



“SATARA WIND POWER PROJECT IN MAHARASHTRA, INDIA”

Document Prepared by NSL Wind Power Company (Satara) Pvt. Ltd¹.

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Project ID	1519
Monitoring period	01-January-2023 to 05-March-2024, inclusive of both start and end dates
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Prepared by	M/s. NSL Wind Power Company (Satara) Pvt. Ltd. Road No.12, Banjara Hills, NSL ICON, 4th Floor, Hyderabad, Telangana, India. Tel: 040 3051 4444 Fax: 040 2332 7919 E-mail: rajnikant.a@nslpower.com Website: www.nslpower.com

¹ <https://registry.terra.org/app/projectDetail/VCS/1519>

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PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The VCS registered² project activity is a Greenfield wind power generation activity. The project activity involves installation of 30 MW capacity wind power generation project by NSL Wind Power Company (Satara) Pvt. Ltd. (Project Participant). The project activity generates clean electricity, which is exported to the Maharashtra State Electricity Distribution Company Limited (MSEDCL), which falls under the Northern, Eastern, Western and North-Eastern regional grids (NEWNE) grid of India. The spatial extent of the project boundary is the NEWNE grid³.

This activity involves installation and operations of 20 numbers of Wind turbine generators (WTGs) of rated capacity 1.5 MW. The WTGs are of Vensys V87 type, supplied by ReGen Power Tech Pvt. Ltd. The purchase order of the first WTG was placed on 09-July-2013 and start date of the project activity is 06-March-2014 which was the day of commercial production of the first machine. The entire project is in continuous operation since its date of commissioning of the respective machines.

In the current monitoring period, the project activity has exported 69,078 MWh of electricity in this monitoring period (01-January-2023 to 05-March-2024) to the Grid, which contributes to GHG emission reduction of 67,468 tCO₂e.

1.2 Audit History

Audit type	Period	Program	Validation/verification body name	Number of years
Validation	06-March-2014 to 05-March-2024	VCS	<u>LGA Technological Center, S.A. (Applus+)</u>	NA
Verification	06-March-2014 to 31-December-2015	VCS	<u>LGA Technological Center, S.A. (Applus+)</u>	01 Year 09 months 26 days
Verification	01-January-2016 to 30-September-2017	VCS	<u>Earthood Services Pvt. Ltd.</u>	01 year 09 months 00 days
Verification	01-October-2017 to 31-August-2018	VCS	<u>Earthood Services Pvt. Ltd.</u>	00 Years 11 months 00 days

² <https://registry.verra.org/app/projectDetail/VCS/1519>

³ Before April 2016, the Indian electricity system was divided into two grids, the NEWNE and Southern Grid. These are now integrated as a single "Indian Grid" covering all the states.

Verification	01-September-2018 to 31-October-2019	VCS	<u>Earthood Services Pvt. Ltd.</u>	01 year 02 months 00 days
Verification	01-November-2019 to 31-October-2020	VCS	<u>LGAI Technological Center, S.A. (Applus+)</u>	01 year 00 months and 00 days
Verification	01-November-2020 to 31-August-2021	VCS	<u>LGAI Technological Center, S.A. (Applus+)</u>	00 Year 10 months 00 days
Verification	01-September-2021 to 30-April-2022	VCS	VKU Certification Pvt Ltd	00 Year 08 months 00 days
Verification	01-May-2022 to 31 December-2022	VCS	VKU Certification Pvt Ltd	00 Year 08 months 00 days
Verification	01-January-2023 to 05-March-2024	VCS	VKU Certification Private Limited	01 Year 02 Months 05 Days

1.3 Sectoral Scope and Project Type

Sectoral scope ⁴	01, Energy Industries (renewable- /non-renewable sources)
Project activity type	I, Renewable energy projects

Sectoral scope	NA
AFOLU project category ⁵	NA
Project activity type	NA

1.4 Project Proponent

Organization name	NSL Wind Power Company (Satara) Pvt. Ltd.
Contact person	Mr. A. Rajnikant
Title	Head – Wind Projects & Operations
Address	NSL ICON, 4th Floor, Road No.12, Banjara Hills, Hyderabad - 500034, Andhra Pradesh
Telephone	+91 - 40 - 3051 4444
Email	<u>rajnikant.a@nslpower.com</u>

⁴ Projects, activities, or methodologies may be developed under any of the 16 VCS sectoral scopes: <https://verra.org/programs/verified-carbon-standard/vcs-program-details/#sectoral-scopes>

⁵ See Appendix 1 of the VCS Standard

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	06-March-2014
Justification	The project start date is 06-March-2014 which is the date of commissioning of the first WTG. AS per VCS Standard version 4.6, Clause 3.8 The Project start date is the date on which the project began reducing or removing GHG emissions i.e., the commissioning date of the project.

1.7 Project Crediting Period

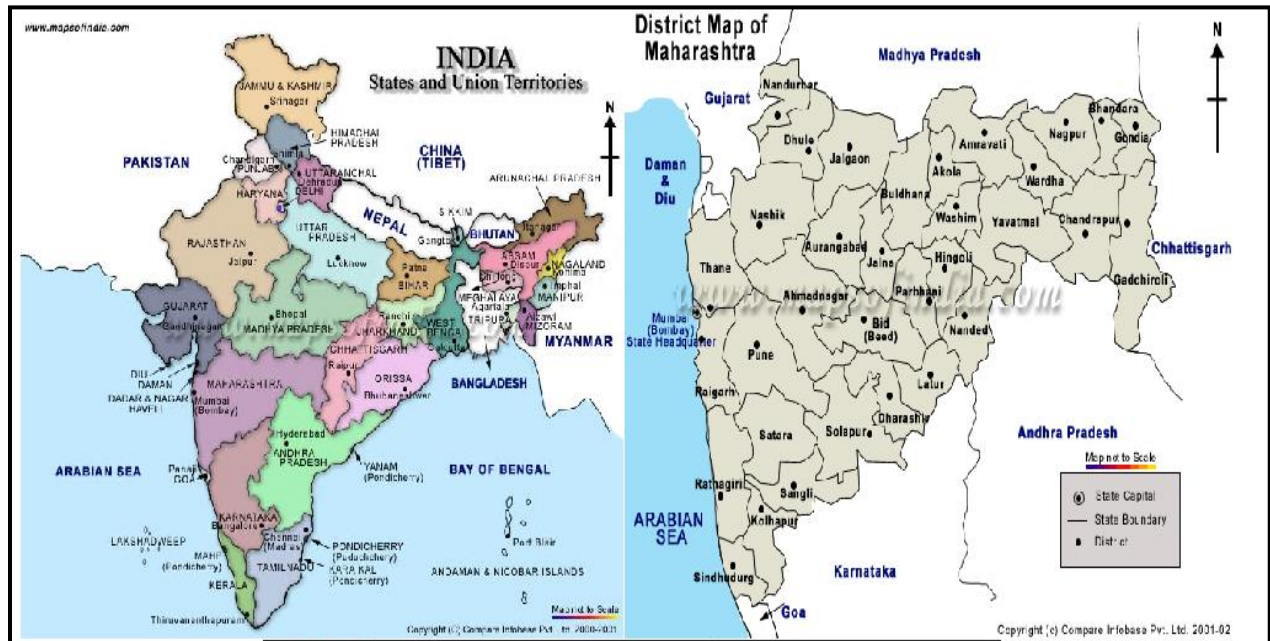
Crediting period	☐ Seven years, twice renewable ☒ Ten years, fixed ☐ Other
Start and end date of first or fixed crediting period	Type of crediting period: Fixed Start date of the crediting period: 06-March-2014 End date of the crediting period: 05-March-2024 As per latest VCS standard version 4.6 where Appendix 3 states that "Registered VCS projects and projects that request registration with the VCS Program on or before 31-December-2019 remain eligible under the VCS Program for the entirety of their crediting periods" The Project completed validation before 31-December-2019 i.e. on <u>29-August-2018</u> and chose to use the crediting period requirements under VCS version 3.

