



**Verified Carbon
Standard**

199.70 MW WIND PROJECT IN MAHARASHTRA BY BWDPL



Document Prepared by EKI Energy Services Limited

Project Title	199.70 MW Wind Project in Maharashtra by BWDPL
Version	05
Report ID	VVER 755
Date of Issue	20-March-2023
Project ID	1447
Monitoring Period	01-October-2021 to 30-September-2022 (inclusive of both dates)
Prepared By	Bhavini Pandey Senior Executive Operations- EKI Energy Services Limited
Contact	EnKing Embassy, Office No. 201, Plot 48, Scheme 78, Part 2 Vijay Nagar, Near brilliant Convention Centre, Indore- 452010 Madhya Pradesh, India Website: www.enkingint.org Email ID: registry@enkingint.org , bhavini.pandey@enkingint.org T: +91 9532180246

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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 source. Bothe Windfarm Development Pvt. Ltd. is the promoter of the implemented project activity. The Project activity envisages implementation of 40 WTGs of individual capacity 2 MW each, and 57 WTGs of individual capacity 2.1 MW each, in the state of Maharashtra. The technology employed is of Suzlon Energy Limited (2.1 MW) and Vestas (2 MW). The total project capacity is 199.7 MW.

The Project activity is a new facility (Greenfield) and it plans to utilize wind energy to generate electricity and supply it to distribution licensees which is now unified India Grid.

Start date for this project is 17-May-2013. This is the day on which the first WTG was commissioned under the Project activity. Plant is running smoothly since commissioning. No major breakdown has been recorded during the current monitoring period.

The Project activity has generated 374,035.26 MWh of energy to the NEWNE Grid (now a part of unified Indian grid) of India during the current monitoring period. This result in emission reductions of 365,432 tCO₂e by its operation during the current monitoring period.

1.2 Sectoral Scope and Project Type

As per the categorization by UNFCCC, the project activity falls under: “Grid-connected electricity generation from renewable sources” Sectoral Scope 1.

Methodology applied is ACM 0002 of version 16.0¹

Project type is renewable (wind).

The project is not a grouped project activity and it non-AFLOU project.

1.3 Project Proponent

Organization name	Bothe Windfarm Development Pvt. Ltd.
Contact person	Mr. V R Ramesh

¹ <https://cdm.unfccc.int/methodologies/DB/EY2CL7RTEHRC9V6YQHLAR6MJ6VEU83>

Title	Sr. Manager - Corporate Finance
Address	102, 'El Tara Building, Orchard Avenue, Hiranandani, Powai, Mumbai - 400 076
Telephone	+91-22-25701567
Email	Vr.ramesh@continumenergy.in

1.4 Other Entities Involved in the Project

Organization name	EKI Energy Services Limited
Role in the Project	Project Consultant
Contact person	Bhavini Pandey
Title	Senior Executive - Operations
Address	Office No 201, Plot No 48, Scheme 78, Vijay Nagar Part-II, Indore 452010, India
Telephone	+91 9532180246
Email	bhavini.pandey@enkingint.org

1.5 Project Start Date

The project start date for this project is 17-May-2013. This is the day on which the first WTG was commissioned under the Project activity.

1.6 Project Crediting Period

The Project has begun generating GHG emission reductions from 17-May-2013. Hence, crediting period for VCS begins on 17-May-2013 and ends on 16-May-2023 i.e., 10 years.

Type: Renewable Crediting Period

1.7 Project Location

The project activity is located in 9 villages namely, Khokade, Bothe, Ransingwadi, Shripalwan, Ugalyachiwadi, Khandyachiwadi, Garudachiwadi, Katalgewadi, and Shirawali, in Satara district in the state of Maharashtra.

S.No	WTG ID	Village Name	Commissioning Date	Latitude (N) (Northing)	Longitude (E) (Easting)	Turbine Type	Capacity	Feeder No.
1	I - 48	Khokade	21-June-2013	17° 49' 0.92" (432715)	74° 21' 54.27" (1970045)	Vestas V100 - 2.0 MW		Feeder II
2	I - 64	Khokade	21-June-2013	17° 48' 50.68" (432816)	74° 21' 57.73" (1969730)	Vestas V100 - 2.0 MW		Feeder II
3	I - 1	Khokade	27-May-2013	17° 49' 4.17" (433203)	74° 22' 10.83" (1970143)	Vestas V100 - 2.0 MW		Feeder II
4	I - 66	Khokade	20-September-2013	17° 48' 46.87" (433311)	74° 22' 14.56" (1969611)	Vestas V100 - 2.0 MW		Feeder II
5	I - 7	Khokade	17-May-2013	17° 48' 33.08" (433073)	74° 22' 6.52" (1969188)	Vestas V100 - 2.0 MW		Feeder I
6	I - 23	Khokade	18-June-2013	17° 48' 25.03" (433292)	74° 22' 13.99" (1968940)	Vestas V100 - 2.0 MW		Feeder I
7	I - 25	Khokade	21-June-2013	17° 48' 18.57" (433388)	74° 22' 17.27" (1968741)	Vestas V100 - 2.0 MW		Feeder I
8	I - 29	Khokade	21-June-2013	17° 48' 9.92" (433497)	74° 22' 21.01" (1968475)	Vestas V100 - 2.0 MW		Feeder I
9	I - 68	Khokade	21-June-2013	17° 48' 6.11" (433145)	74° 22' 9.06" (1968359)	Vestas V100 - 2.0 MW		Feeder I
10	I - 2	Khokade	27-May-2013	17° 48' 40.88" (432698)	74° 21' 53.76" (1969429)	Vestas V100 - 2.0 MW		Feeder II
11	I - 21	Khokade	18-June-2013	17° 47' 57.83" (43388)	74° 22' 34.67" (196812)	Vestas V100 - 2.0 MW		Feeder I
12	I - 27	Khokade	21-June-2013	17° 47' 49.61" (43397)	74° 22' 37.72" (196789)	Vestas V100 - 2.0 MW		Feeder I
13	I - 3	Khokade	27-May-2013	17° 48' 12.61" (43396)	74° 22' 37.27" (196856)	Vestas V100 - 2.0 MW		Feeder I
14	I - 39	Khokade	21-August-2013	17° 48' 35.76" (43349)	74° 22' 20.65" (196929)	Vestas V100 - 2.0 MW		Feeder I
15	I - 49	Khokade	09-October-2013	17° 48' 35.19" (43392)	74° 22' 35.36" (196920)	Vestas V100 - 2.0 MW		Feeder I
16	I - 30	Khokade	10-October-2013	17° 48' 32.35" (43454)	74° 22' 55.13" (196911)	Vestas V100 - 2.0 MW		Feeder I
17	I - 15	Bothe	10-October-2013	17° 46' 11.81" (43374)	74° 22' 31.51" (196484)	Vestas V100 - 2.0 MW		Feeder III
18	I - 47	Bothe	09-October-2013	17° 47' 39.05" (43561)	74° 23' 34.62" (196759)	Vestas V100 - 2.0 MW		Feeder IV
19	I - 59	Bothe	24-January-2014	17° 47' 18.51" (43534)	74° 23' 22.56" (196689)	Vestas V100 - 2.0 MW		Feeder IV
20	I - 52	Bothe	20-February-2014	17° 46' 41.57" (43369)	74° 22' 25.80" (196579)	Vestas V100 - 2.0 MW		Feeder III
21	I - 8	Bothe	11-September-2013	17° 47' 9.87" (43324)	74° 22' 13.30" (196660)	Vestas V100 - 2.0 MW		Feeder III

