



BUNDLED WIND POWER PROJECT BY SEMBCORP GREEN INFRA LIMITED IN INDIA

Project title	Bundled Wind Power Project by Sembcorp Green Infra Limited in India
Project ID	1856
Monitoring period	01-May-2024 to 28-February-2025 (inclusive of both dates)
Original date of issue	The original date of issue will be updated after the completion of the audit.
Most recent date of issue	03-June-2025 (date on which the document was most recently submitted)
Version	02
VCS Standard Version	4.7
Prepared by	Mr. Rajeev Kumar Singh Manager – Carbon Credits Team, Sembcorp Green Infra Private Limited Email: rajeevkumar.singh@sembcorp.com Mobile: +91 9789183888

CONTENTS

PROJECT DETAILS	4
1.1 Summary Description of the Implementation Status of the Project	4
1.2 Audit History.....	5
1.3 Sectoral Scope and Project Type	5
1.4 Project Proponent	6
1.5 Other Entities Involved in the Project	6
1.6 Project Start Date	6
1.7 Project Crediting Period	6
1.8 Project Location	7
<u>1.9</u> Title and Reference of Methodology	10
1.10 Double Counting and Participation under Other GHG Programs	10
1.11 Double Claiming, Other Forms of Credit, and Scope 3 Emissions.....	11
1.12 Sustainable Development Contributions	12
1.13 Commercially Sensitive Information.....	16
2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT	16
2.1 Stakeholder Engagement and Consultation.....	16
2.2 Risks to Stakeholders and the Environment.....	20
2.3 Respect for Human Rights and Equity	21
2.4 Ecosystem Health	23
3 IMPLEMENTATION STATUS	25
3.1 Implementation Status of the Project Activity	25
3.2 Deviations	26
3.3 Grouped Projects	27
3.4 Baseline Reassessment.....	27
4 DATA AND PARAMETERS.....	27
4.1 Data and Parameters Available at Validation	27
4.2 Data and Parameters Monitored.....	28
4.3 Monitoring Plan.....	30
5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS	34
5.1 Baseline Emissions	34

5.2	Project Emissions	35
5.3	Leakage Emissions	35
5.4	GHG Emission Reductions and Carbon Dioxide Removals	35
APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION.....		37
APPENDIX 2: METER CALIBRATION DETAILS.....		38

PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The purpose of the project activity is to generate clean electricity by harnessing the renewable wind energy. The project activity involves the installation of 56 Wind Turbine Generators (WTGs) for generating the electricity having aggregated capacity of 95.5 MW. Over the 10 years of first crediting period, the project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 191,006 tCO₂e per year. This is a greenfield bundled project activity consists of 3 individual projects promoted by:

Project	Project Promoter	State	COD	Capacity of each WTG	No of WTGs	MW	Total MW
Project 1	Green Infra Wind Energy Limited ¹	Gujarat	02-March - 2017	2 MW	4	8	22
			22-March- 2017	2 MW	2	4	
			24-March- 2017	2 MW	2	4	
			25-March- 2017	2 MW	1	2	
			29-March- 2017	2 MW	1	2	
			28-June- 2017	2 MW	1	2	
Project 2	Green Infra Wind Energy Limited	Gujarat	31-March- 2017	2 MW	7	14	24
			30-May- 2017	2 MW	3	6	
			30-June- 2017	2 MW	2	4	
Project 3	Green Infra Wind Solutions Limited	Andhra Pradesh	30-March- 2017	1.5 MW	33	49.5	49.5

¹ The organization has undergone a name change from "Green Infra Wind Energy Limited" to "Sembcorp Green Infra Private Limited"

				Total	56		95.5
--	--	--	--	-------	----	--	------

During the current monitoring period from 01-May-2024 to 28-February-2025 (first and last date included) the project activity has supplied 1,63,828 MWh of electricity, and thus contributing to the GHG reductions 1,55,226 tCO₂e.

1.2 Audit History

Audit type	Period	Program	Validation/verification body name	Number of years
Joint Validation and Verification	02-March-2017 to 31-December-2018	VCS	LGAI Technological Center, S.A. (Applus+ Certification)	1 year, 9 months, 30 days
Verification	01-January-2019 to 31-July-2020	VCS	Earthood Services Pvt.Ltd.	1 year, 7 months
Verification	01-August -2020 to 31-July-2021	VCS	Earthood Services Pvt.Ltd.	1 year, 0 month
Verification	01-August-2021 to 31-July-2022	VCS	LGAI Technological Center, S.A. (Applus+ Certification)	1 year, 0 month
Verification	01-August-2022 to 31-August-2023	VCS	LGAI Technological Center, S.A. (Applus+ Certification)	1 year, 1 month
Verification	01-September-2023 to 30-April-2024	VCS	Carbon Check India Pvt.Ltd.	8 months
Verification	01-May-2024 to 28-February 2025	VCS	Ecolance Private Limited	10 months
Total	02-March-2017 to 28-February-2025	-	-	7 years, 11 months, 29 days

1.3 Sectoral Scope and Project Type

Sectoral scope	01-Energy Industries (renewable/non-renewable sources)
Project activity type	Type I – Renewable Energy Projects

Sectoral scope	Not applicable
AFOLU project category	Not applicable
Project activity type	Not applicable

1.4 Project Proponent

Organization name	Sembcorp Green Infra Private Limited
Contact person	Ms. Shivanjali Anubhuti Mishra
Title	Assistant Manager
Address	5th Floor, Tower C, Building No. 8, DLF Cybercity, Gurgaon-122002, Haryana, India
Telephone	-
Email	netzero@sembcorp.com

1.5 Other Entities Involved in the Project

Organization name	NA
Role in the project	NA
Contact person	NA
Title	NA
Address	NA
Telephone	NA
Email	NA

1.6 Project Start Date

Project start date	02-March-2017
Justification	As per the Section 3.8 of the VCS Standard v.4.7, "The project start date of a non-AFOLU project is the date on which the project began generating GHG emission reductions or removals". The project is a non-AFOLU project and the earliest date of commissioning of first WTG is 02-March-2017. Hence, the start date of the project is 02-March-2017.

