



Verification Report

UCR ID: 378

Prepared by



Naturelink Solutions Pvt. Ltd.

Title	Small Scale Wind Power Project in Kutch District
Project Owner	M/s RB Industries
Project Location	Village: Vehar, Ta.: Nakhatrana, Dist.: Kutch, Gujarat, India. Coordinates: 23°18'08.6"N 69°13'29.8"E
Date	06/03/2024

[COVER PAGE](#)

Project Verification Report Form (VR)

BASIC INFORMATION

Name of approved UCR Project Verifier / Reference No.	Naturelink Solutions Pvt. Ltd
Type of Accreditation	<input type="checkbox"/> CDM Accreditation <input type="checkbox"/> ISO 14065 Accreditation <input checked="" type="checkbox"/> UCR Approved Verifier
Approved UCR Scopes and GHG Sectoral scopes for Project Verification	Sectoral Scope: 01 Energy Industries
Validity of UCR approval of Verifier	May - 2022 onwards
Completion date of this VR	05/03/2024
Title of the project activity	Small Scale Wind Power Project in Kutch District
Project reference no. (as provided by UCR Program)	378
Name of Entity requesting verification service	M/s. Creduce Technologies Private Limited (Aggregator) M/s. RB Industries (Project owner)
Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)	Shailendra Singh Rao (Creduce) shailendra@credcue.tech Perkin Jariwala (RB Industries) deepak@rnbdenims.com
Country where project is located	India
Applied methodologies	AMS-I.D: Grid connected renewable electricity generation– Version 18.0
Sectoral Scope(s):	1
Project Verification Criteria: Mandatory requirements to be assessed	<input checked="" type="checkbox"/> UCR Verification Standard <input checked="" type="checkbox"/> Applicable Approved Methodology

	<input type="checkbox"/> Applicable Legal requirements /rules of the host country <input checked="" type="checkbox"/> Eligibility of the Project Type <input checked="" type="checkbox"/> Start date of the Project activity <input checked="" type="checkbox"/> Meet applicability conditions in the applied methodology <input checked="" type="checkbox"/> Credible Baseline <input checked="" type="checkbox"/> Do No Harm Test <input checked="" type="checkbox"/> Emission Reduction calculations <input checked="" type="checkbox"/> Monitoring Report <input checked="" type="checkbox"/> No GHG Double Counting <input type="checkbox"/> Others (please mention below)
<p>Project Verification Criteria: Optional requirements to be assessed</p>	<input checked="" type="checkbox"/> Environmental Safeguards Standard and do-no-harm criteria <input type="checkbox"/> Social Safeguards Standard do-no-harm criteria
<p>Project Verifier's Confirmation: The <i>UCR Project Verifier</i> has verified the UCR project activity and therefore confirms the following:</p>	<p>The UCR-approved verifier Naturelink Solution Pvt. Ltd., verifies the following with respect to the UCR Project Activity "Small scale wind power project in Kutch district"</p> <input checked="" type="checkbox"/> The project aggregator has correctly described the project activity in the Project Concept Note/4/ including the applicability of the approved methodology AMS-I.D/10/ and meets the methodology applicability conditions and has achieved the estimated GHG emission reductions, complies with the monitoring methodology and has calculated emission reductions estimates correctly and conservatively. <input checked="" type="checkbox"/> The project activity is likely to generate GHG emission reductions amounting to the estimated 5154 tCO ₂ e, as indicated in the monitoring report/5/6/, which are additional to the reductions that are likely to occur in the absence of the Project Activity and complies with all applicable UCR rules, including ISO 14064-2 and ISO 14064-3. <input checked="" type="checkbox"/> The project activity is not likely to cause any net-harm to the environment and/or society


	<input checked="" type="checkbox"/> The project activity complies with all the applicable UCR rules and therefore recommends UCR Program to register the Project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	<p style="text-align: center;">Verification Report UCR</p> <p style="text-align: center;">Reference no.: NSPL/VR/2023/11/UCR/05</p> <p style="text-align: center;">UCR ID: 378</p> <p style="text-align: center;">Version: 1.0</p> <p style="text-align: center;">Date: 06/03/2024</p>
Name of the authorised personnel of UCR Project Verifier and his/her signature with date	<div style="text-align: center;">  </div> <p style="text-align: center;">Mr. Shyam Mandliya GHG Assessor Naturelink Solution Pvt. Ltd. Date: 06/03/2024</p>

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1. Project Verification Report

1.1 Executive Summary

The verification work has been contracted by project aggregator Creduce Technologies Pvt Ltd and RB Industries to perform an independent verification of its UCR project titled “**Small scale wind power project in kutch district.**”, **UCR approved project ID:378**, to establish a number of CoUs generated by the project over the crediting period from 25/02/2022 to 31/12/2022 (both days included).