22	I - 35	Bothe	11-September-2013	17° 45' 51.15" (43590)	74° 23' 45.47" (196422)	Vestas V100 - 2.0 MW	Feeder III
23	I - 37	Bothe	24-January-2014	17° 45' 39.20" (43550)	74° 23' 29.89" (196386)	Vestas V100 - 2.0 MW	Feeder III
24	I - 5	Bothe	15-June-2013	17° 46' 55.30" (43347)	74° 22' 18.21" (196612)	Vestas V100 - 2.0 MW	Feeder III
25	I - 56	Bothe	11-September-2013	17° 47' 18.05" (43431)	74° 22' 49.85" (196688)	Vestas V100 - 2.0 MW	Feeder IV
26	I - 41	Bothe	11-September-2013	17° 47' 34.34" (43453)	74° 22' 55.64" (196738)	Vestas V100 - 2.0 MW	Feeder IV
27	I - 63	Bothe	11-September-2013	17° 47' 32.05" (43508)	74° 23' 12.80" (196736)	Vestas V100 - 2.0 MW	Feeder IV
28	I - 6	Bothe	11-September-2013	17° 47' 39.09" (43533)	74° 23' 25.72" (196567)	Vestas V100 - 2.0 MW	Feeder IV
29	I - 60	Bothe	09-January-2013	17° 47' 26.47" (43545)	74° 23' 29.02" (196713)	Vestas V100 - 2.0 MW	Feeder IV
30	I - 4	Bothe	15-June-2013	17° 47' 5.07" (43559)	74° 23' 31.95" (196645)	Vestas V100 - 2.0 MW	Feeder IV
31	I - 42	Bothe	11-Septemebr-2013	17° 46' 8.21" (43513)	74° 23' 16.99" (196479)	Vestas V100 - 2.0 MW	Feeder III
32	I - 40	Bothe	24-January-2014	17° 45' 48.75" (43541)	74° 23' 27.18" (196410)	Vestas V100 - 2.0 MW	Feeder III
33	I - 43	Bothe	11-September-2013	17° 45' 26.38" (43496)	74° 23' 9.43" (196344)	Vestas V100 - 2.0 MW	Feeder III
34	I - 45	Bothe	11-September-2013	17° 45' 24.69" (43558)	74° 23' 30.89" (196330)	Vestas V100 - 2.0 MW	Feeder III
35	I - 33	Bothe	31-January-2014	17° 46' 56.26" (43295)	74° 22' 3.54" (196623)	Vestas V100 - 2.0 MW	Feeder III
36	I - 71	Bothe	24-January-2014	17° 47' 21.96" (43472)	74° 23' 2.78" (196697)	Vestas V100 - 2.0 MW	Feeder IV
37	I - 72	Bothe	24-January-2014	17° 46' 36.89" (43497)	74° 23' 10.58" (196561)	Vestas V100 - 2.0 MW	Feeder III
38	I - 73	Bothe	31-January-2014	17° 46' 57.70" (43388)	74° 22' 34.54" (196624)	Vestas V100 - 2.0 MW	Feeder III
39	I - 75	Bothe	31-January-2014	17° 46' 7.97" (43446)	74° 22' 53.32" (196474)	Vestas V100 - 2.0 MW	Feeder III
40	I - 76	Bothe	24-January-2014	17° 46' 3.41" (43584)	74° 23' 41.15" (196459)	Vestas V100 - 2.0 MW	Feeder III
41	I - 22	Bothe	29-March-2014	17° 47' 7.88" (43291)	74° 22' 2.34" (196650)	Suzlon S97 - 2.1 MW	Feeder III
42	I - 57	Bothe	26-March-2014	17° 46' 31.41" (43328)	74° 22' 13.91" (196548)	Suzlon S97 - 2.1 MW	Feeder III
43	I - 16	Bothe	26-March-2014	17° 46' 13.82" (43316)	74° 22' 8.81" (196498)	Suzlon S97 - 2.1 MW	Feeder III