1.7 Project Crediting Period

Crediting period	☐ Seven years, twice renewable
------------------	---

	☐ Ten years, fixed ☒ Other (The project has chosen a crediting period of 10 years renewable twice. This is in line with VCS standard v3.7 which was applicable at the time of project registration)
Start and end date of first or fixed crediting period	02-March-2017 to 01-March-2027

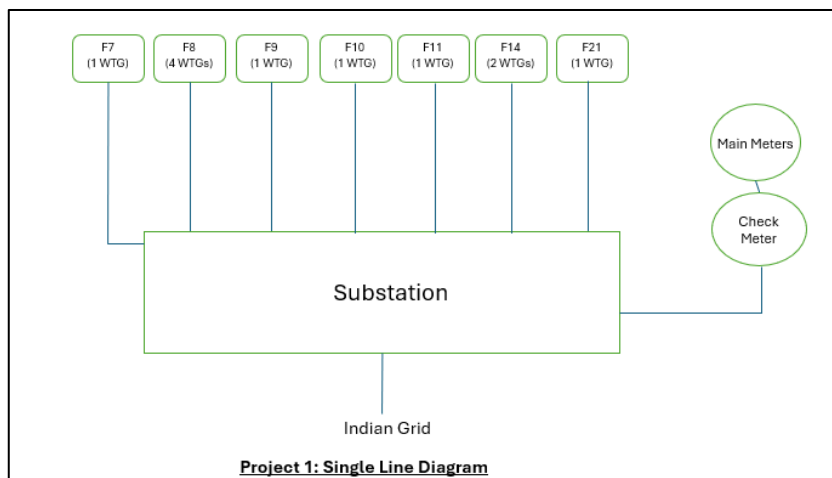
1.8 Project Location

The project activity is located in two states of India. The table provided details of location of each project:

Project	Promoter	Capacity (MW)	Location
Project 1	Green Infra Wind Energy Limited	22	Amreli/Rajkot, Gujarat
Project 2	Green Infra Wind Energy Limited	24	Surendra Nagar, Gujarat
Project 3	Green Infra Wind Solutions Limited	49.5	Kurnool, Andhra Pradesh

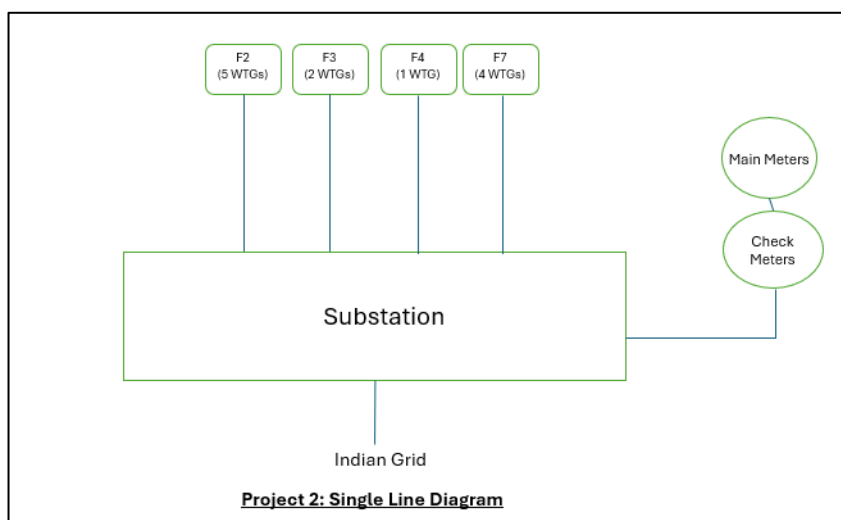
Project 1: The below table provides details of location of individual WTGs (Latitude and Longitude in Degree Minutes Seconds format) of the project.

S.No.	WTG No	Location	Latitude	Longitude
1	RJ9-T-094	Kalasar Jasdan Rajkot	N21°56'50.532"	E71°16'0.516"
2	RJ9-T-099	Lilapur Jasdan Rajkot	N21°50'39.84"	E71°26'37.068"
3	RJ9-T-076	Godladhar Jasdan Rajkot	N22°3'8.928"	E71°19'7.464"
4	RJ9-T-096	Kalasar Jasdan Rajkot	N21°50'53.088"	E71°25'45.732"
5	RJ9-T-078	Godladhar Jasdan Rajkot	N22°6'47.772"	E71°19'7.464"
6	RJ9-T-095	Kalasar Jasdan Rajkot	N21°53'26.7"	E71°11'18.348"
7	RJ9-T-039	Hirana Lathi Amreli	N22°6'58.212"	E71°19'7.32"
8	RJ9-T-013	Miya Khijadiya Babra Amreli	N22°6'33.696"	E71°19'15.524"
9	RJ8-T-073	Sukavada Babra Amreli	N22°6'6.408"	E71°17'8.916"
10	RJ9-T-040	Hirana Lathi Amreli	N22°3'17.82"	E71°20'44.196"
11	RJ9-T-075	Ambaradi Jasdan Rajkot	N22°1'50.232"	E71°22'26.04"



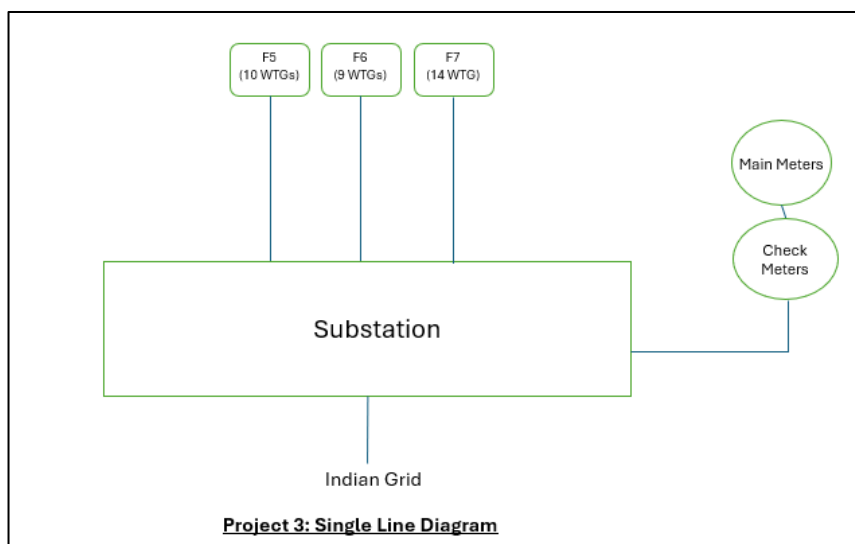
Project 2: The below table provides details of location of individual WTGs (Latitude and Longitude in Degree Minutes Seconds format) of the project

S.No.	WTG No	Location	Latitude	Longitude
1	SDL-T-30	Jepur (Ranipat) Muli Surendranager	N22° 42'57.348"	E71° 13'19.668"
2	SDL-T-33	Jepur (Ranipat) Muli Surendranager	N22° 43'48.468"	E71° 13'38.604"
3	SDL-T-38	Jepur (Ranipat) Muli Surendranager	N22° 43'52.788"	E71° 12'33.624"
4	SDL-T-168	Vadadhra Muli Surendranager	N22° 45'16.74"	E71° 18'1.332"
5	SDL-T-169	Vadadhra Muli Surendranager	N22° 45'25.092"	E71° 17'39.552"
6	SDL-T-170	Vadadhra Muli Surendranager	N22° 45'43.38"	E71° 17'32.496"
7	SDL-T-171	Vadadhra Muli Surendranager	N22° 45'53.352"	E71° 16'59.304"
8	SDL-T-172	Vadadhra Muli Surendranager	N22° 45'4.824"	E71° 17'23.244"
9	SDL-T-98	Asundrali Muli Surendranager	N22° 40'27.372"	E71° 17'32.028"
10	SDL-T-99	Asundrali Muli Surendranager	N22° 40'19.488"	E71° 17'40.992"
11	SDL-T-95	Palasa Muli Surendranager	N22° 37'53.868"	E71° 19'55.02"
12	SDL-T-96	Palasa Muli Surendranager	N22° 38'7.836"	E71° 19'41.232"