Verification for the period: 25/02/2022 to 31/12/2022

In our opinion, the total GHG emission reductions over the crediting / verification period stated in the Monitoring Report (MR)/5/6/, submitted are found to be correct and in line with the UCR guidelines. The GHG emission reductions were calculated on the basis of UCR guideline which draws reference from, the standard baseline, AMS-I. D: Grid connected renewable electricity generation– Version 18.0/10/. The verification was done remotely by way of video calls, by onsite inspection of the plant and submission of documents for verification through emails.

It is certified that the emission reductions from the small scale wind power project in Kutch district (UCR ID – 378) for the period 25/02/2022 to 31/12/2022 amounts to **5154 CoUs (5154 tCO_{2e})**.

Objective

The objective of this verification is to have an independent third-party assessment of whether the project activity conforms to the qualification criteria set out in the UCR Program Manual/1/, UCR CoU Standard/2/ and UCR verification standard/3/ to attain real, measurable, accurate and permanent emission reductions.

Scope

The scope of the verification is the independent, objective review and ex-post determination of the monitored reductions in GHG emission by the project activity.

1. To verify the project implementation and operation with respect to the registered PCN/4/.
2. To verify the implemented monitoring plan with the registered PCN/4/ applied baseline and monitoring methodology.
3. To verify that the actual monitoring systems and procedures follow the monitoring plan.
4. To evaluate the GHG emission reduction data and express a conclusion whether the reported GHG emission reduction data is free from material misstatement
5. To verify that reported GHG emission data is sufficiently supported by evidence.
6. Agreement stating assurance to avoid double accounting/9/ for the project to be verified, along with required proof.

The project is assessed against the requirements of the UCR Program Manual/1/, UCR CoU Standard/2/ and UCR verification standard/3/, ISO 14064-2.

Due professional care has been exercised and ethical conduct has been followed by the assessment team during the verification process. The verification report is a fair presentation

of the verification activity. The validation of the project is not part of the present assignment and project is deemed validated post-registration by UCR.

1.2 Description of the Project

The project activity is a renewable power generation activity which incorporates installation and operation of single Wind Turbine Generator (WTG) having capacity of 2.1 MW manufactured and supplied by Suzlon Energy. The WTG under the project activity was commissioned on 25/02/2022 by Gujarat Energy Development Agency (GEDA), Government of Gujarat, India.

The project involves installation of 2.1 MW capacity of single wind turbine generator manufactured by Suzlon Energy. The details of the project activity are verified with the PCN/4/, MR/5/6/ and relevant documents submitted for verification as mentioned in appendix-2.

The technical specification is listed below;

Sr. No	Item	Description
1	WF Capacity	2.1 MW
2	Make of WTG	Suzlon Energy
3	No. of WTG	1 Nos.
4	Rotor diameter	111.8 m
5	Rotor swept area	9,852 m ²
6	Rated power	2.1 MW
7	Cut in wind speed	3.0 m/s
8	Rated wind speed	12.5 m/s
9	Cut out wind speed	30.0m/s (3-second average) 21.0m/s (10-minute average)
10	Tower Hub heights	90 m 120m 140 m
11	Tower type	Steel Tubular Hybrid Lattice
12	Blade Make	Suzlon SB54
13	Generator frequency	50 Hz / 60 Hz

As mentioned in the monitoring report/5/6/ and emission reduction calculation sheet/7/8/ submitted for verification, the project replaces anthropogenic emissions of greenhouse gases (GHGs) estimated to be 5154 tCO₂e for the verification period, there on displacing 5727.178 MWh amount of electricity from the generation of fossil-fuel based power plants connected to the Indian electricity grid.