44	I - 24	Bothe	26-March-2014	17° 46' 24.75" (43397)	74° 22' 36.66" (196521)	Suzlon S97 - 2.1 MW	Feeder III
45	I - 34	Bothe	31-March-2014	17° 47' 8.53" (43505)	74° 23' 14.82" (196653)	Suzlon S97 - 2.1 MW	Feeder IV
46	I - 26	Bothe	07-September-2013	17° 45' 56.89" (43489)	74° 23' 6.03" (196432)	Suzlon S97 - 2.1 MW	Feeder III
47	I - 77	Bothe	24-January-2014	17° 45' 18.42" (43502)	74° 23' 15.43" (196319)	Suzlon S97 - 2.1 MW	Feeder III
48	I - 81	Bothe	26-March-2014	17° 46' 55.50" (43492)	74° 23' 10.68" (196613)	Suzlon S97 - 2.1 MW	Feeder IV
49	I - 82	Bothe	26-March-2014	17° 45' 35.29" (43581)	74° 23' 41.15" (196375)	Suzlon S97 - 2.1 MW	Feeder V
50	I - 18	Ransingwadi	30-March-2014	17° 44.90" (43515)	74° 23.31" (196249)	Suzlon S97 - 2.1 MW	Feeder V
51	SP40	Shripalwan	11-December-2014	17° 50' 29.04" (43772)	74° 24' 43.38" (197277)	Suzlon S97 - 2.1 MW	Feeder VIII
52	SP05	Shripalwan	11-December-2014	17° 49' 58.71" (437652)	74° 24' 41.78" (1971805)	Suzlon S97 - 2.1 MW	Feeder VIII
53	SP06	Shripalwan	11-December-2014	17° 50' 9.74" (437635)	74° 24' 41.17" (1972144)	Suzlon S97 - 2.1 MW	Feeder VIII
54	SP07	Shripalwan	11-December-2014	17° 50' 18.48" (437525)	74° 24' 37.40" (1972413)	Suzlon S97 - 2.1 MW	Feeder VIII
55	SP08	Shripalwan	11-December-2014	17° 50' 22.75" (437221)	74° 24' 27.06" (1972545)	Suzlon S97 - 2.1 MW	Feeder VIII
56	SP09	Shripalwan	11-December-2014	17° 50' 17.90" (438792)	74° 25' 20.45" (1972391)	Suzlon S97 - 2.1 MW	Feeder VIII
57	SP10	Shripalwan	11-December-2014	17° 50' 25.19" (438573)	74° 25' 13.0" (1972616)	Suzlon S97 - 2.1 MW	Feeder VIII
58	SP12	Shripalwan	25-December-2014	17° 50' 22.27" (439547)	74° 25' 46.09" (1972523)	Suzlon S97 - 2.1 MW	Feeder VIII
59	SP13	Shripalwan	25-December-2014	17° 50' 30.22" (439328)	74° 25' 38.62" (1972768)	Suzlon S97 - 2.1 MW	Feeder VIII
60	SP17	Shripalwan	25-December-2014	17° 50' 51.56" (439689)	74° 25' 50.82" (1973423)	Suzlon S97 - 2.1 MW	Feeder VIII
61	SP19	Ugalyachiwadi	26-December-2014	17° 49' 25.13" (441226)	74° 26' 43.31" (1970762)	Suzlon S97 - 2.1 MW	Feeder VI
62	SP20	Ugalyachiwadi	16-December-2014	17° 49' 35.32" (441217)	74° 26' 42.97" (1971075)	Suzlon S97 - 2.1 MW	Feeder VI

63	SP21	Ugalyachiwadi	30-December-2014	17° 49' 44.51" (441113)	74° 26' 39.41" (1971358)	Suzlon S97 - 2.1 MW	Feeder VI
64	SP22	Khandyachiwadi	30-December-2014	17° 49' 56.85" (441487)	74° 26' 52.08" (1971736)	Suzlon S97 - 2.1 MW	Feeder VI
65	SP26	Khandyachiwadi	30-December-2014	17° 49' 51.04" (442326)	74° 27' 20.60" (1971555)	Suzlon S97 - 2.1 MW	Feeder VI
66	SP27	Khandyachiwadi	26-December-2014	17° 50' 2.48" (441879)	74° 27' 5.38" (1971908)	Suzlon S97 - 2.1 MW	Feeder VI
67	SP29 ²	Khandyachiwadi	26-December-2014	17° 48' 57.06" (444070)	74° 28' 20.01" (1969891)	Suzlon S97 - 2.1 MW	Feeder VII
68	SP30	Khandyachiwadi	26-December-2014	17° 49' 7.86" (444028)	74° 28' 18.55" (1970223)	Suzlon S97 - 2.1 MW	Feeder VII
69	SP31	Khandyachiwadi	26-December-2014	17° 49' 16.81" (444072)	74° 28' 20.02" (1970498)	Suzlon S97 - 2.1 MW	Feeder VII
70	SP32	Khandyachiwadi	26-December-2014	17° 49' 24.59" (443768)	74° 28' 9.67" (1970738)	Suzlon S97 - 2.1 MW	Feeder VII
71	SP33	Khandyachiwadi	26-December-2014	17° 49' 36.54" (443821)	74° 28' 11.43" (1971105)	Suzlon S97 - 2.1 MW	Feeder VII
72	SP34	Khandyachiwadi	30-December-2014	17° 49' 43.52" (443637)	74° 28' 5.16" (1971320)	Suzlon S97 - 2.1 MW	Feeder VII
73	SP35	Khandyachiwadi	30-December-2014	17° 49' 42.92" (443207)	74° 27' 50.55" (1971303)	Suzlon S97 - 2.1 MW	Feeder VII
74	SP36	Khandyachiwadi	30-December-2014	17° 49' 56.46" (443201)	74° 27' 50.31" (1971719)	Suzlon S97 - 2.1 MW	Feeder VII
75	SP37	Khandyachiwadi	30-December-2014	17° 49' 20.63" (444567)	74° 28' 36.82" (1970614)	Suzlon S97 - 2.1 MW	Feeder VII
76	SP38	Khandyachiwadi	30-December-2014	17° 49' 26.69" (444335)	74° 28' 28.92" (1970801)	Suzlon S97 - 2.1 MW	Feeder VII
77	SP39	Khandyachiwadi	30-December-2014	17° 49' 41.92" (445038)	74° 28' 52.76" (1971267)	Suzlon S97 - 2.1 MW	Feeder VII
78	SP41	Garudachiwadi	26-December-2014	17° 50' 36.67" (441422)	74° 26' 49.75" (1972960)	Suzlon S97 - 2.1 MW	Feeder VI

² As per registered PD commissioning dates for WTG no SP29, SP30, SP31, SP32 AND SP33 are 16-December-2014 and as per commissioning certificate this date is 26-12-2014. Hence same has been corrected in monitoring report.