Project 3: The below table provides details of location of individual WTGs (Latitude and Longitude in Degree Minutes Seconds format) of the project

S.No	WTG No	Location	Latitude	Longitude
1	GISKK-01	Gundlakonda Pattikonda Kurnool	N15° 30' 56.484"	E77° 37' 1.02"
2	GISKK-02	Gundlakonda Pattikonda Kurnool	N15° 31' 4.908"	E77° 37' 2.28"
3	GISKK-03	Gundlakonda Pattikonda Kurnool	N15° 31' 15.456"	E77° 36' 47.952"
4	GISKK-04	Gundlakonda Pattikonda Kurnool	N15° 31' 39.396"	E77° 35' 41.784"
5	GISKK-05	Kunkanuru Pattikonda Kurnool	N15° 31' 42.996"	E77° 36' 18.828"
6	GISKK-06	Kunkanuru Pattikonda Kurnool	N15° 32' 57.768"	E77° 36' 7.668"
7	GISKK-07	Jilledubudakala Pattikonda Kurnool	N15° 31' 45.732"	E77° 37' 38.964"
8	GISKK-08	Gundlakonda Pattikonda Kurnool	N15° 31' 51.492"	E77° 36' 18.072"
9	GISKK-09	Devanakonda Pattikonda Kurnool	N15° 31' 51.564"	E77° 35' 40.56"
10	GISKK-10	Jilledubudakala Pattikonda Kurnool	N15° 32' 8.412"	E77° 38' 59.244"
11	GISKK-11	Jilledubudakala Pattikonda Kurnool	N15° 32' 41.676"	E77° 37' 44.184"
12	GISKK-12	Kunkanuru Pattikonda Kurnool	N15° 31' 59.844"	E77° 36' 16.38"
13	GISKK-13	Kunkanuru Pattikonda Kurnool	N15° 32' 9.528"	E77° 36' 10.476"
14	GISKK-14	Jilledubudakala Pattikonda Kurnool	N15° 32' 23.172"	E77° 38' 53.52"
15	GISKK-15	Jilledubudakala Pattikonda Kurnool	N15° 32' 51.144"	E77° 37' 43.608"
16	GISKK-16	Jilledubudakala Pattikonda Kurnool	N15° 31' 55.128"	E77° 37' 37.848"
17	GISKK-17	Kunkanuru Pattikonda Kurnool	N15° 32' 19.536"	E77° 36' 7.272"
18	GISKK-18	Jilledubudakala Pattikonda Kurnool	N15° 32' 33.756"	E77° 38' 53.448"
19	GISKK-19	Jilledubudakala Pattikonda Kurnool	N15° 32' 6.936"	E77° 37' 32.592"
20	GISKK-20	Kunkanuru Pattikonda Kurnool	N15° 32' 28.284"	E77° 36' 5.364"
21	GISKK-21	Jilledubudakala Pattikonda Kurnool	N15° 32' 32.856"	E77° 37' 21.36"
22	GISKK-22	Kunkanuru Pattikonda Kurnool	N15° 32' 35.052"	E77° 35' 59.964"
23	GISKK-23	Kunkanuru Pattikonda Kurnool	N15° 37' 35.364"	E77° 35' 53.052"
24	GISKK-24	Jilledubudakala Pattikonda Kurnool	N15° 32' 24.324"	E77° 37' 21.468"
25	GISKK-25	Jilledubudakala Pattikonda Kurnool	N15° 33' 21.996"	E77° 39' 3.636"
26	GISKK-26	Jilledubudakala Pattikonda Kurnool	N15° 32' 24.36"	E77° 37' 56.28"
27	GISKK-27	Jilledubudakala Pattikonda Kurnool	N15° 32' 58.344"	E77° 37' 42.816"
28	GISKK-28	Jilledubudakala Pattikonda Kurnool	N15° 32' 56.112"	E77° 38' 20.58"
29	GISKK-29	Kappatralla Pattikonda Kurnool	N15° 34' 26.688"	E77° 37' 43.032"
30	GISKK-30	Kappatralla Pattikonda Kurnool	N15° 34' 38.244"	E77° 37' 37.848"
31	GISKK-31	Jilledubudakala Pattikonda Kurnool	N15° 33' 37.404"	E77° 38' 48.012"
32	GISKK-32	Jilledubudakala Pattikonda Kurnool	N15° 34' 8.292"	E77° 37' 56.064"
33	GISKK-33	Kappatralla Pattikonda Kurnool	N15° 34' 19.092"	E77° 37' 53.688"



1.9 Title and Reference of Methodology

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
Methodology	ACM0002	Grid-connected electricity generation from renewable sources	19.0
Tool	Tool 07	Tool to calculate the emission factor for an electricity system	7.0
Tool	Tool 01	Tool for the demonstration and assessment of additionality	7.0

1.10 Double Counting and Participation under Other GHG Programs

1.10.1 No Double Issuance

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program?

☐ Yes ☒ No

1.10.2 Registration in Other GHG Programs

Was the project registered or seeking registration under any other GHG programs?

☐ Yes ☒ No

1.11 Double Claiming, Other Forms of Credit, and Scope 3 Emissions

1.11.1 No Double Claiming with Emissions Trading Programs or Binding Emission Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit? See the *VCS Program Definitions* for definitions of emissions trading program and binding emission limit.

☐ Yes ☒ No

1.11.2 No Double Claiming with Other Forms of Environmental Credit

Has the project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system? See the *VCS Program Definitions* for definition of GHG-related environmental credit system.

☐ Yes ☒ No

1.11.3 Supply Chain (Scope 3) Emissions

Do the project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

If yes:

Is the project proponent(s) or authorized representative a buyer or seller of the product(s) (goods or services) that are part of a supply chain?

☐ Yes ☐ No

If yes:

Has the project proponent(s) or authorized representative posted a public statement on their website saying, "Carbon credits may be issued through the Verified Carbon Standard project [project ID] for the greenhouse gas emission reductions or removals associated with [project proponent or authorized representative organization name(s)] [name of product(s) whose emissions footprint is changed by the project activities]."

☐ Yes ☐ No

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

1.12 Sustainable Development Contributions

Ministry of Environment, Forest and Climate Change (MoEFCC), India's Designated National Authority (DNA) for CDM projects has stipulated economic, social, environment and technological well-being as the four indicators of sustainable development. During the current monitoring period, the project has contributed to sustainable development through the following ways:

Social well-being:

- The project activity has resulted in creating job opportunities for the local population on temporary and permanent basis. Manpower is required both during erection and operation of the renewable energy projects. This would result in the improvement in living standards of the local community.
- The installation of the renewable energy projects also led to development of basic infrastructure like roads, communication with the nearby cities etc. which also improved in living standards of the local population.

Economic well-being:

- The project activity has created direct and indirect job opportunities to the local community during installation and operation of the renewable energy projects.
- The investment for the project activity instances under grouped project activity has led to the improvement in the economic activity in the local area.