The project activity uses kinetic energy of wind to generate electricity by installation of the wind turbine generators having a capacity of 2.1 MW. The project is a small-scale activity. The methodology applied in the monitoring report is verified against the AMS-I. D: Grid connected renewable electricity generation - Version 18.0/10/ total emission reductions (ERs) achieved through the project activity during the monitoring period is summarised below:

Summary of the Project Activity and ERs Generated for the Monitoring Period	
Project start date	25/02/2022
Start date of this Monitoring Period	25/02/2022
Carbon credits claimed up to	31/12/2022
Total ERs generated (tCO _{2e})	5154
Leakage Emission	0
Project Emission	0

1.3 Project Verification team, technical reviewer and approver:

Project verification team

Sr. No.	Role	Last name	First name	Affiliation	Involvement in		
					Doc review	Remote inspection	Interviews
1.	GHG Assessor & Technical Expert	Mandliya	Shyam	Naturelink Solutions Pvt. Ltd.	Yes	Yes	Yes
2.	Trainee Assessor	Prajapati	Divya	Naturelink Solutions Pvt. Ltd.	Yes	Yes	Yes

Technical Reviewer of the Verification report

Sr. No.	Role	Type of resource	Last name	First name	Affiliation
1.	Internal Technical Reviewer	IR	Amin	Shardul	Naturelink Solutions Pvt. Ltd.

2 Verification Process

2.1 Desk/document review

The desk review was conducted by the verification team that included:

- A review of data and information presented to assess its completeness
- A review of the initial PCN/4/, MR/5/6/, emission reduction calculation sheet/7//8/, Methodology - AMS-I.D/10/.
- A cross-check between information provided in the monitoring report/5//6/ and data from other sources such as certificate of share of electricity generated by wind farm/11/, purchase invoices/15/ or similar data sources;
- A review of calculations and assumptions made in determining the GHG data and emission reductions calculation/7//8/;

The list of submitted documents is available in a subsequent section of this verification report under the appendix - 2 “Document reviewed or referenced”.

2.2 Remote Inspection

As per the UCR Verification standard version 2.0, the verification team conducted remote inspection of project activity via video conferencing on 28/02/2024 as mentioned in the below table.

Date of remote inspection:	28/02/2024			
No.	Activity performed During remote inspection	Site location	Date	Project Personnel
1.	Opening meeting	Project location	28/02/2024	Mr. Perkin Jariwala
2.	Remote inspection of all installation	Project location	28/02/2024	Mr. Prajal Dudiya
3.	Closing meeting	Project location	28/02/2024	Mr. Perkin Jariwala

The following parameters were assessed but not limited to:

- An assessment of the implementation and operation of the registered project activity as per the registered PCN/4/;
- A review of information flows for generating, aggregating, and reporting the monitoring parameters;
- Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PCN/4/ and MR/5/6/;
- A cross-check of the monitoring equipment including calibration reports and observations of monitoring practices against the requirements of the PCN/4/ and MR/5/6/ and selected methodology/10/;
- An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

2.3 Interviews

No.	Interview			Date	Subject
	Last name	First name	Affiliation		
1.	Jariwala	Perkin	Head (Accounts) - RB Industries	28/02/2024	Legal ownership of the project, Implementation of the project, Start date and crediting period, Double counting of the carbon credits, Project boundary, Monitoring plan
2.	Dudiya	Prajal	Station in charge – RB Industries	28/02/2024	Wind turbine specification and connections, energy meter readings, transformer specification
3.	Rathore	Natasha	Senior Consultant – Creduce Technologies Pvt. Ltd.	28/02/2024	Project Overview, PCN, Monitoring Report, Methodology, eligibility criteria, Baseline emissions, Emission Reduction Calculation

2.4 Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

Areas of Project Verification findings	No. of CL	No. of CAR	No. of FAR
Green House Gas (GHG)			
Identification and Eligibility of project type	NIL	NIL	NIL
General description of project activity	NIL	NIL	NIL
Application and selection of methodologies and standardized baselines	--	--	--
<ul style="list-style-type: none"> Application of methodologies and standardized baselines 	NIL	NIL	NIL
<ul style="list-style-type: none"> Deviation from methodology and/or methodological tool 	NIL	NIL	NIL
<ul style="list-style-type: none"> Clarification on applicability of methodology, tool and/or standardized baseline 	NIL	NIL	NIL
<ul style="list-style-type: none"> Project boundary, sources and GHGs 	NIL	NIL	NIL
<ul style="list-style-type: none"> Baseline scenario 	NIL	NIL	NIL
<ul style="list-style-type: none"> Estimation of emission reductions or net anthropogenic removals 	NIL	01	NIL
<ul style="list-style-type: none"> Monitoring Report 	01	NIL	NIL
Start date, crediting period and duration	01	NIL	NIL
Environmental impacts	NIL	NIL	NIL
Project Owner- Identification and communication	NIL	NIL	NIL
Others (please specify)	01	NIL	NIL
Total	03	01	NIL