79	SP24	Garudachiwadi	26-December-2014	17° 50' 15.86" (440601)	74° 26' 21.92" (1972323)	Suzlon S97 - 2.1 MW	Feeder VI
80	SP28	Garudachiwadi	30-December-2014	17° 50' 19.77" (441239)	74° 26' 43.58" (1972441)	Suzlon S97 - 2.1 MW	Feeder VI
81	I - 13	Ransingwadi	22-August-2014	17° 44' 12.35" (434217)	74° 22' 46.28" (1961171)	Suzlon S97 - 2.1 MW	Feeder II
82	I - 19	Katalgewadi	01-October-2014	17° 44' 14.55" (434737)	74° 23' 3.93" (1961237)	Suzlon S97 - 2.1 MW	Feeder II
83	I - 31	Katalgewadi	01-October-2014	17° 44' 32.04" (435289)	74° 23' 22.62" (1961773)	Suzlon S97 - 2.1 MW	Feeder II
84	I - 38	Katalgewadi	03-November-2014	17° 44' 25.59" (435475)	74° 23' 28.95" (1961574)	Suzlon S97 - 2.1 MW	Feeder II
85	I - 53	Katalgewadi	22-August-2014	17° 44' 35.62" (436157)	74° 23' 52.08" (1961880)	Suzlon S97 - 2.1 MW	Feeder II
86	I - 69	Katalgewadi	03-November-2014	17° 44' 6.39" (434557)	74° 22' 57.85" (1960987)	Suzlon S97 - 2.1 MW	Feeder II
87	I - 28	Shirawali	03-November-2014	17° 44' 42.99" (435370)	74° 23' 25.33" (1962109)	Suzlon S97 - 2.1 MW	Feeder II
88	I - 46	Shirawali	22-August-2014	17° 44' 50.50" (435648)	74° 23' 34.74" (1962339)	Suzlon S97 - 2.1 MW	Feeder II
89	I - 61	Shirawali	22-August-2014	17° 44' 42.33" (435954)	74° 23' 45.16" (1962087)	Suzlon S97 - 2.1 MW	Feeder II
90	I - 51	Katalgewadi	03-November-2014	17° 44' 42.77" (436663)	74° 24' 9.24" (1962098)	Suzlon S97 - 2.1 MW	Feeder II
91	I - 80	Shirawali	16-November-2014	17° 44' 41.60" (438325)	74° 25' 5.67" (1962057)	Suzlon S97 - 2.1 MW	Feeder II
92	I - 78	Shirawali	27-November-2014	17° 44' 36.14" (437099)	74° 24' 24.06" (1961893)	Suzlon S97 - 2.1 MW	Feeder II
93	I - 79	Shirawali	16-November-2014	17° 44' 33.52" (437872)	74° 24' 50.32" (1961810)	Suzlon S97 - 2.1 MW	Feeder II
94	I - 83	Shirawali	16-November-2014	17° 45' 4.10" (437163)	74° 24' 26.14" (1962752)	Suzlon S97 - 2.1 MW	Feeder II
95	I - 17	Shirawali	27-November-2014	17° 44' 34.81" (437427)	74° 24' 35.20" (1961851)	Suzlon S97 - 2.1 MW	Feeder II
96	I - 84	Khandyachiwadi	30-December-2014	17° 49' 33.63" (444824)	74° 28' 45.51" (1971013)	Suzlon S97 - 2.1 MW	Feeder VII
97	SP25	Garudachiwadi	30-December-2014	17° 50' 29.34" (440644)	74° 26' 23.34" (1972737)	Suzlon S97 - 2.1 MW	Feeder VI



1.8 Title and Reference of Methodology

The methodology applied for the project is ACM0002 of version 16.0 titled “Grid-connected electricity generation from renewable sources³”

ACM0002 draws upon the following tools which have been used in the PDD:

- Tool to calculate the emission factor for an electricity system (Version 04)⁴
- Tool for demonstration and assessment of additionality (Version 7.0.0)⁵

1.9 Participation under other GHG Programs

The Project does not intend to participate in any other GHG mechanism which includes GHG allowance trading. It does not generate any other form of GHG-related environmental credit apart from GHG emission reductions or removals claimed under the VCS Program during the current monitoring period.

1.10 Other Forms of Credit

India is Non-Annex 1 country and there is no compliance with an emission trading program or to meet binding limits on GHG emissions for this project activity. PP has submitted undertaking that it would not use net GHG emission reductions by the projects for compliance with emission trading program to meet binding limits on GHG emissions. PP has also submitted undertaking for not availing other forms of environmental credit for the same monitoring period under consideration.

³ <https://cdm.unfccc.int/methodologies/DB/EY2CL7RTEHRC9V6YQHLAR6MJ6VEU83>

⁴ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v4.0.pdf>

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

PP is not taking REC (National and International)⁶ benefits or any other benefits during the current monitoring period. No double accounting certificate has been submitted to VVB for the same.

1.11 Sustainable Development Contributions

Contribution to sustainable development:

Ministry of Environment and Forests, has stipulated economic, social, environment and technological well-being as the four indicators of sustainable development. The project contributes to sustainable development using the following ways:

Social wellbeing: The project would help in generating employment opportunities during the construction and operation phases. The project activity would lead to development in infrastructure in the region like development of roads and also may promote business with improved power generation.

Economic wellbeing: 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 would also help to reduce the demand supply gap in the state.

The project activity would generate 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 wellbeing: The successful operation of project activity would lead to promotion of wind-based power generation and would encourage other entrepreneurs to participate in similar projects.

Environmental well-being: Wind 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.

There is no requirement of monitoring of sustainability development parameters neither according to the monitoring plan of the registered PD or host country regulation and through the above, the PP has considered that the project activity profoundly contributes to the sustainable development.

According to the Appendix 3- the document history mentioned in the VCS Standard Version 4.3 (latest version), it is clearly mentioned that Project Proponent is required to demonstrate contributions to a minimum of three SDGs, effective immediately for all projects registered on

⁶https://www.recregistryindia.nic.in/index.php/publics/registered_regens,

<https://www.irecstandard.org/registries/>

or after 20-January-2023. Since this project is registered before 20-January-2023, SDG reporting is not required for the current version and the PP will demonstrate contribution to at least three SDGs by 20-January-2025. Since this project activity has been registered before 20-January-2023 thus for current monitoring period, this is not applicable. The weblink of the standard is given in the footnote. Thus, content of Table 1 of Sustainable Development Contributions is left blank in the MR.

Table 1: Sustainable Development Contributions⁷

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime

⁷https://verra.org/wp-content/uploads/2022/06/VCS-Standard_v4.3.pdf

2 SAFEGUARDS

2.1 No Net Harm

The project activity has no significant impact on the environment. Wind power projects are not included in the Schedule I of the EIA notification S.O.1533 (E) dated 14-September-2006 and thus an EIA is not required. Ministry of Environment & forests vide their OM J-11013/41/2006 - IA II (I) dated 13-May-2011, has re-affirmed this and exempted wind power plants from EIA and Environmental Consent requirement.

During the current monitoring period, no major maintenance activity conducted. Regular maintenance is taking place in the plant and it accumulates almost negligible impact. Therefore, no socio-economic impacts have been identified from the project and hence no mitigations measures are applicable.