Environmental well-being:

The project activity utilizes renewable energy for generating electricity which otherwise would have been generated through alternate fuel (most likely - fossil fuel) based power plants, contributing to reduction in specific emissions (emissions of pollutant/unit of energy generated) including GHG emissions. As renewable energy projects produce no end products in the form of solid waste (ash etc.), they address the problem of solid waste disposal encountered by most other sources of power. Being a renewable resource, to generate electricity contributes to resource conservation. Thus, the project causes no negative impact on the surrounding environment.

Technological well-being:

The successful operation of project activity has led to promotion of wind power generation and also encourages other entrepreneurs to participate in similar projects.

Following activities has been implemented during the current monitoring period that result in SDG contributions:



For SDG 7: About 1,63,828 MWh renewable electricity has been supplied to Indian grid during the reported monitoring period i.e., 01-May-2024 to 28-February 2025, that helps to increase the renewable energy share in the energy mix.



For SDG 13: By supplying 1,63,828 MWh clean electricity to Indian grid, the project avoided release of 1,55,226 tCO₂e into the atmosphere during the reporting period i.e., 01-May-2024 to 28-February 2025.



For SDG 8: Project proponent ensures generating employment opportunities in the project. The project activity has generated jobs with currently 61 employees including local, non-local and skilled personnel employed in the project during the current monitoring period i.e., 01-May-2024 to 28-February 2025.

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	About 1,63,828 MWh renewable electricity has been supplied to Central Grid to Indian Electricity grid during the current monitoring period that helps to increase the renewable energy share in the energy mix.	A total of 1,415,383 MWh renewable electricity is supplied to the Indian grid by the project activity since commissioning.		
					S.No.	Monitoring Period	Contribution (MWH)
					1	02-March-2017 to 31-December-2018	223,284
					2	01-January-2019 to 31-July-2020	310,474.799
					3	01-August-2020 to 31-July-2021	192,344
					4	01-August-2021 to 31-July-2022	199,355
					5	01-August-2022 to 31-August-2023	217,236
					6	01-September-2023 to 30-April-2024	98,861
7	01-May-2024 to 28-February 2025	1,63,828					

2	8.5	8.5.2 Unemployment rate, by sex, age and persons with disabilities	Implemented activities to increase	The project activity has generated jobs with currently 61 employees including local, non-local and skilled personnel employed in the project.	The project has created more than 30 jobs since commissioning.
3	13.0	Project specific indicator: Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase	By generating 1,63,828 MWh renewable electricity the project has avoided emission of 1,55,226 tCO2e in the atmosphere.	Since commissioning the project has avoided emission of 1,341,057 tCO2e in the atmosphere.

1.13 Commercially Sensitive Information

No commercially sensitive information has been excluded from the public version of the monitoring report.

2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

2.1 Stakeholder Engagement and Consultation

2.1.1 Stakeholder Identification

Stakeholder Identification	Stakeholders associated with the project activity throughout its lifetime are identified at different stages of project development. The stakeholders identified are generally grouped under two categories- directly affected parties, and indirectly affected parties as shown below:			
	S. No	Stage	Stakeholder Group	Effect-Direct/Indirect
	1	Project conceptualization	- Community representative - Potential end users	Indirect
	2	Project Development	- Government representatives (such as village chief, block development officer, MLAs etc.) - Potential investors - Local people who can be employed	Indirect Direct Indirect
	3	Project Implementation	- DISCOMs - Stakeholders facing electricity shortages	Direct Indirect
	Furthermore, all the stakeholders mentioned above were identified at the project's validation. There has been no change in stakeholder makeup since validation.			

Legal or customary tenure/access rights	Not applicable All legal or customary tenure/access rights are with PP. Furthermore, the project activity has no impact on any collective or conflicting rights held by the stakeholders, indigenous people (IPs), local communities (LCs), or customary rights holders.
Stakeholder diversity and changes over time	Not applicable This is renewable energy project and does no impact on the diversity of the stakeholders.
Expected changes in well-being	There are not significant impacts due to implementation of project activity on air, water, soil quality and ambience are envisaged due to the project activity. Furthermore, wind projects in India have several positive socio-economic impacts: a) Job Creation: Wind energy projects create jobs in various sectors, contributing to local economic growth. b) Economic Growth: These projects contribute to economic growth and community investment. c) Reduced Electricity Rates: Wind energy can reduce electricity rates for project neighbours. d) Health Benefits: Wind turbines help reduce carbon footprints and improve air quality, leading to better health outcomes. e) Educational Opportunities: They provide educational and research opportunities, fostering innovation and knowledge exchange.
Location of stakeholders	No negative impact generated outside/inside of the project boundary. (All stakeholders who will be directly affected by the project activity are included within the project boundary. Further, this project activity does not require the relocation of any stakeholder, Indigenous people, or local communities.)
Location of resources	Not Applicable (In the project activity, neither any territories and resources are owned by the stakeholders, nor they have any customary access)

2.1.2 Stakeholder Consultation and Ongoing Communication

Ongoing consultation	PP follows the following three methods for continuous feedback and ongoing communications with stakeholders during project implementation. These are: a) Grievance box at regional office/project site b) Grievance register maintained at regional office/project site c) A digitized QR code.
Date(s) of stakeholder consultation	Project 1: 18-December-2016 Project 2: 20-December-2016 Project 3: 23-December-2016
Communication of monitored results	Monitored outcomes are conveyed to the stakeholders in two ways: 1. Through VERRA Website: - PP submits third-party (i.e., VVB) verified monitoring results to VERRA, and once approved, the project documentation is made publicly available on the VERRA webpage for each monitoring period. 2. Through PP regional office: - A copy of all the project related documents and monitoring data (e.g., grievance register) is available at regional offices of the PP, which is accessible to all the stakeholders associated with the project activity.
Consultation records	The LSC records were submitted to VVB at the time of validation and grievance register records for the current monitoring period is submitted to VVB.
Stakeholder input	Stakeholder input/feedback received during LSC and the LSC report for the same had been submitted to the VVB during validation. Furthermore, the stakeholder feedback/grievance received during the current MP, through ongoing consultation mechanism, has been taken care as per the standard procedure adopted by PP, provided in section 2.1.4 of the VCS-MR. There were no major comments from the stakeholders which could impact on the design of the project.

2.1.3 Free, Prior, and Informed Consent

Consent	Before the project commissioning PP had taken appropriate approvals from relevant authorities. There are no ongoing or unresolved conflicts related to the project activity.
Outcome of FPIC	Not Applicable. The project activity does not affect any type of property rights, and there are no ongoing or unresolved conflicts over property rights, usage, or resources. This project activity does not involve any encroachment on land, people's relocation, or forced physical or economic displacement.

