDH-31,NDH-32,NDH-33,NDH-34,NDH-35,NDH-36,NDH-37,NDH-38,NDH-39,NDH-44
Feeder-10	NDH-01,NDH-02,NDH-03,NDH-04,NDH-05,NDH-06,NDH-07,NDH-21,NDH-22,NDH-23,NDH-24,NDH-25,NDH-26,NDH-08,NDH-09,NDH-10,NDH-11,NDH-12,NDH-16,NDH-17,NDH-18,NDH-19,NDH-20

The export and import energy is measured continuously using Main and Check meters located at the feeders at Nidhi 220 KV GSS substations where voltage is stepped up from 33 kv to 220 KV. Readings of meters are taken on monthly basis by authorized officer of SEB in the presence of PP or representative of PP. Based on the Meter Reading Statement, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity. In feeder 09 the generation from feeder 03 (23.8 MW) and feeder 04 (39.1 MW) is connected but the bifurcation for feeder 03 is provided in the JMR. Net electricity supplied to grid is calculated as the difference of the measured values of “export” and “import” of electricity through the dedicated energy meter installed at the substation.



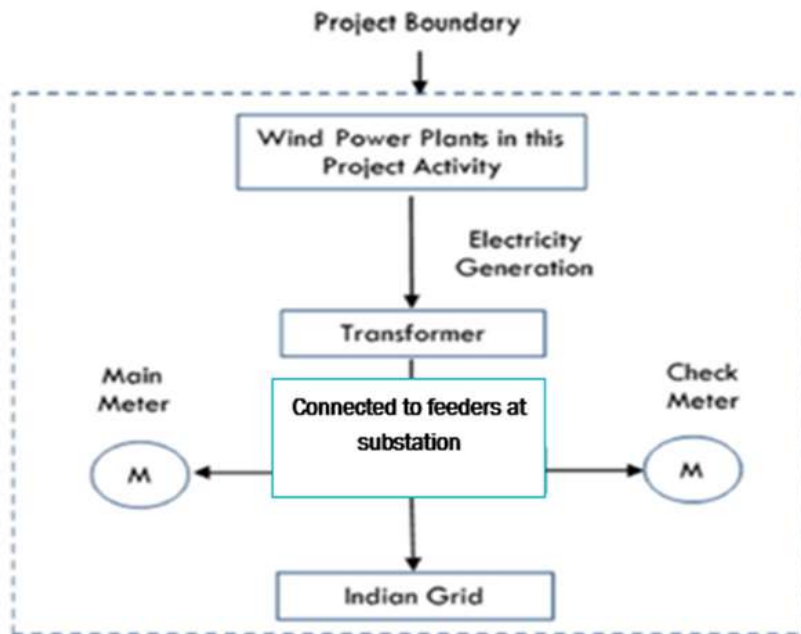
For Madhya Pradesh Site (Nipaniya)-

The voltage generated at hub is 690V and stepped up to 33 Kv and then at the substation voltage is stepped up to 220 KV. The WTGs are connected feeder wise at substation. The details for feeder wise connection are as follows.

Feeders	WTG Location
Feeder -4	NPY P3-112, NPYP3-114, NPYP3-116, NPYP3-117, NPYP3-120
Feeder-6	NPYP3-119, NPYP3-124, NPYP3-127, NPYP3-128, NPYP3-154, NPYP3-157, NPYP58, NPYP59
Feeder-8	NPYP341, NPYP51

The export and import energy is measured continuously at high voltage end 220 KV using Main and Check meters located at the feeders at Nipaniya substations. Readings of meters are taken on monthly basis by authorized officer of SEB in the presence of PP or representative of PP. Based on the Meter Reading Statement, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity. Generation from WTGs of other project owner is provided in JMR along with WTG wise generation breakup.

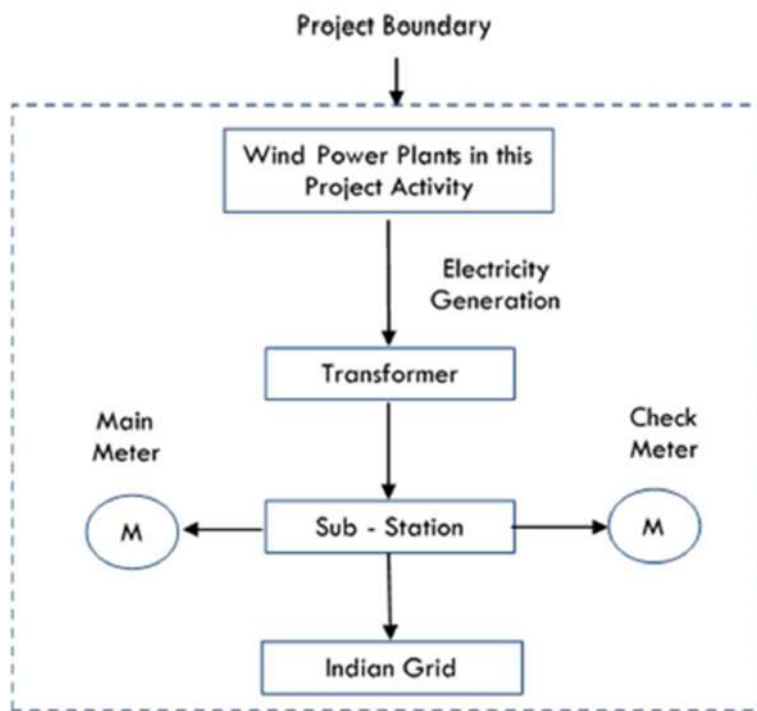
Net electricity supplied to grid is calculated as the difference of the measured values of “export” and “import” of electricity through the dedicated energy meter installed at the substation.



For Nazeerabad side-

The voltage generated at hub is 690V and stepped up to 33 Kv and then at the Pargi substation voltage is stepped up to 132 KV. The export and import energy is measured continuously using Main and Check meters located at the high voltage end of substations. Readings of meters are taken on monthly basis by authorized officer of SEB in the presence of PP or representative of PP. Based on the Meter Reading Statement, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity.