2.2 Local Stakeholder Consultation

The Stakeholder Consultation Report primarily deals with socio-economic impact of the project activity and provided an opportunity for the local population to express their viewpoints and comments with respect to the project.

Before implementation of the project activity, the project proponent did thorough consultation with stakeholders – identifying the stakeholders, consultation with the stakeholders in number of phases and through number of media – focus group discussion, detailed social mapping and fieldwork, inclusion of local stakeholders from all sections of community, explanation of project activity – purpose and details to them and resolving the comments/ grievances along with seeking suggestions from them. The PP has engaged a number of local NGOs for local stakeholder consultations by applying various strategies to engage them in project and for taking care of their complaints/grievances/suggestions. The process is ongoing and continuous; this process is undertaken throughout the year.

During the current monitoring period no grievances received, therefore, therefore no any mitigation measures are required Besides, PP has kept a box at the site for dropping grievances at the plant site and there are forms available to register grievance. For any grievance recorded at site, nature of probable solution is discussed with plant head office and implemented by site In-charge.

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

comments. For the global stakeholders, the suggestion and the grievance can be submitted to info@continuumenergy.in

Stakeholder meetings were organized at the time of registration of project activity in order to identify the major challenges around the area, stakeholders were invited well in advance through printed invitation, calls, meeting and a notice is placed around the local common areas. Various CSR activities around site are carried out. The stakeholder is request to share their experiences and grievances on continuous basis. Grievance registers is used to records the grievances and feedback.

During the current monitoring period, positive feedback is received regarding site operation. No grievances received during the current monitoring period; therefore, no any mitigation measures are required. In case of grievances, the nature of probable resolution is discussed with the plant head office and implemented by the site in-charge. The grievance copies have been submitted to VVB.

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 implementation of the project has started on 17-May-2013 and completed on 30-December-2014.

Wind power 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 project activity is the installation of an environmentally safe and sound technology since there are no GHG emissions associated with the electricity generation.

The technical specifications of the WTGs have been provided as below. There is no transfer of technology involved in the project activity.

The project activity consists of WTGs of Following Machines: -

Key Technical Particulars of Vestas V-100 2.0 MW WTG⁸

Particulars	Specifications
Make	Vestas
Model	V-100
Rated Capacity	2000 kW

⁸ <https://en.wind-turbine-models.com/turbines/1001-vestas-v100-2.0>

Rotor Diameter	100 m
Hub height	95 m
Type of Tower	Tubular
Number of Blades	3
Geared/Gearless	Geared
Gear Box	One planetary stage and two helical stages
Cut-in Wind speed	3 m/s
Rated Wind speed	12 m/s
Cut-out Wind speed	22 m/s
Wind Class	IEC S (IEC IIIA average wind and IEC IIIA extreme wind)

Key Technical Particulars of Suzlon S- 97 90 2.1 MW WTG⁹

Particulars	Specifications
Make	Suzlon
Model	S-97
Rotor diameter	97 m
Hub height	90 m
Estimated service life	20 years
Rated power	2.1 MW
Rated wind speed	11 m/s (without turbulence intensity according to GL guideline)
Cut in wind speed	4.0 m/s (30-second average)
Cut out wind speed	20 m/s (10-minute average)
Controller type	Programmable Logic Controller with SUZLON CONTROL SYSTEM Software

During the current monitoring period, no such events has occurred that may impact the GHG emission reductions or removals and monitoring plan. The project design and monitoring plan is well in place and followed at the site with respect ot the registered PD. The project activity is running smoothly since commissioning.

Breakdown Summary: There is a breakdown of 77.40 hours during the current monitoring period due to various reasons. Breakdown detail has been incorporated in Appendix II of the MR.

3.2 Deviations

2.1.1 Methodology Deviations

The project activity has been implemented as described in the VCS-PD and there was no methodological deviation applied during the current monitoring period.

⁹ <https://www.oakland.edu/Assets/upload/docs/Energy/Wind-Project/07-Suzlon-2.1-MW-S97---Technical-Data.pdf>

2.1.2 Project Description Deviations

No project description deviation is applicable during this monitoring period.

3.3 Grouped Projects

Not applicable as the project is non-grouped.

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 10, December 2014 ¹⁰
Value applied	0.9862 (NEWNE Grid) ¹¹
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 04.0.0” as 3-year generation weighted average using data for the years 2011-2012, 2012-2013 & 2013- 2014. The data are obtained from “CO ₂ Baseline Database for Indian Power Sector” version 10.0, published by the Central Electricity Authority, Ministry of Power, and Government of India.
Purpose of Data	For the calculation of 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	Built Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database, Version 10, December 2014 ¹²
Value applied	0.9495 (NEWNE Grid) ¹³
Justification of choice of data or description of	Calculated as per “Tool to calculate the emission factor for an electricity system, version 04.0.0” as 3-year generation weighted average using data for the years 2011-2012, 2012-2013 &

¹⁰ https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver10.pdf

¹¹ Now INDIAN Grid

¹² https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver10.pdf

¹³ Now INDIAN Grid

measurement methods and procedures applied	2013- 2014. The data are obtained from “CO ₂ Baseline Database for Indian Power Sector” version 10.0, published by the Central Electricity Authority, Ministry of Power, and Government of India.
Purpose of Data	For the calculation of the Baseline Emission
Comments	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	$EF_{grid,CM,y}$
Data unit	tCO ₂ /MWh
Description	Combined Margin CO ₂ emission factor in year y
Source of data	Calculated from CEA database, Version 10, December 2014 ¹⁴
Value applied	0.9770 (NEWNE Grid) ¹⁵
Justification of choice of data or description of measurement methods and procedures applied	The combined margin emissions factor is calculated as follows: $EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$ $EF_{grid,BM,y}$ = Build margin CO₂ emission factor in year y (tCO₂/MWh) $EF_{grid,OM,y}$ = Operating margin CO₂ emission factor in year y (tCO₂/MWh) W_{OM} = Weighting of operating margin emissions factor (%) = 75% W_{BM} = Weighting of build margin emissions factor (%) = 25%
Purpose of Data	For the calculation of the Baseline Emission.
Comments	This parameter is fixed ex-ante for the entire crediting period.