3 Project Verification findings

3.1 Identification and eligibility of project type

<p>Means of Project Verification</p>	<p>The project is eligible as per UCR General project eligibility criteria and guidance Version 6.0/2/ which is acceptable since the project has not been registered under any GHG program and the operations started since 25/02/2022 which is the earliest commissioning date of the wind turbine generator in the project activity. The commissioning certificate/12/ of the wind turbine provided by GEDA has been verified in this regard.</p> <p>Prior to the commencement of the project activity, the project owner got approval for the installation and operation of wind turbine generator from state energy development agency (GEDA) in the district of Kutch, Gujarat and PO has signed wheeling agreement/13/ with Dakshin Gujarat Vij Company Ltd (DGVCL).</p> <p>The project also delivers real, measurable and additional emission reduction of 5154 tCO₂e over the crediting period</p> <p>Project applies an approved CDM monitoring and baseline methodology AMS-I.D: Grid connected renewable electricity generation - Version 18.0./10/</p>
<p>Findings</p>	<p>No finding was raised</p>
<p>Conclusion</p>	<p>The project is eligible as per the requirements of the UCR General project eligibility criteria and guidance Version 6.0/2/.</p> <p>Further project verification team cross checked the other GHG programmes like Clean Development Mechanism (CDM) Registry, VERRA Registry, Gold Standard (GS) Registry for the information regarding the consistency of the title of the project activity, GPS coordinates, Legal Ownership of the Project activity and confirmed that the project was not submitted or registered under any other GHG programmes and non-voluntary non-GHG Programs.</p>

3.2 General description of project activity

<p>Means of Project Verification</p>	<p>The purpose of the project activity is to utilize clean technology that harnesses wind kinetic energy to generate electricity which would be used to meet the electrical demand of PO.</p> <p>The project activity has installed 2.1 MW capacity of Wind turbine generator and applied AMS-I.D: Grid connected renewable electricity generation– Version 18.0/10/ falls into the small-scale category as per applied CDM methodology.</p> <p>A wheeling agreement/13/ is signed between M/s. RB Industries and DGVCL for the captive consumption of electricity generated by wind</p>
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	<p>turbine generator. The project activity generated total 5727.178 MWh electricity and displacing 5154 tCO_{2e}.</p> <p>The project activity involves setting up of a new WTG to harness the wind energy and use it for captive consumption i.e., the Indian grid system through wheeling arrangement. In the absence of the project activity, the equivalent amount of power would have been generated by the operation of grid-connected fossil fuel-based power plants and by the addition of new fossil fuel-based generation sources into the grid.</p> <p>The Location details has been verified during the online assessment and geo coordinates verified through google earth/Maps.</p> <p>The technical specification mentioned in the PCN/4/ is verified against the technical specification/14/ provided by Suzlon.</p>
Findings	No finding was raised
Conclusion	The description of the project activity is verified to be true based on the review of PCN/4/, MR/5/6/, Commissioning Certificate/12/, Technical specification/14/ and Purchase invoice copies/15/ of wind power plant components.

3.3 Application and selection of methodologies and standardized baselines

3.3.1 Application of methodology and standardized baselines

Means of Project Verification	<p>The project activity applied AMS-I. D: Grid connected renewable electricity generation– Version 18.0/10/ falls into the small-scale category as per CDM methodology.</p> <p>Standardized baseline is “In the absence of the project activity, the equivalent amount of electricity would have been imported from the grid (which is connected to the unified Indian Grid system (NEWNE Grid)), which is carbon intensive due to being predominantly sourced from fossil fuel-based power plants” which is as per the project activity and clearly mentioned in PCN/4/ and MR/5/6/</p>
Findings	No finding was raised
Conclusion	The methodology applied is appropriately meeting the requirements of UCR General project eligibility criteria and guidance/2/, standardized baseline. The methodology version is correct and valid. The referenced methodology is applicable to project activity.