Net electricity supplied to grid is calculated as the difference of the measured values of “export” and “import” of electricity through the dedicated energy meter installed at the substation.



Aspari-1 and Aspari-2

The feeder wise WTG connection is as follows

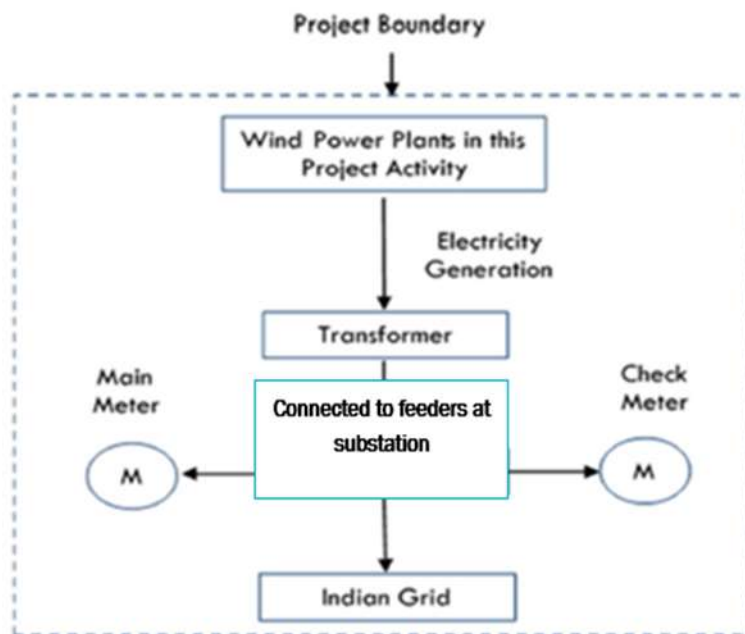
Aspari-1

Feeder	WTG ID
Feeder No 1	ASP-005,ASP-006,ASP-007,ASP-008, ASP-001,ASP-002,ASP-003,ASP-93,ASP-94,ASP-95,ASP-139
Feeder No.2	ASP-009,ASP-010,ASP-011,ASP-012,ASP-013,ASP-014,ASP-015,ASP-016,ASP-017,ASP-025,ASP-026,ASP-027,ASP-028
Feeder No 4	ASP-018, ASP-019,ASP-021,ASP-022,ASP-023,ASP-024,ASP-029,ASP-061,ASP-062,ASP-063,ASP-064,ASP-065,ASP-066,ASP-087
Feeder No. 5	ASP-035,ASP-036,ASP-037,ASP-038,ASP-039,ASP-042,ASP-043,ASP-044
Feeder No.3	ASP-030,ASP-031,ASP-032,ASP-033,ASP-088,ASP-089,ASP-090,ASP-091,ASP-092

Aspari-2

Feeder	WTG ID
Feeder no 8	ASP-040,ASP-071,ASP-072,ASP-073,ASP-074,ASP-0130,ASP-0131,ASP-0132,ASP-0138

Feeder no 9	ASP-046,ASP-047,ASP-048,ASP-050,ASP-052,ASP-053,ASP-054,ASP-055
Feeder no 10	ASP-081,ASP-082,ASP-083,ASP-084,ASP-086



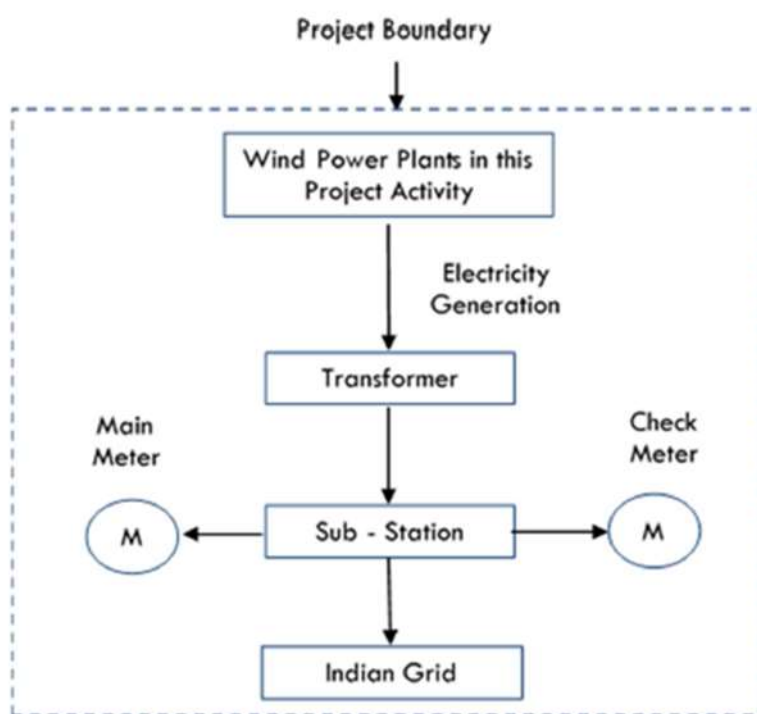
Metering system and monitoring plan:

- The voltage generated at hub is 690V and stepped up to 33 Kv and then at the substation voltage is stepped up to 220 KV
- A Joint Meter Reading combined for project capacity is taken by the representatives of PP and Andhra Pradesh Power Transmission Corporation Limited at the high voltage side 220 KV of the step-up transformer installed at the substation at a particular date.
- In case the main metering system is not in service, then the check metering system is be used until the main system is back to service.
- Meter reading is jointly signed by both the representatives.
- The main and the check metering systems are sealed in presence of representatives of Power producers, and APTRANSCO.
- When any of these metering systems is found to be outside acceptable limits of accuracy or otherwise not functioning properly, it is repaired, recalibrated or replaced.
- PP raises a monthly energy bill/statement based on the JMR at the end of each calendar month and the payment by State Electricity Board is done on this basis. The billing and payment records are maintained by the PP.
- Calibration and Testing of Meters are done once in 5 years

Net electricity supplied to grid is calculated as the difference of the measured values of “export” and “import” of electricity through the dedicated energy meter installed at the substation.