4.2 Data and Parameters Monitored

Data / Parameter	$EG_{PJ,y}$
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project to the grid in year y
Source of data	Monthly electricity share certificates
Description of measurement methods and procedures to be applied	The value of net electricity generation supplied to the grid as per monthly electricity share certificates forms the basis for calculation of the emission reductions; which can be cross checked from the invoice raised to the DISCOM. Net electricity supplied to grid has been calculated as the difference of the measured values of “export” and “import” of electricity through the dedicated SEB energy meter (electronic tri-vector bidirectional main meter & check meter which measures

¹⁴ https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver10.pdf

¹⁵ Now INDIAN Grid

	both export & import concurrently) installed at the delivery point (i.e., the connected substation). Net electricity generated and supplied by the project to the grid = Electricity Export to the grid - Electricity Import from the grid Monthly meter readings have been taken from the main and check meters installed at the substation and certified by the representatives of SEB Officials and the representatives of the project proponent. For apportioning procedure refer section 4.3 of the monitoring report.
Frequency of monitoring/recording	Continuous monitoring, hourly measurement and at least monthly recording
Value monitored	374,035.26
Monitoring equipment	Monitoring: Tri vector meter would be 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 energy meter readings are taken on monthly basis - Energy meters would be calibrated annually and faulty meters would be duly replaced immediately. - All the energy meters are under the control of state utility and calibration/testing of energy meters is also under the jurisdiction of state utility. - The Net electricity exported to the grid would be cross checked against the invoice raised by the PP towards the DISCOM. The calibration records of the main and check meters have been provided in Appendix I.
Purpose of the data	This data has been used to calculate 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 methodology specified in the methodology requires that the project-monitoring plan to consist of monitoring of quantity of net electricity supplied to the grid in the year y. In order to monitor the mitigation of GHG due to the project activity, the total energy exported needs to be measured. The net energy supplied to grid by the project activity multiplied by emission factor for unified Indian grid, would form the baseline for the project activity.

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

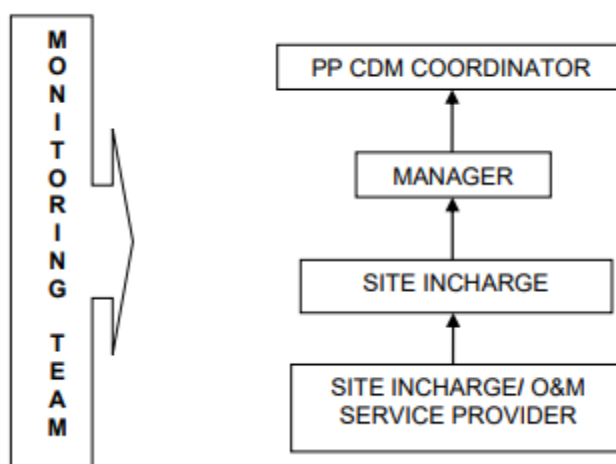
Aim of Monitoring:

The monitoring procedure would set guidelines for the project investor to monitor the parameters regularly and to ensure quality and accuracy in monitoring. It elaborates on the functions of the monitoring team and procedures to be followed in monitoring of the CDM parameters.

The monitoring procedure has included all the equipment's that contribute towards reduction in GHG emissions. Since the project activity focuses mainly on the generation of renewable power, it is important to monitor all the equipment involved in the metering of all the necessary instruments.

The project investor has a well-defined management structure for monitoring the project activity.

Organizational Structure for monitoring



Designation	Responsibilities
PP CDM coordinator	Overall project monitoring including collecting and aggregating JMRs/Invoices for all WTG investors
SR. Engineer	Holds complete control over monitoring aspects pertaining to the project
Site Incharge	- Recording - Verification - Storage of Data
Site Incharge/ O&M Service Provider	- Operation and Maintenance - Storage of Data - Data Recording

In case of INDIAN grid, multiple WTGs would be connected to the feeder, one of which would be part of the project activity and rest of which would not be part of the project activity¹⁶. The import and export of electricity is continuously monitored by the export/ import meter and the data is

¹⁶ All WTGs connected to the feeders in the project activity are of single PP and that PP is the owner of this project only. So there is no scope for apportioning.

recorded on a monthly basis jointly by the proponent and the electricity board. The meter is located at the delivery point of wind power in the grid. This accounts for the import of electricity that is used by the Project proponent. Hence the net electricity generated is calculated from the joint meter reading and recorded /archived in paper/electronic.

SEB/O&M Contractor follows an apportioning procedure to account for electricity generation from individual WTGs based on data from individual WTG controllers.

Following the joint meter readings, apportioning of net electricity supplied to grid by each WTG is done by the SEB/O&M Contractor based on the individual meter readings recorded from the controller panel meter of each WTG and based on the meter reading recorded from the meters situated at the connected substations.

Based on the monthly export and import data as per main/check meters and the WTG controller readings, SEB provides a break-up of the electricity exported and imported for each WTG.

A monthly joint meter reading of the energy meters is taken by MSEDCL officials and O&M contractors (representatives of the project investor). Apportioning of net electricity generation from each WTG connected to NEWNE (INDIAN) grid is then determined as follow:

Apportioning Ratio	Generation at WTG Controller
	Total Generation of All WTG Controller for the feeder
Electricity Import from WTG by the grid (EG_{import})	Import from Main/Check Meter * Apportioning Ratio
Electricity Export to the WTGs by the grid (EG_{export})	Export from Main/Check Meter * Apportioning Ratio
Net electricity generated by WTG	Electricity Import from WTG by the grid – Electricity Export to the WTGs by the grid

Above steps for calculation of EG_{import} and EG_{export} are carried out by MSEDCL Officials & energy break-up sheet is issued by the MSEDCL Officials. Based on the break-up sheets Project investor raises invoice to DISCOM which forms the cross-check for the net electricity generated. The Project investor has no role in the entire procedure of apportioning.

Emergency Preparedness and Uncertainty Procedure:

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

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

Emergency preparedness maintained at the site is as follows:

ASSEMBLY POINT COORDINATION	COMMUNICATION TEAM	RESCUE TEAM	FIRE FIGHTERS	FIRST AIDERS	SEARCH TEAM
Count worker Separate group Report to EPR Leader. Ensure that electrical supply, machineries are OK.	Identify W severity Inform to other EPR team member & external emergency like fire brigade, Ambulance act.	Control workers and start rescue operations with proper rescue techniques.	Start fire extinguisher activity with the appropriate fire extinguisher	Treat the injured person on the spot and accompany him/her till the external medical treatment is given.	Goes to location and find out no any employee working and electrical equipment on condition

Note – If the Above team members or any employees are not available at that time of emergency a senior-most person will assign the responsibility to available employees as per emergency & control emergency.