1.8 Project Location

Project activity is located in the Mann village, in the district Satara, state of Maharashtra. The location maps are included below. The spatial extent of this project activity includes the project site and all the power plants connected physically to the electricity system that the project is connected to, i.e., the Indian Grid. Thus, the project boundary includes all the power plants physically connected to the NEWNE grid now Unified Indian Grid.

Geo-coordinates of the WTGs are provided in the below table:

The physical & Geographical location map of project activity is provided below:



WTG Ref. No.	Date of Commissioning	Geo-Coordinates			
		UTM (Universal Transverse Mercator) format		DD-MM-SS (Degree/minutes/Seconds) format	
		Easting (m)	Northing (m)	Latitude (N)	Longitude (E)
NSL-1	06-March-2014	469336	1934816	17 ° 29 ' 57.52 "	74 ° 42 ' 40.12 "
NSL-2		469066	1934960	17 ° 30 ' 2.19 "	74 ° 42 ' 30.96 "
NSL-10		467591	1935712	17 ° 30 ' 26.58 "	74 ° 41 ' 40.90 "
NSL-11		467555	1935467	17 ° 30 ' 18.61 "	74 ° 41 ' 39.69 "
NSL-12		467395	1935210	17 ° 30 ' 10.24 "	74 ° 41 ' 34.28 "
NSL-13		467477	1935008	17 ° 30 ' 3.67 "	74 ° 41 ' 37.07 "
NSL-14		467616	1934769	17 ° 29 ' 55.90 "	74 ° 41 ' 41.80 "
NSL-15		467758	1934607	17 ° 29 ' 50.64 "	74 ° 41 ' 46.62 "
NSL-3	30-March-2014	468573	1934832	17 ° 29 ' 58.01 "	74 ° 42 ' 14.25 "
NSL-6		468893	1934421	17 ° 29 ' 44.64 "	74 ° 42 ' 25.13 "

NSL-7		468559	1934585	17 ° 29 ' 49.97 "	74 ° 42 ' 13.79 "
NSL-20		466692	1936734	17 ° 30 ' 59.79 "	74 ° 41 ' 10.36 "
NSL-22		466784	1937215	17 ° 31 ' 15.45 "	74 ° 41 ' 13.45 "
NSL-17	31-March-2014	467652	1937233	17 ° 31 ' 16.08 "	74 ° 41 ' 42.89 "
NSL-23		466388	1937239	17 ° 31 ' 17.0 "	74 ° 41 ' 01.1 "
NSL-26		465839	1937687	17 ° 31 ' 30.76 "	74 ° 40 ' 41.37 "
NSL-28		465767	1938105	17 ° 31 ' 44.36 "	74 ° 40 ' 38.91 "
NSL-34		464907	1938830	17 ° 32 ' 7.90 "	74 ° 40 ' 9.7 "
NSL-36		464416	1939096	17 ° 32 ' 16.53 "	74 ° 39 ' 53.02 "
NSL-37		464263	1939245	17 ° 32 ' 21.37 "	74 ° 39 ' 47.83 "

1.9 Title and Reference of Methodology

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
I – Renewable Energy Projects	ACM0002	Consolidated baseline methodology for grid connected electricity generation from renewable sources".	16.0
Tool	07	Tool to calculate the emission factor for an electricity system --	Version 05.0 ⁶
Tool	01	Tool for the demonstration and assessment of additionality	Version 07.0 ⁷

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

If yes, provide required evidence of no double issuance as outlined by the VCS Standard.

1.10.2 Registration in Other GHG Programs

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

⁶ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v5.0.pdf>

⁷ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

☒ Yes ☐ No

PP is also developing the project under CDM⁸ and received HCA with the same title. PP is using the same title for consistency between their CDM and VCS project. It's important to highlight that the project's actual installed capacity of 50.4 MW is indeed lower than the originally titled and proposed capacity of 51 MW. PP has not claimed any credits for the same project activity in CDM or any other program yet since the time of its registration till current monitoring period.

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]."

⁸ <https://cdm.unfccc.int/Projects/Validation/DB/69J8TNRR5CNV4D9LWCAG623YGZQO3F/view.html>

☐ Yes

☒ No

1.12 Sustainable Development Contributions

The project contributes in achieving nationally stated sustainable development priorities like providing direct & indirect employment generation during construction & operation phase. Also, helps in country energy security by generating electricity from renewable source etc. Since the project is continuation of activity as per the registered PD, it is a regulatory surplus activity. The green energy target of the Govt of India does not include green energy generated from wind turbines from private parties.

- **Social well-being:** The project helped in generating employment opportunities during the construction and operation phases. The project activity leads to development in infrastructure in the region like development of roads and also may promote business with improved power generation.
- **Economic well-being:** The project is a clean technology investment in the region, which would not have been taken place in the absence of the VCS benefits. The project activity generates power using zero emissions wind-based power generation which helps to reduce GHG emissions and specific pollutants like SO_x, NO_x, and SPM associated with the conventional thermal power generation facilities.
- **Technological well-being:** The successful operation of project activity led to promotion of wind-based power generation i.e., Wind Turbine Generators 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.
- **Note:** As per the VCS Standard Version 4.6⁹ Page no 79, Appendix 03: Document History and Effective dates, For V4.2, serial number 04 states that “it is required by project proponents to demonstrate contributions to a minimum of three SDGs in all monitoring reports verified after the effective date. Effective immediately for all projects that request registration on or after 20-January-2023. Projects that request registration before 20-January-2023 shall demonstrate contributions to at least three SDGs by 20-January-2025”. This is project's 9th periodic verification of fixed crediting period for the Monitoring Period 01-January-2023 to 05-March-2024 (Inclusive of both start and end dates), Since this project is registered before 20-January-2023, so the Project Proponent (PP) must demonstrate contributions to sustainable development, as defined by and tracked against the United National Sustainable Development Goals (SDGs) at least three SDGs by 20-January-2025
- In continuation, the project has achieved various SDGs during the current monitoring period which fulfills the requirement of minimum three SDG indicators.

⁹ <https://verra.org/documents/vcs-standard-v4-5/>

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 Renewable Energy grid connected Project to increase the RE share in total grid mix.	69,078 MWh delivered to the grid during the current monitoring period.	About $(28,034^{10} + 50,410^{11} + 69,078^{12} = 147,522)$ MWh renewable electricity has supplied to Indian grid that helps to increase the renewable energy share in the energy mix. ¹³
2	8.5	8.5.1: Employment Generation from the project Activity	Implemented Renewable Energy power generation project activity has generated direct & Indirect employment	More than 10 numbers of people got direct employment.	Project is eligible to generate this SDG benefits. However, project is not claiming this SDG benefit. Hence, not quantifying the same here.