Burgula-2

The voltage generated at hub is 690V and stepped up to 11 Kv and then at the racharia substation voltage is stepped up to 33 KV. The export and import energy is measured continuously at high voltage end of substation using Main and Check meters located at the feeder 4 at Racherla substations. Readings of meters are taken on monthly basis by authorized officer of SEB in the presence of PP or representative of PP. Based on the Meter Reading Statement, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity.



Pottipadu site-

The feeder wise details are given below-

The voltage generated at hub is 690V and stepped up to 33 Kv and then at the pooling substation voltage is stepped up to 220 KV

33/220 KV Pooling substation, Vajrarakarur (65.1 MW)

Feeder	WTG ids
--------	---------

Feeder 11	PPD001,PPD002,PPD005,PPD006 PPD011,PPD012,PPD013,PPD014 PPD015,PPD016
Feeder 12	PPD027,PPD028,PPD029,PPD030,PPD031,PPD032,PPD033, PPD034,PPD035,PPD044
Feeder 13	PPD038,PPD039,PPD040,PPD060,PPD061,PPD062,PPD063, PPD064.PPD073.PPD074.PPD075

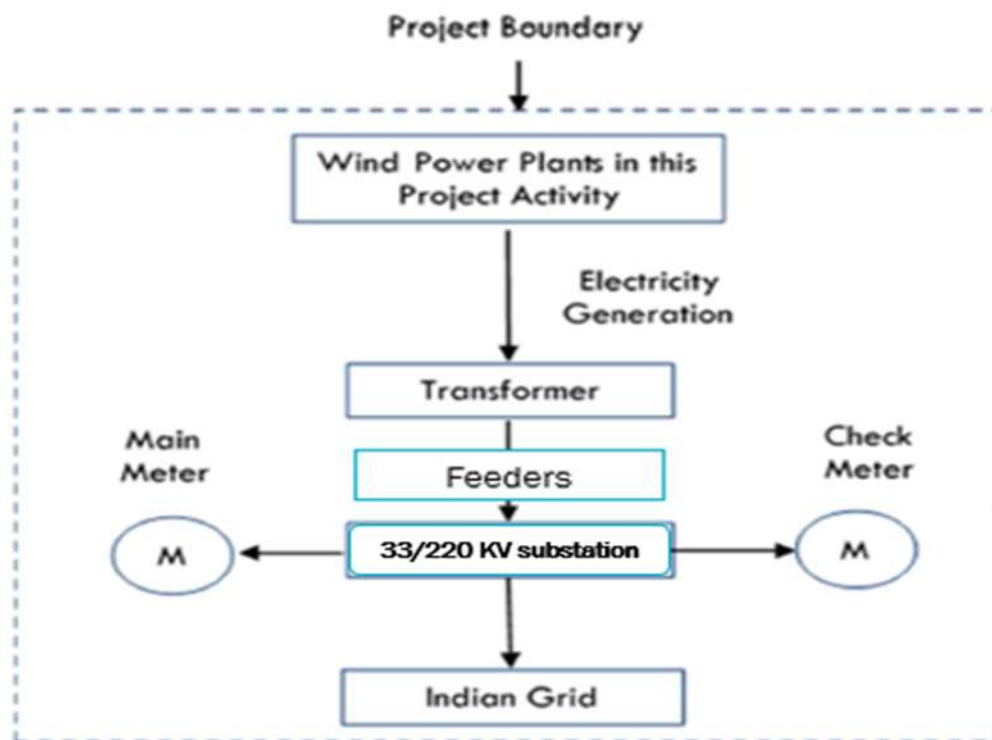
The voltage generated at hub is 690V and stepped up to 33 Kv and then at the pooling substation voltage is stepped up to 220 KV .The export and import energy is measured continuously using above mentioned Main and Check meters located at the feeders at high voltage end 220 KV at respective substations as mentioned above. Readings of meters are taken on monthly basis by authorized officer of SEB in the presence of PP or representative of PP. Based on the Meter Reading Statement, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity. Net electricity supplied to grid is calculated as the difference of the measured values of “export” and “import” of electricity

132/33 KV Guntakal Govt SS.Direct connected (39.9 MW)

Feeder	WTG ids
Suzlon Feeder -1	PPD052,PPD055,PPD056,PPD057,PPD053,PPD45,PPD46, PPD47,PPD58
Suzlon Feeder-2	PPD76.PPD77.PPD78.PPD81.PPD82.PPD84.PPD85. PPD049.PPD050.PPD054

The voltage generated at hub is 690V and stepped up to 33 Kv and then at the government substation voltage is stepped up to 132 KV. The export and import energy is measured continuously using above mentioned Main and Check meters located at the feeders at high voltage end 132 KV at substation. Readings of meters are taken on monthly basis by authorized officer of State Electricity Board in the presence of PP or representative of PP. Based on the Meter Reading Statement, invoices are raised. These invoices can be used for cross checking the meter readings taken for the respective project activity. Net electricity supplied to grid is calculated as the difference of the measured values of “export” and “import” of electricity

through the dedicated energy meter installed at the substation.



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. The period of storage of the monitored data will be 2 years after the end of crediting period or till the last issuance of VERs for the project activity whichever occurs later.