2.1.4 Grievance Redress Procedure

The project proponent has put a robust grievance redressal mechanism in place at the project site. The PP has established three main mechanisms to capture the grievances:

- A grievance box
- A grievance register
- A digitized QR code

Any stakeholder, including local villagers, can lodge a complaint related to any matter through any of the above-mentioned three channels. The grievance register is most easily accessible for the stakeholders as the dedicated visitor cum grievance register has been placed at the project site. It is the most appropriate publicly accessible location at which the local stakeholders can provide their feedback on the project.

The project owner's HSE committee discusses the grievance received (if any) on a quarterly basis and the same if found genuine gets addressed/resolved properly.

Grievances received	Resolution and outcome
No grievances were received during the current monitoring period	NA

2.1.5 Public Comments

The project was open for public comment from 30-January-2019 to 01-March-2019. No public comment was received during this period.

Summary of comments received	Actions taken
Not Applicable	Not Applicable

2.2 Risks to Stakeholders and the Environment

2.2.1 Management Experience

Green Infra Wind Energy Limited & Green Infra Wind Solutions Limited are SPV's of Sembcorp Industries, which has years of experience in implementing wind and solar energy projects. Some of the other projects implemented by the Sembcorp industries are VCS1776, VCS1904, GS7152, GS7468 etc. No entity has been newly involved in project design or implementation during the current monitoring period.

2.2.2 Risk assessment

	Risk identified	Mitigation or preventative measure(s) taken
Natural and human-induced risks to stakeholders' wellbeing	Visual and Aesthetics Impacts	The layout for the wind turbines has been designed and planned so that it blends with the surrounding environment, which has accounted for visual impacts. All the wind turbines have uniform visual characteristics such as colour, size, and design of turbine
Risks to stakeholder participation	No risk identified	The project area constitutes mostly of agricultural land with no immediate impact on any major human settlement and hence no major no impact was identified which could pose a risk to stakeholder's participation.
Working conditions	Safety of employees at project site	PP has a health and safety policy, and procedure manual in place to ensure favorable working condition.
Safety of women and girls	No risk identified	The project is a wind power project and its day-to-day operations does not involve any interactions with the local community. Hence, there

		are no safety related concerns for women and girls.
Safety of minority and marginalized groups, including children	No risk identified	There are no marginalized group or minorities present in the local community. No vulnerable communities were identified at the time of validation.
Pollutants (air, noise, discharges to water, generation of waste, and release of hazardous materials and chemical pesticides and fertilizers)	Soil quality (waste/used oil can lead to contamination of soils at site)	The waste/used oil from the turbines is disposed of to an authorized vendor. PP has QHSE policy in place to deal with risks associated with pollutants
	Burden on local ground/surface water resources due to water demand of onsite personnel. Wastewater generated from site office.	The water requirement during the operation phase of the project shall be met through authorised water tankers. The drinking water requirement for the site personnel is met through packaged drinking water. Adequate number of septic tanks are provided for treatment of wastewater generated.
	Noise from wind turbine operation	Noise measurement is conducted manually by Decibel meter (Noise meter) and recorded periodically. There is no significant impact on the noise levels due to the Project.

2.3 Respect for Human Rights and Equity

2.3.1 Labor and Work

	Risks identified ²	Mitigation or preventative measure(s) taken
Discrimination	Discrimination on the basis of individual's race, gender, age, disability, ethnicity or cultural	PP has code of conduct policy in place to prevent discrimination against anyone.

² The identified risks and commensurate mitigation or preventative measure(s) for forced labor, child labor, and human trafficking, must be inclusive of staff and contracted workers employed by third parties.

	affiliation, sexual orientation, belief, educational background, or any other basis.	
Sexual harassment	Unwelcome acts or behavior (whether directly or by implication)	PP has a prevention of sexual harassment policy in place which is applicable to both permanent and contractual employees.
Gender equity in labor and work	Biasness in hiring, promotions or terminations	PP has fair employment practice policy in place to prevent any such partiality.
Forced labor	No risk identified	PP complies with the core labour standards by engaging those contractors and other providers of goods and services who do not employ forced labour
Child labor	No risk identified	PP complies with the core labour standards by engaging those contractors and other providers of goods and services who do not employ forced labour
Human trafficking	No risk identified	The PP works with ethical suppliers as per code of conduct policy and no such scenario is envisaged for the project activity

2.3.2 Human Rights

Risks identified	Mitigation or preventative measure(s) taken
No risk identified	There are no resettlement and rehabilitation or involuntary resettlement issues related to the project; and no specific / vulnerable group of community is likely to be affected by the project., hence there are no risks to human rights violation identified.

2.3.3 Indigenous Peoples and Cultural Heritage

Risks identified	Mitigation(s) or preventative measure taken
No risk identified	The project does not affect the indigenous people and their cultural heritage as Indigenous

communities like tribes, ethnic minorities, aboriginals etc. are not present in the area

2.3.4 Property Right

Risks identified	Mitigation or preventative measure(s) taken
No risk identified	This project does not infringe with property rights and resources. Hence, there is no need to implement any measures to protect and preserve the property rights of stakeholders, IPs, LCs, and customary rights holders.

2.3.5 Benefit Sharing

Summary of the benefit sharing plan	Not Applicable
Benefit sharing during the monitoring period	Not Applicable

2.4 Ecosystem Health

	Risk identified	Mitigation or preventative measure(s) taken during the monitoring period
Impacts on biodiversity and ecosystems	No risk identified	This project activity does not involve any activity which may negatively impact biodiversity and ecosystem. The locations identified for the WTG do not comprise of any trees or shrubs in the immediate vicinity. Provision of adequate spaces between each turbine for movement of 6s which reduces the potential for accidental collision has been provided as per the project site layout plan.
Soil degradation and soil erosion	Dispersion of soil	Temporary paved areas are constructed to be used while refueling the machineries, in case of any accidental spill the soil will be cut and stored securely for disposal with hazardous waste.
Water consumption and stress	Contamination of pond, domestic water run off	Portable toilets are provided with septic tank followed by soak pit. Temporary paved areas are used while refueling the machineries Storage of oil is undertaken on paved impervious surface

and secondary containment shall be provided for fuel storage tanks.

2.4.1 Rare, Threatened, and Endangered species

The project is not located in, or adjacent to habitats for rare, threatened, or endangered species

Species or habitat	Not Applicable
Areas needed for habitat connectivity	Not Applicable

	Risks identified	Mitigation or preventative measure(s) taken
Habitats for rare, threatened, and endangered species	Not Applicable	Not Applicable
Areas for habitat connectivity	Not Applicable	Not Applicable

2.4.2 Introduction of species

This project activity neither involve any planting activities nor introduction of species. Hence, not applicable.

Species introduced	Classification	Justification for use	Adverse effects and mitigation
Not Applicable	Not Applicable	Not Applicable	Not Applicable

This project activity does not involve introduction of any species which may be invasive in nature.

Existing invasive species	Mitigation measures to prevent the spread or continued existence of invasive species
Not Applicable	Not Applicable

	Risks identified	Mitigation or preventative measure(s) taken
Invasive species	Not Applicable	Not Applicable

2.4.3 Ecosystem conversion

This project activity does not involve ARR, ALM, WRC or ACoGS activities. Hence, not applicable.