¹⁰ Contribution to the last i.e., 7th monitoring period 01-September-2021 to 30-April-2022 (Inclusive of both the days)

¹¹ Contribution to the last i.e., 8th monitoring period 01-May-2022 to 31-December-2022 (Inclusive of both the days)

¹² Contribution to the current monitoring period 01-January-2023 to 05-March-2024 (Inclusive of both the days)

¹³ As per VERRA's guidelines to claim SDGs for contributions Over Project Lifetime "The cumulative impact should be calculated by summing the current project contributions with all impacts included in previously approved VCS monitoring reports or Sustainable Development Contribution Reports, PP has only claimed the SDGs in last 7th & 8th verification & in this Monitoring period, Thus PP is only applying values of last verifications along with current monitoring period.

3	13.2	13.2.1: Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase avoidance of emissions	67,468 tCO _{2e} has been prevented by the project activity during the current Monitoring Period.	Prevented the release of (27,381 ¹⁴ + 49,235 ¹⁵ + 67,468 ¹⁶ = 144,084) tCO _{2e} into the atmosphere during the current & last monitoring period. ¹⁷
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¹⁴ Contribution to the last i.e., 7th monitoring period from 01-September-2021 to 30-April-2022 (Inclusive of both the days)

¹⁵ Contribution to the last i.e., 8th monitoring period from 01-May-2022 to 31-December-2022 (Inclusive of both the days)

¹⁶ Contribution to the current monitoring period 01-January-2023 to 05-March-2024 (Inclusive of both the days)

¹⁷ As per VERRA's guidelines to claim SDGs for contributions Over Project Lifetime "The cumulative impact should be calculated by summing the current project contributions with all impacts included in previously approved VCS monitoring reports or Sustainable Development Contribution Reports", PP has only claimed the SDGs in last 7th & 8th verification & in this Monitoring period, Thus PP is only applying values of last verifications along with current monitoring period.

1.13 Commercially Sensitive Information

There is no commercially sensitive information applicable for the current monitoring period.

2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

2.1 Stakeholder Engagement and Consultation

2.1.1 Stakeholder Identification

Stakeholder Identification	At the time of validation, the stakeholders were identified. NSL identified the following local stakeholders to be associated with the project activities, directly or indirectly. The typical groups of the stakeholders identified are - Local villagers - Local Gram Panchayat Members - Employees of the Wind firm - Local vendors and other relevant stakeholders.
Legal or customary tenure/access rights	There is not any legal or customary tenure/access rights to territories and resources, including collective and conflicting rights, held by stakeholders, indigenous people (IPs), local communities (LCs), and customary rights holders.
Stakeholder diversity and changes over time	The social, economic, and cultural diversity within stakeholder groups remained stable over time. Interactions between groups were consistent, and there were no significant changes in the composition of each group observed during the monitoring period.
Expected changes in well-being	In the baseline scenario, there are no alterations to the well-being or other characteristics of stakeholders. This includes the preservation of ecosystem services that stakeholders deem important.
Location of stakeholders	Stakeholders, which include local communities, indigenous peoples, and customary rights holders, are primarily located within the project area and its immediate vicinity. Areas beyond the project boundary that do not experience indirect

	impacts, such as environmental changes or socio-economic shifts, are not considered due to the nature of the wind project.
Location of resources	Since wind projects usually occupy small physical footprints, stakeholders' territories and resources typically do not directly overlap with the project area. However, stakeholders may have customary access to land or resources located in nearby regions. These territories might encompass agricultural lands, grazing areas, or culturally significant sites. Recognizing and respecting these territories are crucial for ensuring effective stakeholder engagement and project planning.

2.1.2 Stakeholder Consultation and Ongoing Communication

Ongoing consultation	The project proponent has organized Local Stakeholder Consultation (LSC) meetings in accordance with the approved communication plan. These meetings served as a forum for stakeholders to express their concerns, stay informed about project developments, and offer feedback. Additionally, stakeholders have the opportunity to submit their comments and grievances through a dedicated grievance register.
Date(s) of stakeholder consultation	The stakeholder meeting was conducted on 06/10/2012 at P.C Shah Memorial Hall, Hotel Pankaj Executive, Pune-Bangalore highway, Karad. All the stakeholders were informed about the agenda, venue and date of the meeting through notices issued 15 days prior to the meeting. Further, a project concept note, which gives a clear idea on the project activity including the measures taken under the project and the benefits achieved by the project, was also issued along with the notices as information to the concern stakeholder. Also apart from personal invitations, a public notice on local newspaper (Dated: 29/09/2012) had been published in order to invite a broad range of stakeholders that may have direct or indirect access to the project or any of its concerns. Thus, invitation was served a week in advance of the meeting to provide sufficient time to the stakeholders. An

	attendance record sheet was maintained for all the attendees and comments/feedback received from the stakeholders during the meeting were recorded and compiled in the minutes of meeting.
Communication of monitored results	Monitoring results were shared through the grievance register by documenting grievances, conducting investigations, and documenting resolutions.
Consultation records	The results of stakeholder consultations were documented using a variety of methods, including meeting minutes, reports, surveys, and feedback forms.
Stakeholder input	Concerns and responses as recorded during the meeting at the sites of the wind farm area: All the stakeholders were happy in knowing that the project activity in their locality is contributing to a global cause and they commended the NSL management for their initiatives in the areas of climate change and sustainable development. In particular, the stakeholders lauded the project promoters for the environment friendly power generation using wind. Local Population: The villagers expressed their pleasure with the setting up of the power project as it had provided the rural population with permanent employment opportunities. Indirect employment generated as result of the project activity was highlighted by the villagers. The increase in the land prices subsequent to the setting up of the project was a welcome boon for the villagers. In the meeting, the stakeholders were briefed about the project activity in the local language and were informed as to how power is generated using wind energy. They were then informed about global warming and its causes and the effects. Subsequently, they were introduced to the concept of Carbon Credits, Sustainable developments and associated socio-economical aspects of such projects. Also, it was discussed as to how the project helps in mitigating Greenhouse Gas (GHG) emissions. The stakeholders were then invited to provide their comments on how the project activity had affected their lives and about their expectations, remarks etc. related to the project activity.

	There was no adverse comment received regarding the project activity; whereas all the queries or remarks were satisfactorily addressed during the meeting. The stakeholders were very observant and supportive to the project, the meeting was concluded on positive notes. All the documents related to stakeholders meeting have been made available for validation. Employees: The local population hired for the project activity are pleased with the employment opportunity available to them which was absent in the region prior to the commissioning of the plant. During current monitoring period any input received during the consultation will be thoroughly reviewed and analyzed to ensure that stakeholders' perspectives are duly considered. However, no inputs were received during the current monitoring period.
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2.1.3 Free, Prior, and Informed Consent