Emergency preparedness

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

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. Total 5 trainings were provided during the current monitoring period. Training details are mentioned in Annexure -2

Apportioning

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:

- In the event when the individual verification period dates and billing cycle dates of the various WTGs in the project activity do not coincide, then the monitoring procedure is-

X : Sum of generation during partial days of the month recorded at controller meter (kwh) source – Electronic / Manual Log Book

Y : Total generation during the month recorded at controller meter (kwh/month)

Z = X/ Y: Ratio

B : Net Energy export by the WTG as per Monthly Report on Generation and Consumption

Z*B : Generation of partial days for calculating emission reduction (kwh)

QA/QC procedures:

Energy meters are calibrated once in a five year and faulty meter are duly replaced immediately. The entire responsibility of this task lies with the state utility. The meter have an accuracy class of at least 0.5s. State utility 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. In very rare occasion when both main and backup meter fails, then standby/backup meter are used to take reading. Where, standby/backup meter is not present than in such scenario the daily generation reading taken at PP end will be referred. As per CEA guideline one of the faulty meter will be replaced immediately

If during any of monthly measurement, main meter is found to be beyond permissible limit of error, then meter shall be calibrated immediately & the correction factor applicable for the main meter shall be used for energy computation at time of such test checks. For the period there after the measurements shall be continued in accordance with the calibrated main meter.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

As per the approved consolidated Methodology ACM0002 (Version 17.0, EB 89, Annex 1) para 44:

Baseline emissions include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid connected power plants and the addition of new grid- connected power plants. The baseline emissions are to be calculated as follows:

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

Where:

BE_y = Baseline Emissions in year y (tCO₂)

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

$EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the TOOL 07 "Tool to calculate the emission factor for an electricity system" (tCO₂/MWh)

Baseline emission factor (EF_y):

The baseline emission factor is calculated using the combined margin approach as described in Step 6 above:

Therefore, $EF_y = EF_{grid,CM,y} = 0.9653 \text{ t CO}_2/\text{MWh}$.

For Vintage 2022

$$= 597,615.568 \times 0.9653 = 576,875 \text{ (round down value)}$$

For Vintage 2023

$$= 411,166 \times 0.9653 = 396,895 \text{ (round down value)}$$

$$BE_y = 1,008,781.8 \times 0.9653 = 973,770 \text{ tCO}_2\text{e}$$

5.2 Project Emissions

As per Applied Methodology: ACM0002, v17.0,

the project activity is the installation of a new grid-connected Wind Power plant and does not involve any project emissions from fossil fuel, operation of dry, flash steam or binary geothermal power plants, and from water reservoirs of hydro power plants. Therefore $PE_{FF,y}$, $PE_{GP,y}$, $PE_{HP,y}$ are equal to zero and thus,

$$PE_y = 0 \text{ tCO}_2\text{e}.$$

5.3 Leakage

As per Applied Methodology: ACM0002, v17.0, No leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, and transport). These emission sources are neglected.

$$LE_y = 0 \text{ tCO}_2\text{e}.$$

5.4 Net GHG Emission Reductions and Removals

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

$$ER_y = BE_y - PE_y - LE_y$$

Where,

ER_y = Emission Reduction in tCO_2/year

BE_y = Baseline emission in tCO_2/year

PE_y = Project emissions in tCO_2/year

LE_y = Leakage Emissions in tCO_2/year

For the project activity during the current monitoring period, as per section 5.1

$$BE_y = 973,770 \text{ tCO}_2\text{e}$$

$$PE_y = 0 \text{ tCO}_2\text{e}$$

$$LE_y = 0 \text{ tCO}_2\text{e}$$

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)
01-April-2022 to 31-December-2022	576,876	0	0	576,876
01-January-2023 to 30-June-2023	396,895	0	0	396,895
Total	973,770	0	0	973,770

<u>Ex-ante emissions reductions /removals</u>	<u>Achieved emissions reductions /removals</u>	<u>Percent difference</u>	<u>Justification for the difference</u>
1,150,989	973,770	-15%	During the current monitoring period, the plant underwent breakdowns which is 19.84% of operating hours of 253 WTGs. The generation is also less 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 15% lower as compared to the estimated emission reductions. The PLF achieved during current monitoring period is 18.66% whereas registered PLF is 19.90% which is within sensitivity range of 10%

APPENDIX 1: METER CALIBRATION DETAILS

The main meter and Check meter details of Nazeerabad Site are as follows:

	Main meter	Check meter
Make	L & T	L & T
Meter no	0018128682	0018128666
Accuracy class	0.2 s	0.2s
Calibration date	10-March-2021	10-March-2021
Calibration Due date	09-March-2026	09-March-2026
Calibration frequency	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.	

The Main meter and Check meter details of Pottipadu Site are as follows:

For 65.1 MW			
PPD-06 (21 MW)			
	Main meter	Check meter	Backup meter
Make	Secure	Secure	Secure
Meter no	XC559930	XC559931	XC559924
Accuracy class	0.2 s	0.2s	0.2s
Calibration date	24-December-2020	24-December-2020	24-December-2020
Calibration Due date	23-December-2025	23-December-2025	23-December-2025
Calibration frequency	5 years	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.		

PPD-40			
	Main meter	Check meter	Backup meter
Make	Secure	Secure	Secure
Meter no	XC559921	XC559922	XC559923
Accuracy class	0.2 s	0.2s	0.2s
Calibration date	24-December-2020	24-December-2020	24-December-2020
Calibration Due date	23-December-2025	23-December-2025	23-December-2025
Calibration frequency	5 years	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.		

PPD-35			
	Main meter	Check meter	Backup meter
Make	Secure	Secure	Secure
Meter no	XC559932	XC559933	XC559934
Accuracy class	0.2 s	0.2s	0.2s
Calibration date	21-December-2020	21-December-2020	21-December-2020
Calibration Due date	20-December-2025	20-December-2025	20-December-2025
Calibration frequency	5 years	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.		

PPD-39.9 MW			
Feeder 01			
	Main meter	Check meter	Backup meter
Make	Secure	Secure	Secure
Meter no	13720861	13720862	13720863
Accuracy class	0.2 s	0.2s	0.2s
Calibration date	21-December-2020	21-December-2020	21-December-2020
Calibration Due date	20-December-2025	20-December-2025	20-December-2025
Calibration frequency	5 years	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.		

Feeder 02			
	Main meter	Check meter	Backup meter
Make	Secure	Secure	Secure
Meter no	13720897	13720868	13720872
Accuracy class	0.2 s	0.2s	0.2s
Calibration date	21-December-2020	21-December-2020	21-December-2020
Calibration Due date	20-December-2025	20-December-2025	20-December-2025
Calibration frequency	5 years	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.		