Data Recording and Archiving:

O&M operator would keep complete and accurate records of operating log at the Power Plant. The data would be archived electronically as well as in log books at the power plant and would be kept for two years after the end of the crediting period or the last issuance of VCUs for this project activity, whichever occurs later.

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

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

For carrying out the apportioning procedures, WTG controller data (data recorded by the WTG controller software) would be utilized. The electricity generation from WTG controllers is recorded on a daily basis in the Power Generation Reports maintained by the O&M contractors. The data from Power Generation Reports would be referred for determination of the apportioning ratio.

The following steps will be applied to carry out the apportioning:

- (Apportioning Ratio = (Generation at WTG controller for apportioning period) / (Total Generation of all WTG controller for the feeder)
- Electricity Import from WTG by the grid (EG_{import})= Import from Main/Check Meter * Apportioning Ratio
- Electricity Export to the WTGs by the grid (EG_{export})= Electricity Export to the WTGs by the grid (EG_{export})
- Net electricity generated by WTG=Electricity Import from WTG by the grid – Electricity Export to the WTGs by the grid

Following electricity generation apportioning procedure will be followed. The calculated value after apportioning would be used for calculation of emission reductions during that period.

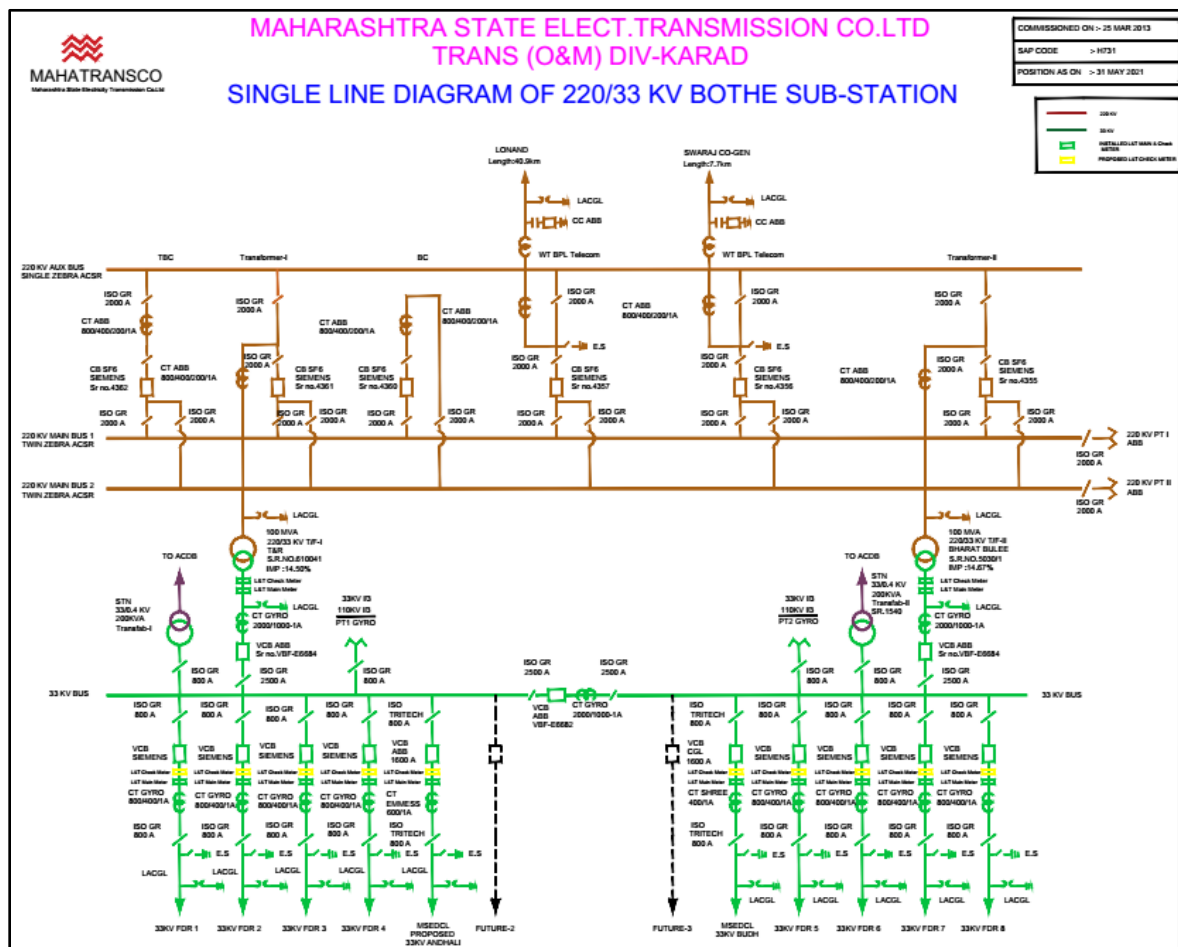


Figure 1. Single Line Diagram of project activity

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

The baseline emissions are calculated using the following formula:

$$\text{Baseline Emissions (BE}_y\text{)} = \text{EG}_{\text{PJ},y} \times \text{EF}_{\text{Grid,CM},y}$$

Where:

BE_y = Baseline Emission in Year y (tCO₂/yr)

EG_{PJ,y} = Quantity of net electricity generation supplied by the project to the grid 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, version 04.” (tCO₂/MWh)

As per the VCS PD, the baseline emissions factor (EF_{Grid,CM,y}) is 0.9770 tCO₂/MWh.

For the project activity, monthly generation records have been aggregated to arrive at the yearly net generation values.

The net generation for the current monitoring period is

Year	Net Generation (MWh)	Baseline emissions factor (tCO ₂ /MWh)	Baseline emissions (ER _y)
01-October-2021 to 31-December-2021	62,480.12	0.9770	61,043
01-January-2022 to 30-September-2022	311,555.13	0.9770	304,389*

*Calculation details are provided in excel worksheet

5.2 Project Emissions

As per the para 35 of methodology ACM0002 (Version 16.0), “For most renewable power generation project activities, PE_y = 0.

5.3 Leakage

As per para 60 of the methodology ACM0002 (Version 16.0) does not consider any leakage emissions, LE_y=0.