3.3.2 Clarification on applicability of methodology, tool, and/or standardized baseline

Means of Project Verification	Applicability as per AMS-I. D version 18.0	Verifier assessment
	<p>1. This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:</p> <p>a. Supplying electricity to a national or a regional grid; or</p> <p>b. Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.</p>	<p>The project activity “Small Scale Wind Power Project in Kutch District” which incorporates installation and operation Wind turbine generator for captive consumption.</p> <p>b) the project owner has done a wheeling agreement/13/ with DGVCL to supply the electricity generated by wind power plant.</p> <p>This was confirmed during the online assessment and through document review of wheeling agreement and certificate for share of electricity generated by wind farm.</p>
	<p>2. This methodology is applicable to project activities that:</p> <p>a. Install a greenfield plant;</p> <p>b. Involve a capacity addition in (an) existing plant(s);</p> <p>c. Involve a retrofit of (an) existing plant(s);</p> <p>d. Involve a rehabilitation of (an) existing plant(s)/ unit(s); or</p> <p>e. Involve a replacement of (an) existing plant(s).</p>	<p>The project is green field plant and involves installation and generation of electricity from 2.1 MW capacity of Wind turbine generator connected to the Indian national grid. The electricity generated from project activity is exported to the Indian national grid, there by displacing electricity from the grid which would have otherwise been generated by operation of grid connected power plants and by addition of new generation sources into the grid. The project activity generates 5738.655 MWh of electricity and displaces 5164 tCO_{2e}.</p>
	<p>3. Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <p>a. The project activity is implemented in an existing reservoir with no change in the volume of reservoir;</p> <p>b. The project activity is implemented in an existing reservoir, where the volume of</p>	<p>This criterion is not applicable as the project activity is the installation and operation of Wind turbine power plant to generate electricity.</p>

	<p>reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m².</p> <p>c. The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m²</p>	
	<p>4. If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.</p>	<p>The project activity is a 2.1 MW wind power project, i.e., the only component is a renewable power project below 15 MW, thus the criterion is not applicable to this project activity.</p>
	<p>5. Combined heat and power (co-generation) systems are not eligible under this category.</p>	<p>The project activity does not involve co-generation. Hence this criterion is not applicable.</p>
	<p>6. In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct⁶ from the existing units.</p>	<p>No capacity addition in the existing renewable plant. This is new installation of wind power plant which was verified and confirmed through online assessment and interviews with project owner and their representatives.</p>
	<p>7. In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.</p>	<p>There is no retrofit or replacement in the project activity, hence it is not applicable.</p>
	<p>8. In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid, then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered</p>	<p>The project activity is a greenfield 2.1 MW wind power project; hence, this criterion is not applicable to this project activity.</p>

	methane is used for heat generation or cogeneration other applicable Type-I methodologies such as “AMS-I.C.: Thermal energy production with or without electricity” shall be explored.	
	9. In case biomass is sourced from dedicate plantations, the applicability criteria in the tool “Project emissions from cultivation of biomass” shall apply.	The project activity is new greenfield activity of wind power plant and does not involve biomass, hence this criterion is not applicable.
Findings	No finding was raised	
Conclusion	The verification team confirms that all the applicability criteria set by the applied CDM methodology/10/ and its eligible tools are met. The relevant information against those criteria is also included in the PCN/4/ and MR/5/6/. The selected CDM methodology for the project activity is applicable.	

3.3.3 Project boundary, sources and GHGs

Means of Project Verification	<p>As per the applied methodology AMS-I. D version 18.0/10/, the spatial extent of the project boundary includes industrial, commercial facilities consuming energy generated by the system. The components of the project boundary mentioned in the section B.4 of PCN were verified against the para 18 of the applied methodology.</p> <p>The project verification team conducted desk review of the implemented project to confirm the appropriateness of the project boundary identified and GHG sources required by the methodology have been included within the project boundary.</p> <p>The project location is clearly depicted with the help of a pictorial depiction in section A.3. of the PCN/4/ and duly verified by the project verification team via geographical coordinates, commissioning certificate/12/ of the project activity & wheeling agreement/13/ between RB Industries and DGVCL.</p>
Findings	No finding was raised
Conclusion	<p>The project verification team was able to assess that complete information regarding the project boundary has been provided in PCN/4/ and MR/5/6/ and could be assured from the single line diagram/16/, commissioning certificate/12/, geographical coordinates and wheeling agreement/13/</p> <p>The project verification team confirms that the identified boundary, selected emissions sources are justified for the project activity.</p>