The Main meter and Check meter details of Nidhi Site are as follows:

Feeder 09		
	Main meter	Check meter
Make	Secure	Secure
Meter no	RJB96159	RJB96160
Accuracy class	0.2 s	0.2s
Calibration date	10-April-2021	10-April-2021
Calibration Due date	09-April-2026	09-April-2026
Calibration frequency	5 years	5 years
Calibration Agency	Darsh Calibrations Pvt Ltd	

Feeder 10		
	Main meter	Check meter
Make	Secure	Secure
Meter no	RJB96157	RJB96158
Accuracy class	0.2 s	0.2s
Calibration date	10-April-2021	10-April-2021
Calibration Due date	09-April-2026	09-April-2026
Calibration frequency	5 years	5 years
Calibration Agency	Darsh Calibrations Pvt Ltd	

The Main meter and Check meter details of Bhesada Site are as follows:

Feeder 02		
	Main meter	Check meter
Make	Secure	Secure
Meter no	RJB 78188	RJB 78189
Accuracy class	0.2 s	0.2s
Calibration date	21-February-2021	21-February-2021
Calibration Due date	20-February-2026	20-February-2026
Calibration frequency	5 years	5 years
Calibration Agency	Darsh Calibrations Pvt. Ltd	

Feeder 03		
	Main meter	Check meter
Make	Secure	Secure
Meter no	RJB 78194	RJB 78200
Accuracy class	0.2 s	0.2s
Calibration date	21-February-2021	21-February-2021
Calibration Due date	20-February-2026	20-February-2026
Calibration frequency	5 years	5 years

Calibration Agency	Darsh Calibrations Pvt. Ltd
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Feeder 04		
	Main meter	Check meter
Make	Secure	Secure
Meter no	RJB 78201	RJB 78203
Accuracy class	0.2 s	0.2s
Calibration date	21-February-2021	21-February-2021
Calibration Due date	20-February-2026	20-February-2026
Calibration frequency	5 years	5 years
Calibration Agency	Darsh Calibrations Pvt. Ltd	

The Main meter and Check meter details of Aspari Site are as follows:

Apsari-I		
	Main meter	Check meter
Make	Secure	Secure
Meter no	APX01010	APX01011
Accuracy class	0.2 s	0.2s
Calibration date	18-December-2020	18-December-2020
Calibration Due date	17-December-2025	17-December-2025
Calibration frequency	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.	

Apsari-II		
	Main meter	Check meter
Make	Secure	Secure
Meter no	APX01012	APX01013
Accuracy class	0.2 s	0.2s
Calibration date	18-December-2020	18-December-2020
Calibration Due date	17-December-2025	17-December-2025
Calibration frequency	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.	

The Main meter and Check meter details of Burgulla Site are as follows:

Burgulla-II		
	Main meter	Check meter
Make	Secure	Secure
Meter no	APX017021	APX01022
Accuracy class	0.2 s	0.2s
Calibration date	22-December-2020	22-December-2020

Calibration Due date	21-December-2025	21-December-2025
Calibration frequency	5 years	5 years
Calibration Agency	Yathva Energy Solutions Pvt Ltd.	

The Main meter and Check meter details of Nipaniya Site are as follows:

Nipaniya		
	Main meter	Check meter
Make	Secure	Secure
Meter no	MPC70479	MPC70480
Accuracy class	0.2 s	0.2s
Previous Calibration date	18-December-2020	18-December-2020
Calibration Due date	17-December-2025	17-December-2025
Calibration frequency	5 years	5 years
Calibration Agency	Marut-Shakti Energy India Limited	

Nipaniya		
	Main meter	Check meter
Make	Secure	Secure
Meter no	MPC70481	MPC70482
Accuracy class	0.2 s	0.2s
Previous Calibration date	18-December-2020	18-December-2020
Calibration Due date	17-December-2025	17-December-2025
Calibration frequency	5 years	5 years
Calibration Agency	Marut-Shakti Energy India Limited	

APPENDIX 2: TRAINING DETAILS

S.No	Site	Topic	Date
1.	Aspari	Quality Assurance	19-March-2022
2.	Bhesada	Road safety and material handling	28-January-2022
3.	Bhesada	Defensive driving training	29-August-2022
4.	Nidhi	Quality Assurance	18-July-2022
5.	Nazeerabad	Quality Assurance	26-February-2023

APPENDIX 3: BREAKDOWN DETAILS

Pottipadu site

S.No	WTG	From	To	Total Break Down Hrs.	Remarks
1.	F-12	16-October-2022	26-October-2022	100.5	EXTL_Grid Down from EB/INTL_Feeder BreakDown
2.	PPD035	21-January-2023	27-January-2023	154.5	Elec FB Generator Fan
3.	F-13	20-May-2023	22-May-2023	558.5	EXTL_Grid Down from EB @ 400/440kv Line
Total				813.5	