Risks identified		Mitigation or preventative measure(s) taken
Ecosystem conversion	NA	NA

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The project activity has been successfully commissioned by project promoters and was registered by VCS Board subsequently (Project ID: Ref No 1856).

The project is a bundled Wind Power project, consists of 3 individual projects which involves installation of total 56 numbers of WTGs (11 WTGs x 2MW = 22MW, 12 WTGs X 2MW = 24MW, 33 WTGs X 1.5MW = 49.5MW) aggregated capacity of project is 95.5 MW. The generated electricity is delivered to grid i.e., Sale to Grid.

The detailed specifications of the WTGs are as below:

Project	Project Promoter	Capacity in MW	No of WTGs	Capacity & make	Commissioning Dates
Project 1	Green Infra Wind Energy Limited	22	11	2MW, INOX make (DF100-92 M) ³	02.03.2017, 22.03.2017, 24.03.2017, 25.03.2017, 29.03.2017, 28.06.2017
Project 2	Green Infra Wind Energy Limited	24	12	2MW, INOX make (DF113 - 92M) ⁴	31.03.2017, 30.05.2017, 30.06.2017
Project 3	Green Infra Wind Solutions Limited	49.5	13	1.5 MW each of ReGen make(V87) ⁵	30.03.2017

As described above Project 1 and Project 2 are promoted by the SPV ‘Green Infra Wind Energy Limited’ and Project 3 is promoted by the SPV “Green Infra Wind Solutions Limited” of which “Green Infra Wind Energy Limited” is the representative of promoters of this bundled project.

The electricity generated by the project is exported to the Indian electricity grid. The project activity will therefore displacing an equivalent amount of electricity which would have otherwise been generated by fossil fuel dominant electricity grid. During the current monitoring period from 01-May-2024 to 28-February 2025 (first and last date included) the project activity has supplied

1,63,828 MWh of electricity, and thus contributing to the GHG reductions 1,55,226 tCO₂e. The project activity has been in operation continuously since its commissioning. There have been no emergencies happened to the monitoring system. There are no events or situation that occurred during the monitoring period which may impact the applicability of the methodology. Also, there were no major breakdowns occurred during current monitoring period

3.2 Deviations

3.2.1 Methodology Deviations

No methodology deviation is applied during the monitoring period.

3.2.2 Project Description Deviations

This project did not apply any deviations related to Project Description during the current monitoring period.

Deviation during previous monitoring period:

Deviation #1:

1. Typo Error Correction in Reporting the Make of Energy Meters for project 1.

Reason: The Make of Energy Meters for the project 1 is “EDMI” but inadvertently reported as Secure. Hence, PP is correcting the typo error in reporting the “Make” of Energy meters. Please refer Appendix-2 for details of Energy Meters. The above deviations do not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology. This deviation was approved in monitoring period of 01-January-2019 to 31-July-2020.

Deviation #2:

Data Adjustment in case of monitoring period different from billing period.

As the billing cycle differs from monitoring period, therefore in case the dates of a particular monitoring period do not match with the dates of the billing period, the net electricity exported to the grid would be calculated as follows:

$$D = (A/B) \times C$$

Where:

A = Difference of number of days which are not matching of billing period and monitoring period.

B = Number of days of the billing period/ month which was not matched with the monitoring period.

C = Net Electricity supplied to the grid for that given billing period/ month.

The calculated value after apportioning would be used for calculation of emission reductions during that period. Based on the above procedure, the Monthly Certificate for Share of Electricity Generated shall be provided to the project participant. This is to be noted that the detail procedure of monitoring is illustrated here for the sake of understanding; for the preparation of monitoring report during periodic verifications, only the net electricity generation value mentioned in monthly wind energy certificates shall be directly used for emission reduction calculation. No other parameters as explained above shall be used and presented in the monitoring report

However, this project deviation doesn't have an adverse impact in the applicability of the methodology, additionally or the appropriateness of the baseline scenario. This deviation was approved in monitoring period of 01-August-2021 to 31-July-2022.

3.3 Grouped Projects

Not applicable, as the project is not a grouped project.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	EF _{grid,OM,y}
Data unit	tCO ₂ /MWh
Description	Operating margin CO ₂ emission factor for the project electricity system in year y
Source of data	Central Electricity Authority: CO ₂ Emission Database
Value applied	0.9726
Justification of choice of data or description of measurement methods and procedures applied	Calculated using "Tool to calculate the emission factor for an electricity system" using data from Central Electricity Authority of India's (CEA) "Baseline Carbon Dioxide Emission Database Version 13".
Purpose of data	Calculation of baseline emissions
Comments	The operating margin emission factor is a 3-year generation weighted average (2014-17). The operating Margin is calculated ex ante and fixed during the crediting period

Data / Parameter	$EF_{grid,BM,y}$
Data unit	tCO ₂ /MWh
Description	Build margin CO ₂ emission factor for the project electricity system in year y
Source of data	Central Electricity Authority: CO ₂ Emission Database
Value applied	0.8723
Justification of choice of data or description of measurement methods and procedures applied	Calculated using “Tool to calculate the emission factor for an electricity system” using data from Central Electricity Authority of India’s (CEA) “Baseline Carbon Dioxide Emission Database Version 13
Purpose of data	Calculation of baseline emissions
Comments	The build margin emission factor is a 3-year generation weighted average (2014-17). The operating Margin is calculated ex ante and fixed during the crediting period

Data / Parameter	$EF_{grid,CM,y}$
Data unit	tCO ₂ /MWh
Description	Combined margin CO ₂ emission factor for the project electricity system in year y
Source of data	Central Electricity Authority: CO ₂ Emission Database
Value applied	0.9475
Justification of choice of data or description of measurement methods and procedures applied	The data has been considered in accordance to the Tool to calculate emission factor of an electricity system. The tool guides to take 75% weightage of $EF_{grid,OM}$ simple, & 25% weightage of $EF_{grid,BM,y}$.
Purpose of data	Calculation of baseline emissions
Comments	The above value is fixed and it is same 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 plant/unit to the grid in year y in MWh

Source of data	Project 1 & Project 2: Monthly “Certificate for Share of Electricity Generated by Wind Farm” issued by GETCO. Project 3: JMR (Joint Meter Reading).
Description of measurement methods and procedures to be applied	Project 1 & Project 2: Data Type: Measured & calculated. Monitoring equipment: a) At substation: EDM I & Secure make Meters accuracy class 0.2s. Archiving Policy: Paper & Electronic. The Net electricity supplied to the grid by the project activity will be calculated as a difference of electricity exported to the grid, electricity imported from the grid obtained from Monthly Meter reading reports provided by GETCO/ SLDC as per below equation: Calculation of EGfacility,y : Net-Electricity = Export – Import The net electricity exported by the project activity is taken directly from the share certificate issued by GETCO on monthly basis. The apportioning procedure is performed by GEDA personnel on monthly basis and the PP has no role in it. Net electricity supplied to the grid by the project activity will be cross checked with invoices raised by PP. Responsibility: a) At WTG yard: The O&M shift-in-charge shall be responsible for the regular recording of data. b) At substation: The representatives of the PP/GETCO/GEDA are responsible for taking monthly joint meter reading at the substation. Project 3: Data Type: Measured & calculated. Monitoring equipment: Substation: All Schneider Electric India Pvt Ltd. Make Meters accuracy class 0.2s. Archiving Policy: Paper & Electronic. Net electricity supplied will be calculated based on the difference between calculated values of “export” and “import” and transmission losses on the EB energy meter at the “evacuation point”. (Net Electricity = Export – Import – Transmission loss) The Export and import are referred from JMR.