3.3.4 Baseline scenario

Means of Project Verification	<p>The baseline scenario as per paragraph 19 of the applied methodology, prescribed the baseline scenario of the project activity. In the absence of the project activity, the users would have been supplied electricity from the national grid.</p> <p>As per the UCR General project eligibility criteria and guidance/2/; “The project owner has opted UCR recommended emission factor of 0.9 tCO₂/MWh for the 2013-2020 years as a fairly conservative estimate for Indian projects not previously verified under any GHG program. Emission factors for the post 2020 period is to be selected as the most conservative estimate between the national electricity/power authority published data set and UCR default of 0.9 tCO₂/MWh”.</p>
Findings	<p>No finding was raised</p>
Conclusion	<p>The project verification team concluded that the identified baseline scenario reasonably represents what would occur in the absence of the project activity.</p> <p>The calculated baseline emission for each vintage year of crediting period is rounded down as per UCR CoU verification standard /4/.</p>

3.3.5 Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	<p>The project verification team checked whether the equations and parameters used to calculate GHG emission reductions or net anthropogenic GHG removals for PCN/4/ and MR/5/6/ is in accordance with applied methodology. Project Verification team checked section B.5 and C.5.1 of the PCN/4/ & MR/5/6/ respectively to confirm whether all formulae to calculate baseline emissions, project emission and leakage have been applied in line with the underlying methodology.</p> <p>The emission reduction calculation has been done as per the CDM SSC methodology AMS-I.D, Version 18.0/10/.</p> $BE_y = EG_{BLY} \times EF_{CO_2,y}$ <p>Where,</p> <p>BE_y = Baseline Emissions in year y; tCO₂</p> <p>EG_{BLY}= Quantity of net electricity displaced as a result of the implementation of the CDM project activity in year y (MWh)</p> <p>EF_{CO₂,y} = Combined margin CO₂ emission factor for grid connected power generation in year y.</p> <p>Project emissions:</p>
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As per paragraph 25 of the applied methodology, For most renewable energy project activities, $PE_y = 0$. Since Wind power is a GHG emission free source of energy project emission considered as Zero for the project activity

Leakage Emissions:

As per the paragraph 29 of the applied methodology AMS-I.D Version 18.0, there are no emissions related to leakage in this project.

Emission reductions

As per Paragraph 30 of the applied methodology, emission reductions are calculated as follows

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y = Emission reductions in year y (tCO₂)

BE_y = Baseline Emissions in year y (t CO₂)

PE_y = Project emissions in year y (t CO₂)

LE_y = Leakage emissions in year y (t CO₂)

Year	Electricity generated (MWh)	Emission factor (tCO ₂ /MWh)	Total Emission reduction (tCO ₂ e)
2022	5727.178	0.9	5154
Total	5727.178	0.9	5154

Findings

CAR 01 was raised

Conclusion

The combined margin emission factor as per “CO₂ Baseline Database for the Indian Power Sector” current version 18, December 2022 by CEA/18/ is 0.918 tCO₂/MWh which results into higher emission factor than the UCR recommended emission factor of 0.9 tCO₂/MWh; Hence for 2022 vintage UCR default emission factor remains conservative as per UCR General project eligibility criteria and guidance/3/.

Project Verification team confirm that the algorithms and formulae proposed to calculate project emissions, baseline emissions, leakage and emission reductions in the PCN/4/ and MR/5/6/ is in line with the requirements of the selected methodology AMS-I.D, version 18.0/10/

For emission reduction calculation, the assessment team confirms that;

All assumptions and data used by the project participants are listed in the PCN/4/ and MR/5/6/ including their references and sources.

All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PCN/4/ and MR/5/6/

	The baseline methodology and the applicable tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions.
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3.3.6 Monitoring Report