Aspari site

S.No	WTG	From	To	Total Break Down Hrs.	Remarks
1	ASP-06	17-August-2020	02-May-2023	23736	Pitch Bearing failure
2	ASP-09	05-March-2020	03-April-2023	27000	Pitch Bearing failure
3	ASP-13	02-May-2020	22-April-2023	26064	Pitch Bearing failure
4	ASP-36	28-January-2022	09-May-2023	11208	Pitch Bearing failure
5	ASP-26	04-May-2020	05-May-2023	26328	Pitch Bearing failure
6	ASP-29	14-February-2020	03-April-2023	27480	Pitch Bearing failure
7	ASP-31	06-May-2020	11-May-2023	26424	Pitch Bearing failure
8	ASP-33	05-May-2020	12-May-2023	26472	Pitch Bearing failure
9	ASP-38	05-May-2020	26-April-2023	26088	Pitch Bearing failure
10	ASP-62	16-February-2020	14-May-2023	28416	Pitch Bearing failure
11	ASP-65	25-August-2020	11-June-2023	24504	Pitch Bearing failure
12	ASP-66	16-February-2020	18-May-2023	28512	Pitch Bearing failure
13	ASP-88	17-February-2020	14-June-2023	29136	Pitch Bearing failure
14	ASP-22	14-September-2020	12-May-2023	23304	Pitch Bearing failure
15	ASP-30	09-September-2020	24-May-2023	23712	Pitch Bearing failure
16	ASP-43	24-November-2020	03-April-2023	20664	Pitch Bearing failure
17	ASP-89	07-December-2020	28-May-2023	21672	Pitch Bearing failure
18	ASP-28	08-December-2018	21-June-2023	39768	Gear box failure
19	ASP-71	21-March-2021	30-June-2023	19968	Main bearing failure
20	ASP-74	16-August-2021	30-June-2023	16416	Blade Failure
21	ASP-91	30-April-2021	30-June-2023	19008	Pitch Bearing failure
22	ASP-82	25-May-2023	30-June-2023	888	Main bearing failure
23	ASP-15	05-May-2020	30-June-2023	27648	Pitch Bearing failure
Total				544416 hours	

Burgulla -2

Sl.No	Loc.No	Stopped from From	Start Date	Total BD Hrs.	Reason
1	BRG-552	15-April-2023	16-April-2023	48	Pitch motor fail
2	BRG-524	24-April-2023	28-April-2023	120	Main contactor, FG005 board got flashed
3	BRG 540	24-April-2023	26-April-2023	72	IGBT failue
4	BRG 516	01-May-2023	03-May-2023	72	CCU failure
5	BRG 541	16-May-2023	19-May-2023	96	IGBT failue
6	BRG 514	06-June-2023	18-June-2023	312	Blade tip damaged due to Ligthning
7	BRG-553	31-May-2023	01-June-2023	48	Blade stud damaged
Total				768 hours	

Bhesada Site

Sr.No	WTG	Stop Date	Start Date	Total BD Hrs.	Remarks
1	Ext Line 220 KV Collapsed	26-April-23	04-May-23	4900.5	220 KV line Tower no. 127 Collapsed due to Wind Storm. Replaced Tower then charged Line.
2	RSA632	24-May-23	25-May-23	38.5	Transformer Failure
3	RSA128	17-June-23	20-June-23	67.5	Transformer Failure
Total				5006.5 hours	

Nipania Site

Sr. no.	Loc. No.	Stop date	Start date	Breakdow n hours	remark
1	NPY P3-127	01-April-23	08-April-23	192	PM3000 failure
2	NPY P3-154	15-April-23	22-April-23	192	PM3000 failure
3	NPY P3-127	09-May-23	15-May-23	168	PM3000 ASIM board failure
4	NPY P3-112	27-May-23	28-May-23	48	Generator encoder failure
5	NPY P3-127	16-June-23	18-June-23	72	SLC284,SDI208 and DO 232 failure
6	NPY P3-114	17-June-23	30-June-2023	336	Gearbox stud issue, USS ACB and 2.3MVA TFR failure
Total				1008 hours	

Nazeerabad site

S. NO	Location	Date	Duration	Remark
1.	NRB04	09-April-2023	17.00	Elec FB Gear Oil Cooler Stop
2.	NRB11	30-May-2023	16.00	DFIG Inverter Fault Shutdown
3.	NRB71	19-June-2023	17.00	DFIG Inverter Fault Shutdown
4.	NRB54	24-June-2023	19.00	DFIG Grid fault
5.	NRB67	24-June-2023	20.00	Pitch FreqConvPitch ErrStop
6.	NRB57	19-July-2023	24.00	Power Panel flash Over
7.	NRB57	20-July-2023	18.00	Power Panel flash Over
8.	NRB57	22-July-2023	24.00	Power Panel flash Over
9.	NRB57	23-July-2023	24.00	Power Panel flash Over
10	NRB18	23-July-2023	16.00	Elec Test Pitch TimeOutStop
11	NRB57	24-July-2023	24.00	Power Panel flash Over
12	NRB57	25-July-2023	17.00	Power Panel flash Over
13	NRB57	26-July-2023	24.00	Power Panel flash Over
14	NRB57	27-July-2023	24.00	Power Panel failure
15	NRB57	28-July-2023	24.00	Power Panel flash Over
16	NRB57	29-July-2023	24.00	Power Panel flash Over
17	NRB57	30-July-2023	24.00	Power Panel flash Over
18	NRB57	31-July-2023	24.00	Power Panel flash Over
19	NRB57	01-August-2023	24.00	Power Panel flash Over
20	NRB57	02-August-2023	19.00	Power Panel flash Over
21	NRB57	04-August-2023	24.00	Power Panel flash Over
22	NRB26	05-August-2023	20.00	DFIG Inverter Fault Shutdown
23	NRB57	05-August-2023	24.00	Power Panel flash Over
24	NRB57	06-August-2023	24.00	Power Panel flash Over
25	NRB57	07-August-2023	24.00	Power Panel flash Over
26	NRB57	08-August-2023	24.00	Power Panel flash Over
27	NRB57	09-August-2023	24.00	Power Panel flash Over

28	NRB57	10-August-2023	24.00	Power Panel flash Over
29	NRB57	11-August-2023	24.00	Power Panel flash Over
30	NRB57	12-August-2023	24.00	Power Panel failure
31	NRB57	13-August-2023	17.00	Power Panel failure
32	NRB20	13-August-2023	24.00	Temp Generator Bearing DE HighStop
33	NRB57	14-August-2023	24.00	Power Panel failure
34	NRB20	14-August-2023	24.00	Temp Generator Bearing DE High Stop
35	NRB57	15-August-2023	24.00	Power Panel failure
36	NRB20	15-August-2023	24.00	Temp Generator Bearing DE High Stop
37	NRB57	16-August-2023	24.00	Power Panel flash Over
38	NRB20	16-August-2023	23.00	Temp Generator Bearing DE High Stop
39	NRB57	17-August-2023	23.00	Power Panel flash Over
40	NRB57	18-August-2023	24.00	Power Panel flash Over
41	NRB57	19-August-2023	24.00	Power Panel flash Over
42	NRB57	20-August-2023	24.00	Power Panel flash Over
43	NRB57	21-August-2023	24.00	Power Panel flash Over
44	NRB57	22-August-2023	24.00	Power Panel flash Over
45	NRB36	22-August-2023	15.00	Rep Pitch CANComFail
46	NRB57	23-August-2023	24.00	Power Panel flash Over
47	NRB57	24-August-2023	24.00	Power Panel flash Over
48	NRB18	24-August-2023	22.00	Mech Rpm Encoder Proximity Diff Stop
49	NRB18	25-August-2023	24.00	Generator Bearing problem
50	NRB57	25-August-2023	24.00	Power Panel flash Over
51	NRB36	25-August-2023	15.00	Rep Pitch FreqConvPitch1 ErrStop