Consent	Consent from concerned parties, including Indigenous Peoples (IPs), local communities (LCs), and customary rights holders, was obtained through a transparent and inclusive process. This involved engaging in meaningful dialogue, providing relevant information in accessible formats, and addressing any concerns or questions raised. Agreements were reached through consensus-building, ensuring that all parties had the opportunity to express their views and negotiate terms. Transparency was maintained by documenting the process and agreements reached, and ensuring that all stakeholders understood the implications of their consent. There are no ongoing or unresolved conflicts, demonstrating that the project does not exacerbate or influence the outcomes of unresolved conflicts.
Outcome of FPIC	The Free, Prior, and Informed Consent (FPIC) process culminated in a transparent agreement between the project proponent and all concerned parties, including Indigenous Peoples (IPs), local communities (LCs), and customary rights holders. Before finalizing this agreement, the project provided comprehensive information about its scope,

	potential impacts, and mitigation measures in accessible formats and local languages during Local Stakeholder Consultation (LSC). It was ensured that the project did not encroach on any land, relocate people, or cause forced physical or economic displacement. All activities have been conducted in accordance with the terms outlined in the transparent agreement, ensuring the protection of the rights and interests of all stakeholders involved.
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2.1.4 Grievance Redress Procedure

Grievances received	Resolution and outcome
No Grievance was recorded during current monitoring period,	To maintain ongoing communication with stakeholders, a grievance register mechanism has been established, known as the "Grievance Register," located at the project site office and accessible to all stakeholders. Community members can visit the project site to share their complaints, feedback, or comments in this register. If the comments are deemed genuine, immediate action will be taken. Plant in-charge is responsible for addressing the grievances at the plant after due consideration and discussion with the NSL headquarters about the grievances received, NSL headquarters analyze the intensity of the grievance and accordingly the redressal mechanism is planned and discussed with the site in-charge and then action is taken. A copy of the grievance register is retained at the project site. However, no feedback or grievances have been reported during this monitoring period, resulting in no applicable or relevant outcomes from this ongoing communication with local stakeholders.

2.1.5 Public Comments

Summary of comments received	Actions taken
Provide a summary of each comment received in each row	No comments were found on-site. The grievance register has been provided for feedback collection, ensuring effective communication and resolution of concerns.

2.2 Risks to Stakeholders and the Environment

	Risk identified	Mitigation or preventative measure taken
Risks to stakeholder participation	No risk identified	Stakeholder participation in wind projects poses minimal risk due to the clean nature of wind energy production, which does not emit pollutants. This fosters positive community relationships and reduces potential health and environmental concerns, ensuring smoother project implementation and garnering support from the community.
Working conditions	No risk identified	Stakeholder participation in wind projects poses negligible risks when the systems are operational. Wind technology typically operates reliably with minimal maintenance requirements, ensuring consistent energy generation and stakeholder satisfaction.
Safety of women and girls	No risk identified	Ensuring the safety of women and girls in the project involves comprehensive risk assessment and mitigation strategies. Measures such as well-lit areas, security patrols, gender-sensitive policies, and training on harassment prevention help mitigate risks, fostering a safe environment for all stakeholders and workers.
Safety of minority and marginalized groups, including children	No risk identified	While wind projects generally entail minimal or no risks to minority and marginalized groups, comprehensive safety measures have been implemented. This includes ensuring safe access to project sites, implementing child protection policies, and addressing any potential social or economic impacts on marginalized communities, thereby safeguarding

		their well-being throughout project development and operation.
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	No risk identified	The projects' lack of pollutants substantially reduces risks to stakeholders, including potential health hazards or environmental contamination. This inherent cleanliness fosters a safer environment for communities, minimizing concerns related to air and water quality, noise pollution, waste generation, and exposure to hazardous materials, ensuring overall safety and well-being.

2.3 Respect for Human Rights and Equity

2.3.1 Labor and Work

Discrimination and sexual harassment	No instances of discrimination or sexual harassment have been reported or identified within the project. This is ensured through the implementation of comprehensive policies and training aimed at preventing and promptly addressing such issues.
Management experience	No new entities are involved in in project design or implementation. The initially engaged management is experienced enough to handle the implementation of the project activity.
Gender equity in labor and work	Equal opportunities for gender equity and fair pay are guaranteed through transparent hiring practices, non-discriminatory policies, and regular pay scale reviews to rectify any disparities. Ongoing training programs also foster gender inclusivity and address unconscious biases in the workforce. The Project Proponent ensures equal wage pay to its employees keeping them in line with the minimum wage criteria as per state labor laws.
Human trafficking, forced labor, and child labor	The project has implemented stringent ethical sourcing policies, which include the comprehensive vetting of suppliers and contractors to ensure compliance with labor laws and human rights standards. Regular audits and inspections are carried out to verify that the project's supply chain and workforce are free from human trafficking, forced labor, or child labor. The company policy restricts hiring of any

	such employee involved in such practices. The project remains under strict surveillance of the project proponent & the state DISCOM, any malpractice at the project implemented site will be immediately reported and strict actions will be taken. Since the date of project start date, PP has not encountered any such activity at the project site.
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2.3.2 Human Rights

The project maintains a commitment to upholding the rights of IPs, LCs, and customary rights holders, aligning with international human rights standards, including the UN Declaration on the Rights of Indigenous Peoples and ILO Convention Indigenous Peoples and Cultural Heritage

2.3.3 Property Rights

Disputes over rights to territories and resources	N/A
Respect for property rights	Ongoing measures to protect property rights include upholding agreements made before land acquisition, respecting customary rights, and ensuring transparent and equitable compensation processes. Regular consultations and grievance mechanisms are maintained to address any concerns promptly. No such incident was reported at the time of validation, in last verifications or during current monitoring period.

2.3.4 Benefit Sharing

Summary of the benefit sharing plan	NA
Benefit sharing during the monitoring period	NA

2.4 Ecosystem Health

	Risk identified	Mitigation or preventative measure taken during the monitoring period
Impacts on biodiversity and ecosystems	No risk Identified	Throughout the monitoring period, no adverse effects on biodiversity or ecosystems were observed in the project. Wind projects are generally recognized as environmentally

		benign, with minimal impact on surrounding ecosystems.
Soil degradation and soil erosion	No risk Identified	Throughout the monitoring period, no instances of soil degradation or erosion were identified in the project area. Wind projects typically employ land management practices that minimize soil disturbance, ensuring the preservation of soil health and stability.
Water consumption and stress	No risk Identified	Throughout the monitoring period, no concerns regarding water consumption or stress were identified within the project. Wind installations generally have minimal water requirements, reducing strain on local water resources and ecosystems.
Usage of fertilizers	No risk Identified	As this project activity is a renewable energy project (Wind Project) and there is not any usage of fertilizers in the project activity.

2.4.1 Rare, Threatened, and Endangered species

Species or habitat	The Project is located in the Mann village, in the district Satara, state of Maharashtra, Country: India and there is no endangered species found during the monitoring period, neither reported at the time of project registration.
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2.4.2 Introduction of species

Species introduced	Classification	Justification for use	Adverse effects and mitigation
N/A	N/A	N/A	N/A

Existing invasive species	Mitigation measures to prevent spread or continued existence of invasive species
N/A	N/A

2.4.3 Ecosystem conversion

Ecosystem conversion in wind projects is justified by the transition to renewable energy sources, mitigating climate change, reducing reliance on fossil fuels, and fostering sustainable development for future generations.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The implementation status of the project activity includes the following information:

- The project activity has been in operation since its date of commissioning. The first WTG in the bundle was commissioned on 06-March-2014 and the last WTG was commissioned on 31-March-2014.
- There is no event of major break down or major non-operational phase during the monitoring period. Details of scheduled maintenance and minor breakdowns is reported in appendix of this report.
- There are no any other changes related to the project proponent or project observed.
- Project is implemented and operational as per the VCS Project description submitted:

Technical Specification of WTGs:

ReGen Powertech	VENSYS 87
POWER	
Rated power	1500 kW
Cut-in wind speed (10 min. mean)	3 m/s
Rated Wind Speed (10 min. mean)	approx. 12 m/s
Cut-out wind speed (10 min. mean)	22 m/s
Survival wind speed	52.5 m/s
Generator	Variable Speed, Multi-pole Synchronous with Permanent Magnet Excitation
ROTOR	
Diameter	87
Swept area	5942 sq. m

Speed range (variable)	9 to 17.3 rpm
TOWER AND FOUNDATION	
Hub height	85 m
Design	Tubular, Four sections
Foundation type	Floating foundation
CONTROL AND SAFETY SYSTEMS	
Control of output	Pitch Regulation
Speed control	Variable, Micro-controller based
Low Voltage Ride Through (LVRT)	3 seconds
Primary brake system	Aerodynamic Brake, Single Pitch Control/triple redundant
Pitch System	Electromechanical, Maintenance Free Toothed Belt Drive (Patented)
Remote Monitoring	VPN, Visualization via web-browser
TYPE CLASSES	
Wind turbine type class	GL III B

The project activity has been in operation since its date of commissioning. No events have happened that may impact the GHG emission reductions or removals and monitoring during this monitoring period.

During the current monitoring period, all the WTGs were operational. However, breakdown of 9,539.17 hours & Lull hours are 18,492.6 hours has occurred in this monitoring period due to non-availability of wind and some scheduled shutdown for the maintenance. This downtime is approx. 4.46 % & Lull hours is 9.18% of total available hours of operation of the WTGs, during the current monitoring period. The PP has provided the breakdown details in Appendix 03 of MR and evidences for the same to VVB. The project activity has supplied **69,078 MWh** of electricity, and thus contributing to **67,468 tCO₂e** GHG reductions.

For the current monitoring period estimated emission reduction is **60,477 tCO₂e**, whereas actual emission reductions achieved are **67,468 tCO₂e** (round down value), which is approximately **+11.56%** higher than the estimated emission reductions. The Project is in continued operation for **9th periodic verification** of fixed crediting period for which the monitoring period is from **01-January-2023 to 05-March-2024 (Inclusive of both the days)**. There has been downtime of equipment's, overhaul times or exchange of equipment's in the project activity during the current monitoring period. The details have been clearly described in the Appendix 3 of the monitoring

report. This variation is majorly due to high plant load factor (PLF¹⁸) Some other reasons for this are the variations in the wind flow pattern, and other parameters which are not in the control of the project proponent.

3.2 Deviations

3.2.1 Methodology Deviations

The project did not apply any methodology deviation under the current monitoring period. Further, no methodology deviations were applied during the previous verification and validation.

3.2.2 Project Description Deviations

No project description deviation applied to the project activity during the current monitoring period. Also, during the previous monitoring periods no project description related deviation was occurred. The same can be referred from the previous approved monitoring reports.

3.3 Grouped Projects

Not applicable as this is not a grouped project.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes

☒ No

¹⁸ The estimated PLF as per registered PD is 20% whereas actual PLF achieved during this MP is 22.31% Calculation can be referred under the ER sheet.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	EF _{grid,OMsimple, y}
Data unit	tCO ₂ /MWh
Description	Operating margin CO ₂ emission factor of NEWNE grid
Source of data	Central Electricity Authority: CO ₂ Emission Database CEA <u>CO₂ Baseline database Version 10</u> ¹⁹
Value applied	0.9857
Justification of choice of data or description of measurement methods and procedures applied	The operating margin emission factor is a 3-year generation-weighted average data, based on the most recent data available on CEA database at the time of submission of the VCS-PDD to the VVB for validation. Data compiled in CEA CO ₂ CDM database is in line with the requirements Version 05.0.0 of “Tool to calculate the emission factor for an electricity system”.
Purpose of Data	Calculation of baseline emissions
Comments	This parameter is calculated ex ante and remains fixed during the crediting period.

Data / Parameter	EF _{grid,BM,y}
Data unit	tCO ₂ /MWh
Description	Build margin CO ₂ emission factor of NEWNE grid
Source of data	Central Electricity Authority: CO ₂ Emission Database CEA <u>CO₂ Baseline database Version 10</u>
Value applied	0.9495
Justification of choice of data or description of measurement methods and procedures applied	The build margin emission factor is the most recent data available from CEA CO ₂ Baseline database. Data compiled in CEA CO ₂ CDM database is in line with the requirements Version 05.0.0 of “Tool to calculate the emission factor for an electricity system”.
Purpose of Data	Calculation of baseline emissions
Comments	The build Margin would be calculated ex ante and fixed during the crediting period.

¹⁹ https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver10.pdf

Data / Parameter	EF _{grid,CM,y}
Data unit	tCO ₂ /MWh
Description	Combined margin CO ₂ emission factor of NEWNE grid
Source of data	Central Electricity Authority: CO ₂ Emission Database CEA <u>CO₂ Baseline database Version 10</u>
Value applied	0.9767
Justification of choice of data or description of measurement methods and procedures applied	The combined margin emissions factor is calculated as follows: $EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$ The following default values should be used for w_{OM} and w_{BM}: For Wind power generation project activities: w_{OM} = 0.75 and w_{BM} = 0.25 for the selected crediting period Data compiled in CEA CO₂ CDM database is in line with the requirements Version 05.0.0 of “Tool to calculate the emission factor for an electricity system”.
Purpose of Data	Calculation of baseline emissions
Comments	The Combined Margin would be calculated ex ante and fixed during the crediting period.

4.2 Data and Parameters Monitored

Data / Parameter	EG _{facility, y}
Data unit	MWh
Description	Quantity of Net Electricity exported to the grid by the project WTGs to the grid during the year y.
Source of data	Calculated
Description of measurement methods and procedures to be applied	This parameter is calculated based on the measured parameters those are continuously measured and monthly recorded. Metering at common metering point: The electricity generated by the project activity WTGs along with non-project WTGs are metered at feeder-wise common metering point. The metering point consists of a main meter & check meter, having accuracy of 0.2s. The meters measures parameters like export & import for all the connected WTGs. The export reading for a given metering point for a given billing month is obtained by subtracting initial reading (taken in previous month) from the final reading (taken in billing

	month). The difference is multiplied by the applicable meter multiplication factor. Similar procedure is followed to arrive the import reading. The monitoring & measurement²⁰ of electricity at project metering point is being done on continuous basis; while recording is being done on monthly basis as Joint Meter Reading by the representatives of State Utility & PP. Calculation of net electricity export to the grid by project activity WTG: The export & import by the project activity WTG connected to the metering point is calculated by apportioning of the electricity at feeder level by the state utility. The apportioning of the electricity is based on the controller reading of project activity WTGs, controller reading for all WTGs connected at the given metering point and the electricity reading (export, import etc.) recorded by the main meter at the given metering point on monthly basis. It gives monthly values of export & import for project activity WTG. The net export for any given month by the project activity WTG to the grid is then obtained by subtracting import from export. Thus: $EG_{\text{facility},y} = EG_{\text{JMR, NSL, export}} - EG_{\text{JMR, NSL, import}}$ The value of the monthly net electricity delivered to the Grid by the project activity WTG is aggregated annually to get quantity of net electricity supplied by the project plant/unit to the grid in year y i.e. ($EG_{PJ,y}$). Note: The apportioning of the electricity is the responsibility of the state utility & same is beyond the control of the PP.
Frequency of monitoring/recording	Monthly recording.
Value monitored	69,078 MWh
Monitoring equipment	Energy Meter
QA/QC procedures to be applied	The quantity of net electricity supplied can be cross-verified from the invoices raised on MSEDCL by the project proponent. The main

²⁰ The meters are capable of measuring the electricity parameters (export, import etc.) on real time basis. It complies the hourly measurement requirement as per the monitoring methodology

	and check meters are calibrated and maintained by the state utility as the frequency of meter testing is once in 3 years ²¹ .
	Data Recording: Electronic/ Paper
	Energy Meter accuracy Class: 0.2s.
Purpose of the data	Used to calculate baseline emissions
Calculation method	Calculation method is described in detail in section 4.3 of registered VCS PD version 03 dated 08-February-2016.
Comments	Data will be archived for crediting period plus two years after the end of Crediting period.