5.4 Net GHG Emission Reductions and Removals

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01-October-2021 to 31-December-2021	61,043	0	0	61,043
01-January-2022 to 30-September-2022	304,389	0	0	304,389
Total	365,432	0	0	365,432

During the present monitoring period, actual emission reductions achieved are 365,432 tCO₂e whereas estimated emission reductions was 364,217 tCO₂e. The project witnessed an increase of 0.33% in emission reductions as compared to ex-ante emissions, which is due to high wind speed during the monitoring period and it cannot be controlled by the Project Proponent.

APPENDIX I: CALIBRATION DETAIL

Year 2021-2022

Meter Sr. No. (Main)	Meter Sr. No. (Check)	WTG ID	Feeder No & Dev no	Meter Make	Accuracy Class	Date of Calibration	Due Date of Calibration
15687851	05269326	I-66, I-01, I-02, I-30, I-49, I-39, I-25, I-48, I-29, I-64, I-21, I-23, I-03, I-07	Feeder-1 & Dev No-8310	Elster	0.2s	21-June-2021	20-June-2022
15687861	15687859	I-13, I-46, I-53, I-61, I-19, I-31, I-28, I-69, I-38, I-51, I-79, I-80, I-83, I-78, I-17	Feeder-2 & Dev No-8311				
05269324	05269316	I-22, I-24, I-57, I-52, I-33, I-73, I-72, I-08, I-06, I-05	Feeder-3 & Dev No-8312				
05269327	15687848	I-34, I-81, I-59, I-71, I-47, I-60, I-41, I-56, I-63, I-04	Feeder-4 & Dev No-8313				
16351048	16351049	I-15, I-75, I-26, I-18, I-82, I-16, I-77, I-37, I-40, I-76, I-35, I-42, I-43, I-45	Feeder-5 & Dev No-8320				
16351050	16351051	I-27, I-68, SP-19, SP-20, SP-24, SP-41, SP-22, SP-26, SP-28, SP-27, SP-21, SP-25, SP-29, SP-30,	Feeder-6 & Dev No-8329				

		SP-31, SP-32					
16351052	16351053	SP-33, SP-34, SP-37, SP-39, SP-35, SP-36, SP-38, I- 84	Feeder- 7 & Dev No- 8330				
16351054	16351055	SP-05, SP-06, SP-07, SP-08, SP-10, SP-40, SP-09, SP-12, SP-13, SP-17	Feeder- 8 & Dev No- 8331				

Year 2022-2023

Meter Sr. No. (Main)	Meter Sr. No. (Check)	WTG ID	Feeder No & Dev no	Meter Make	Accuracy Class	Date of Calibration	Due Date of Calibration
15687851	05269326(Old) ¹⁷ Q0603802 (New)	I-66, I-01, I-02, I-30, I-49, I-39, I-25, I-48, I-29, I-64, I-21, I-23, I-03, I-07	Feeder- 1 & Dev No- 8310	Elster	0.2s	27-June- 2022	26-June- 2023
15687861	15687859	I-13, I-46, I-53, I-61, I-19, I-31, I-28, I-69, I-38, I-51, I-79, I-80, I-83, I-78, I-17	Feeder- 2 & Dev No- 8311				
05269324	05269316	I-22, I-24, I-57, I-52, I-33, I-73, I-72, I-08, I-06, I-05	Feeder- 3 & Dev No- 8312				

¹⁷ There was a check meter change on 12/07/2022.

05269327	15687848	I-34, I-81, I-59, I-71, I-47, I-60, I-41, I-56, I-63, I-04	Feeder- 4 & Dev No- 8313				
16351048	16351049	I-15, I-75, I-26, I-18, I-82, I-16, I-77, I-37, I-40, I-76, I-35, I-42, I-43, I-45	Feeder- 5 & Dev No- 8320				
16351050	16351051	I-27, I-68, SP-19, SP- 20, SP-24, SP-41, SP- 22, SP-26, SP-28, SP- 27, SP-21, SP-25, SP- 29, SP-30, SP-31, SP- 32	Feeder- 6 & Dev No- 8329				
16351052	16351053	SP-33, SP- 34, SP-37, SP-39, SP- 35, SP-36, SP-38, I- 84	Feeder- 7 & Dev No- 8330				
16351054	16351055	SP-05, SP- 06, SP-07, SP-08, SP- 10, SP-40, SP-09, SP- 12, SP-13, SP-17	Feeder- 8 & Dev No- 8331				

APPENDIX II: BREAKDOWN DETAIL

Gen. Date	Customer Name	State	Site	MW	Breakdown Remark	Breakdown Hrs.
01-October-2021	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.20
12-October-2021	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.20
23-October-2021	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.20
04-November-2021	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.10
10-November-2021	BWDPL	Maharashtra	Satara	2	Elec Voltage Asymmetry	0.30
20-November-2021	BWDPL	Maharashtra	Satara	2	Elec Voltage Asymmetry	0.20
01-December-2021	BWDPL	Maharashtra	Satara	2	Grid Down from EB	5.60
15-December-2021	BWDPL	Maharashtra	Satara	2	Elec Voltage Asymmetry	0.20
31-December-2021	BWDPL	Maharashtra	Satara	2	Grid Down from EB	5.60
10-January-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	12.80
21-January-2022	BWDPL	Maharashtra	Satara	2	FSS Fault	2.20
02-February-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	12.80
13-February-2022	BWDPL	Maharashtra	Satara	2	FSS Fault	1.60
24-February-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.10
06-March-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	5.00
19-March-2022	BWDPL	Maharashtra	Satara	2	Preventive Check	0.70
31-March-2022	BWDPL	Maharashtra	Satara	2	FSS Fault	1.20
18-April-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	5.00
29-April-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	5.00
02-May-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.40
04-May-2022	BWDPL	Maharashtra	Satara	2	FSS Fault	7.20
22-May-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.20
07-June-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	2.60
17-June-2022	BWDPL	Maharashtra	Satara	2	Monthly Lubrication	0.80
29-June-2022	BWDPL	Maharashtra	Satara	2	Elec Voltage Asymmetry	0.10
06-July-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	2.60
17-July-2022	BWDPL	Maharashtra	Satara	2	Monthly Lubrication	1.00
28-July-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.40
09-August-2022	BWDPL	Maharashtra	Satara	2	Modification	1.70
10-August-2022	BWDPL	Maharashtra	Satara	2	Monthly Lubrication	1.00
31-August-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.10
01-September-2022	BWDPL	Maharashtra	Satara	2	Grid Down from EB	0.10
12-September-2022	BWDPL	Maharashtra	Satara	2	Elec Voltage Asymmetry	0.20
Total Breakdown hours						77.40