52	NRB57	26-August-2023	24.00	Power Panel flash Over
53	NRB18	27-August-2023	24.00	Mech Rpm Encoder Proximity DiffStop
54	NRB57	27-August-2023	24.00	Power Panel failure
55	NRB26	27-August-2023	20.00	DFIG Inverter Fault Shutdown
56	NRB57	28-August-2023	24.00	Power Panel failure
57	NRB57	29-August-2023	24.00	Power Panel failure
58	NRB57	30-August-2023	24.00	Power Panel failure
59	NRB57	31-August-2023	23.00	Power Panel failure
60	NRB57	01-September-2023	23.00	Power Panel failure
61	NRB57	02-September-2023	24.00	Power Panel failure
62	NRB57	03-September-2023	24.00	Power Panel failure
63	NRB57	04-September-2023	24.00	Power Panel failure
64	NRB57	05-September-2023	24.00	Power Panel failure
65	NRB57	06-September-2023	24.00	Power Panel flash Over
66	NRB57	07-September-2023	24.00	Power Panel flash Over
67	NRB57	08-September-2023	24.00	Power Panel flash Over
68	NRB57	09-September-2023	24.00	Power Panel failure
69	NRB57	10-September-2023	24.00	Power Panel flash Over
70	NRB57	11-September-2023	24.00	Power Panel flash Over
71	NRB57	12-September-2023	24.00	Power Panel flash Over
72	NRB57	13-September-2023	24.00	Power Panel flash Over
73	NRB57	14-September-2023	24.00	Power Panel failure

Total	1656 hours
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Nidhi site

S.no	Loc.No	Date	Duration	Remark
1.	NDH-31	01-April-2023	20.5	Start-up
2.	NDH-34	03-April-2023	21.5	Manual stop due to pitch bearing abnormality
3.	NDH-14	11-April-2023	11.5	Manual stop
4.	NDH-49	11-April-2023	15.5	Manual stop
5.	NDH-06	16-April-2023	22:00	Manual stop
6.	NDH-09	18-April-2023	19.5	Manual stop
7.	NDH-19	20-April-2023	19.00	Manual stop
8.	NDH-32	25-April-2023	20.50	Manual Stop
9.	NDH-42	26-April-2023	11.00	Battery voltage not OK axis 1
10.	NDH-02	28-April-2023	19.00	Manual stop
11.	NDH-41	28-April-2023	18.00	Manual stop
12.	NDH-50	02-May-2023	19.00	Manual stop
13.	NDH-29	05-May-2023	12.00	Battery voltage not OK axis 2
14.	NDH-03	05-June-2023	23.00	Communication fault pitch controller Axis 2
15.	NDH-44	30-June-2023	11.00	Battery voltage not OK axis 3
Total			263 hours	

APPENDIX 4: COMMISSIONING DETAILS

The commissioning details for the Bhesada project site is given below:

Location No	Commissioning Date
RSA 126	30-December-2015
RSA 128	30-December-2015
RSA 286	30-December-2015
RSA 280	30-December-2015

The commissioning details for the Pottipadu project site is given below:

Location No	Commissioning Date
PPD-045	31-December-2015
PPD-046	31-December-2015
PPD-047	31-December-2015
PPD-058	31-December-2015
PPD-076	31-December-2015
PPD-077	31-December-2015
PPD-078	31-December-2015
PPD-081	31-December-2015
PPD-082	31-December-2015
PPD-084	31-December-2015
PPD-085	31-December-2015
PPD-052	05-March-2016
PPD-055	05-March-2016
PPD-056	05-March-2016
PPD-057	05-March-2016
PPD-001	06-March-2016
PPD-002	06-March-2016
PPD-005	06-March-2016
PPD-006	06-March-2016
PPD-011	06-March-2016
PPD-012	06-March-2016
PPD-013	06-March-2016
PPD-014	06-March-2016
PPD-015	06-March-2016

PPD-016	06-March-2016
PPD-038	06-March-2016
PPD-039	06-March-2016
PPD-040	06-March-2016
PPD-060	06-March-2016
PPD-061	06-March-2016
PPD-062	06-March-2016
PPD-063	06-March-2016
PPD-064	06-March-2016
PPD-073	06-March-2016
PPD-074	06-March-2016
PPD-075	06-March-2016
PPD-049	26-March-2016
PPD-050	26-March-2016
PPD-053	26-March-2016
PPD-054	26-March-2016
PPD-027	27-March-2016
PPD-028	27-March-2016
PPD-029	27-March-2016
PPD-030	27-March-2016
PPD-031	27-March-2016
PPD-032	27-March-2016
PPD-033	27-March-2016
PPD-034	27-March-2016
PPD-035	27-March-2016
PPD-044	27-March-2016

The commissioning details for the Nidhi project site is given below:

Location No	Commissioning Date
NDH 01	31-March-2016
NDH 02	31-March-2016
NDH 03	31-March-2016
NDH 04	31-March-2016
NDH 05	31-March-2016
NDH 06	31-March-2016
NDH 07	31-March-2016
NDH 21	31-March-2016
NDH 22	31-March-2016
NDH 23	31-March-2016
NDH 24	31-March-2016