Data / Parameter	EG _{JMR, NSL, export,y}
Data unit	MWh
Description	Quantity of Electricity exported by the Project WTGs connected to the feeder i to the grid during the year y.
Source of data	Monthly statements/credit notes issued by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL).
Description of measurement methods and procedures to be applied	Quantity of electricity export would be calculated using the apportioning procedure as described in section 4.3 of Registered VCS PD version 03 dated 08-February-2016.
Frequency of monitoring/recording	Continuous measurement and monthly recording
Value monitored	69,112.42
Monitoring equipment	Calculated parameter, hence no monitoring equipment is required.
QA/QC procedures to be applied	The value is calculated and can be cross checked from the invoices raised on the state utility. The monitoring frequency of the data parameter is monthly basis.
Purpose of the data	Used to calculate baseline emissions
Calculation method	Calculation method is described in section 4.3 of Registered VCS PD version 03 dated 08-February-2016.

²¹ Meter Details & meter calibration has been provided in Appendix 1.

Comments	Date will be archived for crediting period plus two years after the end of Crediting period
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Data / Parameter	EG_{JMR, NSL, import,y}
Data unit	MWh
Description	Quantity electricity imported by the Project WTGs connected to the feeder i from the grid during the year y.
Source of data	Monthly statements/credit notes issued by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL).
Description of measurement methods and procedures to be applied	Quantity of electricity import would be calculated using the apportioning procedure as described in section 4.3 of Registered VCS PD version 03 dated 08-February-2016.
Frequency of monitoring/recording	Continuous measurement and monthly recording
Value monitored	34.09
Monitoring equipment	Calculated parameter, hence no monitoring equipment is required.
QA/QC procedures to be applied	The value is calculated and can be cross checked from the invoices raised on the state utility. The monitoring frequency of the data parameter is monthly basis.
Purpose of the data	Used to calculate baseline emissions
Calculation method	Calculation method is described in section 4.3 of Registered VCS PD version 03 dated 08-February-2016.
Comments	Date will be archived for crediting period plus two years after the end of Crediting period

Data / Parameter	EG_{Controller, gen}
Data unit	MWh
Description	Quantity electricity generated by the project activity WTGs recorded at respective controller meters
Source of data	Monthly operating logs recorded in electronic format by O&M contractor

Description of measurement methods and procedures to be applied	The value is recorded continuously by the online monitoring station. This reading can also be seen in the electronic panel installed inside the WTG tower. The LCS meter (Controller meter) do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WTGs. In case there is any mismatch in the energy values recorded by the Panel meter and the energy values calculated by the inverting system; the machine will stop working and generate the error report. The operations and maintenance staff will attend to the problem immediately in order to identify and correct the error.
Frequency of monitoring/recording	Continuous measurement and monthly recording
Value monitored	74,983.03 (Roundoff Value)
Monitoring equipment	LCS meter (Controller Meter)
QA/QC procedures to be applied	This data parameter will be logged electronically on a monthly basis by O&M contractor on its online portal. The value of this parameter shall be compared with the value of EG_{P,y} and the conservative approach would be taken by the PP for estimating the net electricity supplied value for the calculation of emission reduction.
Purpose of the data	Used to calculate baseline emissions
Calculation method	Not applicable
Comments	Date will be archived for crediting period plus two years after the end of Crediting period

4.3 Monitoring Plan

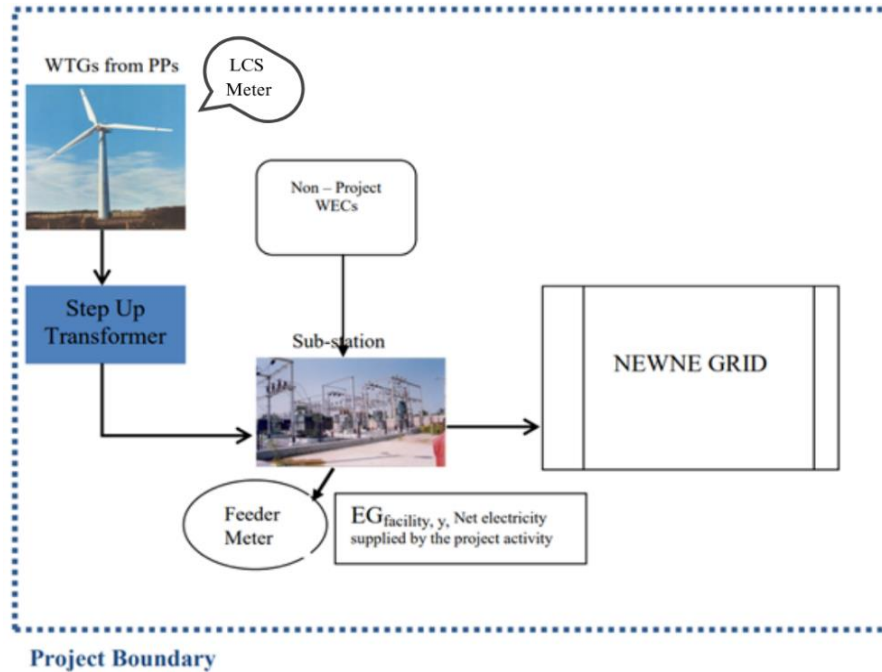
As per approved monitoring methodology ACM0002 / Version 16.0, 'Net electricity generation from the project activity' is required to be monitored.

As the emission reductions from the project are determined by the number of units exported to the grid by the project activity it is mandatory to have a monitoring system in place and ensure that the project activity produces and supplies the rated power at the stipulated norms.

The purpose of the monitoring plan, is to define the organizational structure of the monitoring supervisor, monitoring practices, QA and QC procedures and archiving procedures. The monitoring plan will ensure that the emission reductions from the project activity are reported accurately and transparently.

Since the baseline methodology is based on ex ante determination of the baseline, the monitoring of operating margin emission factor and build margin emission factor is not required. Further,

wind-based electricity generation is not associated with any kind of leakages. Hence, the sole parameter for monitoring is the electricity generated by the project and supplied to the grid.



Monitoring at common metering point:

Quantity of electricity generated and supplied to the grid by all the WTGs (project activity WTGs and non-project WTGs) connected to the particular feeder will be measured through the energy meters (Main Meter and Check Meter) installed at the 33KV Hirawadi Substation. The meter readings at the substations are taken jointly by the representatives of Project participant representative and Maharashtra State Electricity Distribution Company Limited (MSEDCL) representative and recorded in the JMR.