	Currently, DISCOM has considered the Transmission Losses while preparing the Joint Meter Reading. Hence same has been considered and deducted from the Export value to arrive at the Net Electricity delivered to the grid. Calibration Frequency: Once in five years ³
Frequency of monitoring/recording	Continuous measurement and monthly recording
Value monitored	1,63,828
Monitoring equipment	Special energy meters (SEMs) of 0.2s accuracy class. Details of the meters including calibration dates is provided under Appendix-2 of this MR.
QA/QC procedures to be applied	Net electricity supplied to the grid by the project activity is cross checked with invoices raised by PP. The meter(s) shall be calibrated and maintained by the state utility as per their own schedule, and this frequency of meter calibration is not within the control of the Project Proponent. Calibration of electricity meters is carried out in-line with the Nation standard which recommends at least once in 5-year calibration or whenever abnormal difference/inconsistency is observed between main meter and check meter. Meter Details has been provided under Appendix-2 of the MR
Purpose of the data	Calculation of baseline emissions
Calculation method	-
Comments	Data will be archived in paper & electronic form for two years after the end of crediting period or of the last issuance of VERs for this project activity, whichever occurs later.

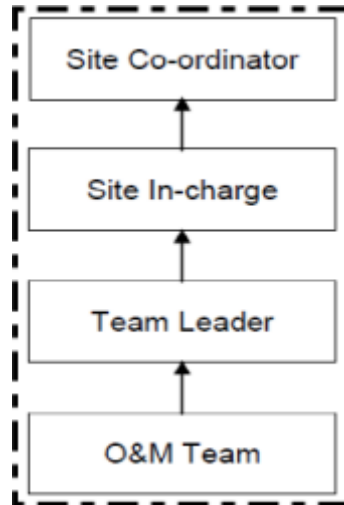
4.3 Monitoring Plan

All the three projects in the bundle have entered into agreement with the WTG Suppliers for the operation and maintenance of WTGs. The WTG supplier has dedicated and technically well-equipped O&M team for day-to-day Operation and maintenance of each WTG. O&M contractor will provide a monthly report, which includes generation data, major breakdown events and machine availability. Project manager is responsible for recording of monthly meter readings of export and import. Monthly power export and import data will be sent regularly to site in charge of each project separately.

Monitoring roles and responsibilities:

³ https://cea.nic.in/wp-content/uploads/2020/02/meter_reg.pdf

The data for the project is compiled by the O&M Contractor and subsequently stored by the PP, the reporting and data flows as per the below mentioned flow chart starting from Site O&M team which monitors day to day operational data and monthly recording. The reporting responsibilities for the project are described as below;



Emergency preparedness:

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

Data recording & archiving:

The project proponent shall maintain data both in electronic form and hard copies. The monitored data shall be archived till 2 years after the completion of crediting period.

Monitoring Process at project site

Project 1 & Project 2 (Same Procedure):

- Joint monthly meter reading shall be taken from pooling substation (PSS) meter by representative of GEDA/GETCO and O&M team/service provider (on behalf of individual wind mill owners). Let the total generation recorded for particular month is 'X' units in sub-station meter.
- Joint daily meter reading shall be taken at Local Meter (transformer yard meter of each WTG) by representative of GEDA/GETCO on a monthly basis. Let us assume total approved generation recorded for particular month is 'Y1' units.
- Similarly, joint meter reading for other wind farm owners connected to the sub-station shall also be taken. Let the generation of individual owner recorded for particular month are 'Y2, Y3,Yn' units.

- The GEDA/GETCO apportions 'X' to individual wind farm owners using following formula and issues monthly certificates. Net units calculated for billing = $(X \times Y_i) / \sum Y_n$
- For PP, net units calculated for billing = $X \times Y_1 / \sum Y_n$

The net electricity generated by the project owners is being provided by GETCO in the share certificate of electricity generated. The value of the net electricity generated by the project activity has been taken directly by the project proponent from the share certificate provided by GETCO for calculation of emission reductions. The share certificate provides the value of export and import by the project.

Calculation of $EG_{\text{facility},y}$:

Net Electricity = Export – Import

Hence, the net electricity supplied to the grid by the project activity is taken directly from the share certificate issued by GETCO on monthly basis by simply taking export & import and the cross checking is done by monthly invoices raised by PP. The apportioning g procedure is performed by GEDA personnel on monthly basis and the PP has no role in it. Hence the PP does not have any apportioning data available.

Data Adjustment in case of monitoring period different from billing period:

As the billing cycle differs from monitoring period, therefore in case the dates of a particular monitoring period do not match with the dates of the billing period, the net electricity exported to the grid would be calculated as follows:

$$D = (A/B) \times C$$

Where:

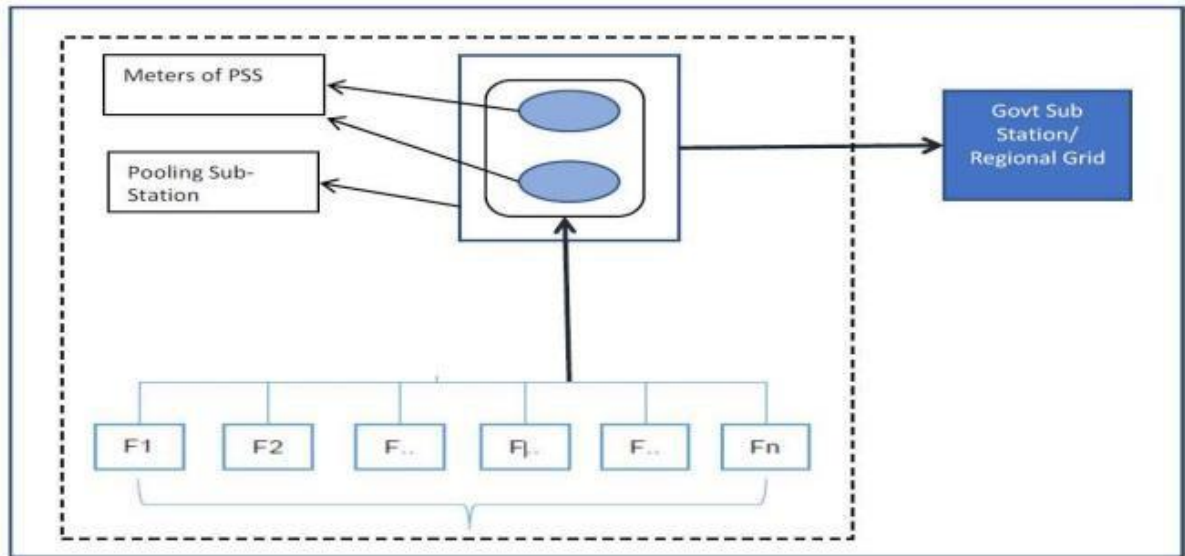
A = Difference of number of days which are not matching of billing period and monitoring period.