NDH 25	31-March-2016
NDH 26	31-March-2016
NDH 08	31-March-2016
NDH 09	31-March-2016
NDH 10	31-March-2016
NDH 11	31-March-2016
NDH 12	31-March-2016
NDH 16	31-March-2016
NDH 17	31-March-2016
NDH 18	31-March-2016
NDH 19	31-March-2016
NDH 20	31-March-2016
NDH 27	31-March-2016
NDH 28	31-March-2016
NDH 29	31-March-2016
NDH 30	31-March-2016
NDH 31	31-March-2016
NDH 32	31-March-2016
NDH 33	31-March-2016
NDH 34	31-March-2016
NDH 35	31-March-2016
NDH 36	31-March-2016
NDH 37	31-March-2016
NDH 38	31-March-2016
NDH 39	31-March-2016
NDH 44	31-March-2016

The commissioning details for the Nipaniya project site is given below:

Location No	Commissioning Date
NPY-P-58	19-March-2016
NPY-P3-41	19-March-2016
NPY-P3-114	19-March-2016
NPY-P3-116	19-March-2016
NPY-P3-117	19-March-2016
NPY-P3-120	20-January-2016
NPY-P3-127	19-March-2016
NPY-P-59	19-March-2016
NPY-P3-157	19-March-2016
NPY-P3-112	27-March-2016

NPY-P3-124	29-March-2016
NPY-P3-154	29-March-2016
NPY-P3-119	19-March-2016
NPY-P-51	29-March-2016
NPY-P3-128	27-March-2016

The commissioning details for the Nazeerabad project site is given below:

NRB-2	27-March-2016
NRB-3	27-March-2016
NRB-4	27-March-2016
NRB-5	27-March-2016
NRB-6	27-March-2016
NRB-15	27-March-2016
NRB-14	27-March-2016
NRB-16	27-March-2016
NRB-17	27-March-2016
NRB-26	27-March-2016
NRB-28	27-March-2016
NRB-31	27-March-2016
NRB-34	27-March-2016
NRB-40	27-March-2016
NRB-41	27-March-2016
NRB-43	27-March-2016
NRB-35	27-March-2016
NRB-72	27-March-2016
NRB-49	27-March-2016
NRB-56	27-March-2016
NRB-58	27-March-2016
NRB-57	27-March-2016
NRB-54	31-March-2016
NRB-30	31-March-2016
NRB-62	31-March-2016
NRB-07	31-March-2016
NRB-44	31-March-2016
NRB-71	31-March-2016
NRB-36	31-March-2016
NRB-63	31-March-2016
NRB-19	31-March-2016
NRB-69	31-March-2016

NRB-23	31-March-2016
NRB-22	31-March-2016
NRB-01	31-March-2016
NRB-64	31-March-2016
NRB-27	31-March-2016
NRB-11	31-May-2016
NRB-39	31-May-2016
NRB-24	31-May-2016
NRB-29	31-May-2016
NRB-18	31-May-2016
NRB-66	31-May-2016
NRB-60	31-May-2016
NRB-68	31-May-2016
NRB-67	31-May-2016
NRB-20	31-May-2016
NRB-48	06-March-2017

The commissioning details for the Burgula-II project site is given below

Location No	Commissioning Date
BRG-552	30-March-2017
BRG-553	30-March-2017
BRG-506	13-March-2017
BRG-556	13-March-2017
BRG-558	13-March-2017
BRG-559	13-March-2017

The commissioning details for the Aspari project site is given below:

Location No	Commissioning Date
ASP-5	15-October-2016
ASP-6	15-October-2016
ASP-7	15-October-2016
ASP-8	15-October-2016
ASP-9	15-October-2016
ASP-10	15-October-2016
ASP-11	15-October-2016
ASP-12	15-October-2016
ASP-13	15-October-2016
ASP-14	15-October-2016

ASP-15	15-October-2016
ASP-16	15-October-2016
ASP-17	15-October-2016
ASP-18	15-October-2016
ASP-19	15-October-2016
ASP-21	15-October-2016
ASP-22	15-October-2016
ASP-23	15-October-2016
ASP-24	15-October-2016
ASP-25	15-October-2016
ASP-26	15-October-2016
ASP-27	15-October-2016
ASP-28	15-October-2016
ASP-29	15-October-2016
ASP-61	15-October-2016
ASP-62	15-October-2016
ASP-63	15-October-2016
ASP-64	15-October-2016
ASP-65	15-October-2016
ASP-66	15-October-2016
ASP-31	20-October-2016
ASP-30	20-October-2016
ASP-87	20-October-2016
ASP-33	20-October-2016
ASP-90	20-October-2016
ASP-32	20-October-2016
ASP-88	20-October-2016
ASP-89	20-October-2016
ASP-43	20-October-2016
ASP-36	20-October-2016
ASP-42	20-October-2016
ASP-35	20-October-2016
ASP-37	20-October-2016
ASP-91	20-October-2016
ASP-92	20-October-2016
ASP-38	20-October-2016
ASP-39	20-October-2016
ASP-1	16-March-2017
ASP-2	16-March-2017

ASP-3	16-March-2017
ASP-44	16-March-2017
ASP-139	16-March-2017
ASP-93	16-March-2017
ASP-94	16-March-2017
ASP-95	16-March-2017
ASP-53	25-March-2017
ASP-54	25-March-2017
ASP-50	25-March-2017
ASP-40	25-March-2017
ASP-71	25-March-2017
ASP-72	25-March-2017
ASP-46	25-March-2017
ASP-73	25-March-2017
ASP-81	25-March-2017
ASP-86	25-March-2017
ASP-84	25-March-2017
ASP-55	25-March-2017
ASP-130	25-March-2017
ASP-138	25-March-2017
ASP-131	25-March-2017
ASP-132	25-March-2017
ASP-82	25-March-2017
ASP-83	25-March-2017
ASP-47	25-March-2017
ASP-48	25-March-2017
ASP-74	25-March-2017
ASP-52	25-March-2017