The metering equipment is duly approved, tested and sealed by MSEDCL. The metering equipment (consisting of the Main Meter and the Check Meter) is identical in make and technical standards and is of 0.2% accuracy class. They comply with the requirements of the Electricity Rules.

The MSEDCL carries out the calibration, periodical testing, sealing and maintenance of meters in the presence of PPs representative. The frequency of meter testing is once in 03 years²². All meters are tested only at the Metering Point.

Metering Equipment and Metering Arrangement Information and Emergency preparedness:

- The meters are two-way meter and measure the electricity import and export and give the net electricity.

²² Meter Details & meter calibration has been provided in Appendix 1.

- As per the Power Purchase Agreement entered into with the electricity distribution utility, there will be two meters, one main meter and one backup meter. Both meters would be two-way export import meters that measure both export and import of electricity and provide net electricity exported to the grid.
- In case the meters are found to operate outside the permissible limits, the meters will be either replaced immediately or calibrated. Whenever a main meter goes defective, the consumption recorded by the backup meter will be referred.
- If main as well as back up metering system becomes defective, the details of the malfunctioning along with date and time and snap shot parameters along with load survey will be retrieved from the main meter. The exact nature of the malfunctioning will be determined after analysing the data so retrieved and the consumption recorded by the main meter will be adjusted accordingly.
- The main meter readings are apportioned based upon the LCS meter readings from the individual WTGs to compute net electricity supplied from individual WTGs. The LCS meter readings of project activity WTGs are archived electronically on continuous basis. Joint meter reading at the DISCOM substation is noted each month. Therefore, cumulative LCS meter reading for each month is used for purpose of allocation of net electricity supplied to the grid from the project activity. Both main and check meters will be **calibrated once in 3 years**.

Project proponent has signed an “Operation and Maintenance” contract with the supplier, ReGen Power Tech Private Limited to operate the wind mills for a period of ten years from the date of commissioning of each WTG. The performance of the mills, safety in operation and scheduled /breakdown maintenances are organized and monitored by the contractor. ReGen monitors the generation of the WTG daily on a regular basis and maintains a log book recording daily generation details for each WTG comprising the project, as metered at the wind farm.

Apportioning Procedure followed:

The allocation of the net electricity supplied to the grid by the project activity is done based on the joint meter readings taken at the DISCOM substation & LCS meter readings of individual WTGs. Apportioning procedure is applied is explained in below:

$EG_{JMR, Export}$ = Electricity exported by all the WTGs (project WTGs & non-project WTGs), as recorded by the main meter at the substation

$EG_{JMR, Import}$ = Electricity imported by all the WTGs (project WTGs & non-project WTGs), as recorded by the main meter at the substation

$EG_{Controller, gen}$ = Electricity exported by a project WTG, as measured at the controller

$EG_{Controller, gen, total}$ = Electricity exported by all the WTGs (project activity & non project activity) connected to the main meter at the grid substation, measured at the controller of each WTG

$\sum EG_{Controller, gen}$ = Summation of electricity generated by the project activity WTGs recorded at respective LCS meters.

$EG_{JMR, NSL, export}$ = Electricity exported by a WTG to the grid, calculated

$EG_{JMR, NSL, import}$ = Electricity imported by a WTG from the grid, calculated.

Electricity exported by each WTG is apportioned on the basis of electricity exported recorded at the controller of each WTG and the electricity exported at the main meter and mentioned in the JMR. The export multiplication factor is calculated as follows-

$$\text{Export Multiplication Factor} = EG_{JMR, Export} \div EG_{\text{Controller, gen, total}} \dots\dots\dots (1)$$

Thus, the energy exported by a WTG to the grid is given by the equation-

$$EG_{JMR, NSL, export} = \text{Export Multiplication factor} \times \sum EG_{\text{Controller, gen}} \dots\dots\dots (2)$$

As the controller meter doesn't record import, the apportioning of energy imported by each WTG is also done on the basis of electricity exported recorded at the controller of each WTG and the electricity imported at the main meter and mentioned in the JMR. The import multiplication factor is calculated as follows-

$$\text{Import Multiplication Factor} = EG_{JMR, Import} \div EG_{\text{Controller, gen, total}} \dots\dots\dots (3)$$

Thus the energy imported by a WTG to the grid is given by the equation-

$$EG_{JMR, NSL, import} = \text{Import Multiplication factor} \times \sum EG_{\text{Controller, gen}} \dots\dots\dots (4)$$

The net electricity exported by the WTGs of the project is given by the equation-

$$EG_{\text{facility, y}} = \sum EG_{JMR, NSL, export} - \sum EG_{JMR, NSL, import} \dots\dots\dots (5)$$

$$\sum EG_{JMR, NSL, export} = EG_{JMR, NSL, export, y}$$

$$\sum EG_{JMR, NSL, import} = EG_{JMR, NSL, import, y}$$

Based on the above calculation, a monthly statement/credit note is prepared and signed by the representatives of PP and endorsed by the state utility (MSEDCL). The statement mentions the total electricity exported to grid, total electricity imported from the grid and the net electricity supplied. The net electricity supplied is calculated as the difference of the total electricity exported to grid and total electricity imported from the grid by the project activity.

Upon receipt of the "Monthly Statement/credit note", Project participant generates invoices on sale of electricity and sends to respective district level MSEDCL office and MSEDCL makes payments against the invoices. The value of net electricity supplied can be cross checked with the monthly invoices.

Mismatch in Monitoring Period and the Billing Period

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 from:

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

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

The operational and management structure implemented for data monitoring is as follows:

VCS PROJECT COORDINATOR

↑

ASSISTANT ENGINEER (AE)

↑

OPERATOR

The day-to-day operation of the WTGs at the ground level is looked after by the operator. The operator reports to the Assistant Engineer (AE) - Wind Farm, who is responsible for collecting the required information from the operator. The AE – Wind Farm records the generation on a daily basis for each service connection point and reports the cumulative generation to the Management. VCS Project coordinator will be responsible for assessment of emission reduction achieved every year and documentation of the same.

Personnel training: The training for operating and maintaining the plant is provided by the technology supplier

Data collection and archiving:

The daily data at the site is collected in electronic form. Monthly data is collected and maintained in hard copies. The project proponent shall keep complete and accurate records of all the data as a part of monitoring for at least a period of 2 years after the end of the crediting period or the last issuance of Verified Carbon Units for the project activity, whichever occurs later.

NOTE:

As per the monitoring plan, the monitoring parameters $EG_{JMR, NSL, export, y}$, $EG_{JMR, NSL, import, y}$ and $EG_{facility, y}$ to be calculated based on the generation data of other project activities connected to the same substation. Since the generation data of other project activities is only available with the O&M contractor, apportioning cannot be done by PP and hence the other parameters $EG_{JMR, Export}$, $EG_{JMR, Import}$ and $EG_{Controller, gen, total}$ is not included in section 4.2 of the PD.