B = Number of days of the billing period/ month which was not matched with the monitoring period.

C = Net Electricity supplied to the grid for that given billing period/ month.

The calculated value after apportioning would be used for calculation of emission reductions during that period. Based on the above procedure, the Monthly Certificate for Share of Electricity Generated shall be provided to the project participant. This is to be noted that the detail procedure of monitoring is illustrated here for the sake of understanding; for the preparation of monitoring report during periodic verifications, only the net electricity generation value mentioned in monthly wind energy certificates shall be directly used for emission reduction calculation. No other parameters as explained above shall be used and presented in the monitoring report.

A schematic diagram indicating the metering system is provided below: Metering



Project 3:

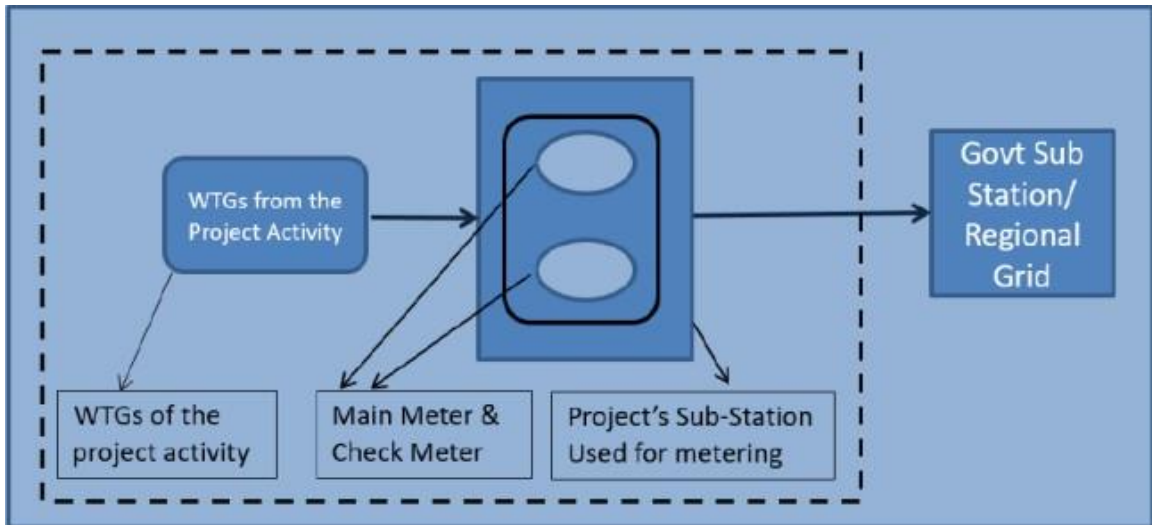
Joint monthly meter reading is taken at the Pooling substation (PSS) meters by representative of DISCOM and O&M team/service provider (on behalf of the project proponent). It must be noted here that the meter readings as mentioned above shall be calculated as the product of meter multiplication factor and the difference of the current and previous meter readings and transmission losses are also deducted to prepare the JMR.

(i. e. Net Electricity = Export – Import -Transmission Losses)

Based on the above procedure, the monthly JMRs shall be provided to the project proponent.

Metering Arrangement:

Line diagram with metering arrangement for the wind project activity is shown below:



For all the projects in the bundle this is to be noted that the detail procedure of monitoring is illustrated here for the sake of understanding; for the preparation of subsequent monitoring report during periodic verifications, only the net electricity generation value shall be directly used for emission reduction calculation. No other parameters as explained above shall be used and presented in the monitoring.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

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

where,

BE_y = Baseline Emissions in year y (tCO₂e/yr)

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

$EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO₂/MWh) (i.e., 0.9475 tCO₂/MWh).

Here,

$$BE_y = 1,63,899 \text{ MWh} \times 0.9475 \text{ tCO}_2/\text{MWh}$$

$$= 1,55,293 \text{ tCO}_2\text{e (Round down values)}$$

5.2 Project Emissions

The project emissions from the wind power project activity is zero as per the ACM0002, para 34. As 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, $PE_y = 0$.

5.3 Leakage Emissions

As per the para 56 in the ACM0002, no other leakage emissions are considered. The emission potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use are neglected.

$LE_y = 0$

5.4 GHG Emission Reductions and Carbon Dioxide Removals

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU (tCO ₂ e)	Removal VCU (tCO ₂ e)	Total VCU (tCO ₂ e)
01-May-2024 to 31-Dec-2024	1,32,957	0	0	1,32,957	0	1,32,957
01-Jan-2025 to 28-February-2025	22,270	0	0	22,270	0	22,270
Total	1,55,226	0	0	1,55,226	0	1,55,226

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-May-2024 to 31-Dec-2024	1,28,209	1,32,957	3.7%	The actual Emission reduction achieved are more as the generation depends on the climatic conditions like the monsoon season and low winds which is beyond the control of the project participant
01-Jan-2025 to 28-	30,874	22,270	-27.9	The actual Emission reduction achieved are less as the

February-2025				generation depends on the climatic conditions like the monsoon season and low winds which is beyond the control of the project participant
Total	1,59,083	1,55,226	-2.4%	The total actual Emission reduction achieved are less as the generation depends on the climatic conditions like the monsoon season and low winds which is beyond the control of the project participant.

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

Section	Information	Justification
<u>NA</u>	NA	NA

APPENDIX 2: METER CALIBRATION DETAILS

Project 1:		
Meter & Calibration Details		
Details	Line 1	Line 2
Meter Number	GJ-3057-A	GJ-5935-A
Make	EDMI	Secure
Accuracy	0.2s	0.2s
Previous Calibration	22-November-2021	07-December-2023
Validity Date	21-November-2026	06-December-2028

Project 2:		
Meter & Calibration Details		
Details	Line 1	Line 2
Meter Number	GJ3819A	GJ3820A
Make	Secure	Secure
Accuracy	0.2s	0.2s
Previous Calibration	22-April -2022	22-April -2022
Validity Date	21- April -2027	21- April -2027

Project 3:			
Meter & Calibration Details			
Details	Main Meter	Check Meter	Standby Meter
Meter Number	0023001342	0023001343	0023001344
Make	Schneider Electric India Pvt Ltd	Schneider Electric India Pvt Ltd	Schneider Electric India Pvt Ltd
Location	33 kV/220 kV Karidikonda Pooling Substation	33 kV/220 kV Karidikonda Pooling Substation	33 kV/220 kV Karidikonda Pooling Substation
Accuracy	0.2s	0.2s	0.2s
Previous Calibration	28-December-2024	28-December-2024	28-December-2024
Validity Date	27-December-2029	27-December-2029	27-December-2029