The revised monitoring plan is complete, accurate and in line with actual metering and monitoring arrangement finalized by DISCOM in consultation with State Electricity Regulatory Commission

There is no delay in meter calibration identified during the current monitoring period.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

According to the methodology and VCS PD, Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

Where:

ER_y	=	Emission reductions in year y (tCO _{2e})
BE_y	=	Baseline emissions in year y (tCO ₂)
PE_y	=	Project emissions in year y (tCO _{2e})

Baseline Emissions:

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

The baseline emissions are to be calculated as follows:

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

Where:

BE_y	=	Baseline emissions in year y (tCO ₂)
$EG_{PJ,y}$	=	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh)
$EF_{grid,CM,y}$	=	Combined margin CO ₂ 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” (tCO ₂ /MWh)

If the project activity is the installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity, then:

$$EG_{PJ,y} = EG_{facility,y}$$

Where:

$EG_{PJ,y}$	=	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh/yr)
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$$EG_{\text{facility}, y} = \text{Quantity of net electricity generation supplied by the project plant/unit to the grid in year } y \text{ (MWh/yr)}$$

$$EF_{\text{grid}, \text{CM}, y} = \text{is the emission factor (0.9767 tCO}_2\text{e/MWh fixed ex-ante).}$$

$$BE_y = 69,078 \text{ MWh} \times 0.9767 \text{ tCO}_2\text{e}$$

$$= 67,468 \text{ tCO}_2\text{e (rounded down value has been considered).}$$

5.2 Project Emissions

As per section 5.4.1 of para 37 of methodology²³ i.e., ACM0002 Version 16.0, This project activity is grid connected wind power generation. Hence there is no project emission from the project activity.

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

5.3 Leakage Emissions

As per the applicable methodology ACM0002, Version 16.0, no leakage emissions are considered.

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

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)
Year 2023 (01-January-2023 to 31-December-2023)	62,198	0	0	0	0	62,198
Year 2024 (01-January-2024 to 05-March-2024)	5,270	0	0	0	0	5,270
Total	67,468	0	0	0	0	67,468

²³ <https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG>

For projects required to assess permanence risk: Since the project activity does not fall under the AFOLU (Agriculture, Forestry, and Other Land Use) or Geologic Carbon Storage (GCS) project categories, it is not required to assess the permanence risk. Therefore, the following tables are not applicable.

i) Provide the requested information using the table below:

State the non-permanence risk rating (%)	NA
Has the non-permanence risk report been attached as either an appendix or a separate document?	☐ Yes ☒ No
For ARR and IFM projects with harvesting, state, in tCO ₂ e, the Long-term Average (LTA).	NA
Has the LTA been updated based on monitored data, if applicable?	☐ Yes ☒ No
State, in tCO ₂ e, the expected total GHG benefit to date.	NA
If a loss occurred (including a loss event or reversal), state the amount of tCO ₂ e lost:	NA

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Buffer pool allocation (tCO ₂ e)	Reductions VCU (tCO ₂ e)	Removals VCU (tCO ₂ e)	Total VCU issuance (tCO ₂ e)
DD-MMM-YYYY to 31-Dec-YYYY	NA	NA	NA	NA	NA	NA	NA
Total	NA	NA	NA	NA	NA	NA	NA

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
Year 2023 (01-January-2023 to 31-December-2023)	51,335 tCO ₂ e	62,198 tCO ₂ e	+21.16%	The actual ER achieved is higher than the PD estimated ER for the comparable period. This is mainly due to high PLF during the comparable

				period. (PLF calculation and comparison is reported in ER Sheet)
Year 2024 (01-January-2024 to 05-March-2024)	5,270 tCO ₂ e	9,142 tCO ₂ e	-42.35%	The actual ER achieved is lower than the PD estimated ER for the comparable period. This is mainly due to low PLF during the current monitoring period. (PLF calculation and comparison is reported in ER Sheet)
Total (01-January-2023 to 05-March-2024)	60,477 tCO₂e	67,468 tCO₂e	+11.56%	The actual ER achieved is higher than the PD estimated ER for the comparable period. This is mainly due to high PLF during the current monitoring period. (PLF calculation and comparison is reported in ER Sheet)

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

No commercially sensitive information has been provided in the monitoring report.

APPENDIX A: METER CALIBRATION DETAILS

WTG Ref No	Feeder No	Meter Details	Previous Calibration	Previous Calibration	Current Calibration	Due Date
NSL-1	F-02		20-August-2020	03-February-2022	25-July-2023	24-July-2026
NSL-2						
NSL-3		Main Meter:				
NSL-6		Make: Elster, S. No: 13277651 Class: 0.2s				
NSL-7						
NSL-10						
NSL-11						
NSL-12		Check Meter:				
NSL-13		Make: Elster, S. No: 13277650 Class: 0.2s				
NSL-14						
NSL-15						
NSL-20	F-01	Main Meter:	20-August-2020	03-February-2022	25-July-2023	24-July-2026
NSL-22		Make: Elster, S. No: 13277649 Class: 0.2s				
NSL-17						
NSL-23		Check Meter:				
NSL-26		Make: Elster, S. No: 02814525 Class: 0.2s				
NSL-34						
NSL-36						
NSL-37						
NSL-28	F-05	Main Meter:				

		Make: Elster, S. No: 13277639	20-August-2020	03-February-2022	25-July-2023	24-July-2026
		Class: 0.2s				
		Check Meter:				
		Make: Elster, S. No: 13277640				
		Class: 0.2s				

APPENDIX B: BREAKDOWN DETAILS

S.No.	Month	No. of days	Total Hours For The Month for each WTG	Production. Hrs.	Lull Hrs.	Total Machine Breakdown Hrs	Total Breakdown Hours	% of production Hours	% of Breakdown Hours	% of Lull Hours	Total Hrs. (No. of days*No. of hrs in a day*Number of WTGs)
1	Jan-23	31	744	11541.2	3101.3	188.9	237.9	77.56%	1.60%	20.84%	14880
2	Feb-23	28	672	11703.8	1461.8	181.1	275.1	87.08%	2.05%	10.88%	13440
3	Mar-23	31	744	12280	1742.8	153.6	858	82.53%	5.77%	11.71%	14880
4	Apr-23	30	720	10630.2	1857.4	134.6	1913.1	73.82%	13.29%	12.90%	14400
5	May-23	31	744	12141.1	1460.5	230	1279.1	81.59%	8.60%	9.82%	14880
6	Jun-23	30	720	13205.5	108.3	348.1	1086.9	91.70%	7.55%	0.75%	14400
7	Jul-23	31	744	14108.7	2.6	514.1	769.2	94.82%	5.17%	0.02%	14880
8	Aug-23	31	744	14519.1	88	211.9	273.2	97.57%	1.84%	0.59%	14880
9	Sep-23	30	720	12688.5	1200.7	235.3	511.3	88.11%	3.55%	8.34%	14400

10	Oct-23	31	744	12380.1	1470.7	987.9	1029.8	83.20%	6.92%	9.88%	14880
11	Nov-23	30	720	12609.4	1260.7	352.5	530.3	87.57%	3.68%	8.75%	14400
12	Dec-23	31	744	13384.9	1354.6	101	140.9	89.95%	0.95%	9.10%	14880
12	Jan-24	31	744	13174.9	1405.2	135.4	300.8	88.54%	2.02%	9.44%	14880
12	Feb-24	29	696	11481.6	2147.4	194.9	291.2	82.48%	2.09%	15.43%	13920
12	Mar-24	5	120	2077.0	280.6	34.6	42.4	86.54%	1.77%	11.69%	2400
	Total	430	10320	177926	18942.63	4003.95	9539.17	86.20%	4.62%	9.18%	206400