Means of Project Verification	<p>The monitoring report/5/6/ submitted by the PP has been verified thoroughly and is in compliance with the applicable methodology and UCR General project eligibility criteria and guidance/3/ for calculation of GHG emission reductions.</p> <p>The assessment team has reviewed all the parameters in the monitoring plan against the requirements of the applied methodology and confirmed that monitoring parameters are applied in line with the requirement of the methodology and relevant in the context of the program. The procedures have been reviewed by the assessment team through document review, interviews with the respective monitoring personnel and online assessment.</p> <p>As per the CEA guidelines/17/ for installation and operation of Meters, the energy meter shall be tested at least once in five years.</p> <p>Monitoring methodology, data management and calibration of the energy meter were also discussed with project owner.</p>
Findings	CL 01 was raised
Conclusion	<p>The project verification team confirms that,</p> <p>The monitoring report/5/6/ is in compliance with the applicable methodology and UCR General project eligibility criteria and guidance/3/.</p> <p>The monitoring parameters reported in PCN/4/ and MR/5/6/ adequately represents the parameters relevant to emission reduction calculation.</p> <p>The number of CoUs generation is calculated based on accurately reported data. The calculation was done using an excel sheet where all the parameters were reported.</p> <p>UCR recommended emission factor for electricity generation is opted which is conservative.</p> <p>In the MR/5/6/, emission reduction calculations sheet/7/8/ are correctly calculated and reported. The monitoring report/5/6/ meets the requirements of UCR project verification requirements.</p> <p>The project proponent has not carried out calibration of energy meter for the monitoring period. However, energy meter calibration for the recent year is provided.</p> <p>Energy meter details:</p>

Sr. no.	Meter No.	Class	Calibration date
1.	GJ4994B	0.2 s	08/04/2023

3.4 Start date, crediting period and duration

Means of Project Verification	The Commissioning certificate/12/ of the installation of the project activity has been verified as per PCN/4/ and MR/5/6/.
Findings	CL 02 was raised
Conclusion	Crediting period is from 25/02/2022 to 31/12/2022 which is appropriate as per UCR General project eligibility criteria and guidance/3/.

3.5 Environmental impacts and safeguard assessment

Means of Project Verification	<p>As The guidelines on Environmental Impact Assessment have been published by Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India (GOI) under Environmental Impact Assessment notification 14/09/2006/49/.</p> <p>Further amendments to the notification have been done, The Wind Power projects up to 25 MW are listed in white category, hence, No EIA required.</p> <p>The impact of the project activity on the environmental safeguards has been carried out.</p> <p>Out of all the safeguards no risks were identified to the environment due to the project implementation and operation.</p> <p>And the following have been indicated as positive impacts:</p> <p>Environment Air - CO₂ emissions: The project activity being renewable power generation avoids CO₂ emissions that would have occurred in baseline scenario due to the electricity generation in thermal power plants.</p> <p>Environment - Natural Resources: Replacing fossil fuels with renewable sources of energy.</p> <p>Impacts identified as 'Harmless':</p> <p>Solid waste Pollution: - Any Solid-waste if generated from the plant shall be discarded in accordance with host country regulation. The parameter is being monitored as 'Project Waste' and Proper mitigation action has been implemented for waste management.</p> <p>Land use: since the wind power plant does not require larger area, there is no significant damage to land.</p>
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	<p>Emission due to transportation of wind components: The emissions associated with the transport of the modules are insignificant compare to manufacturing facilities.</p> <p>Solid waste Pollution from end-of-life products equipment: - Waste generated from the plant.</p>
Findings	No findings raised.
Conclusion	The project activity displaces fossil fuel consumption and provides affordable and clean energy. The project has also avoided total 5154 tCO ₂ e, hence it has positive impact.

3.6 Project Owner- Identification and communication

Means of Project Verification	<p>The information and contact details of the project owner has been appropriately incorporated in the PCN/4/ and MR/5/6/.</p> <p>The legal owner of the project activity has been identified through the commissioning certificate/12/, wheeling agreement/13/, and purchase invoices/15/ issued by equipment suppliers.</p>
Findings	No findings raised.
Conclusion	The project verification team confirms that the legal ownership of the project belongs to M/s. RB Industries

3.7 Others (Double Counting of Credits)

Means of Project Verification	The project activity was searched on other GHG programs to ensure that project is not registered in any other GHG programs like VERRA, Gold standard, GCC. An agreement stating that project activity will not cause double counting of the credits is also checked as per clause 1.8, Universal Carbon Registry Program Manual (Ver 4.0) August 2022.
Findings	CL 03 was raised
Conclusion	Double accounting agreement/9/ is signed between PO and Aggregator and found to appropriate as per clause 1.8, Universal Carbon Registry Program Manual (Ver 4.0) August 2022.

4 Internal quality control:

- Due professional care has been taken while reviewing the submitted document.
- There is no conflict of interest as the verifier has no other engagement with either the aggregator or project owner directly or indirectly.
- Verification team consists of experienced personnel.
- Technical review is performed by an independent person.

5 Project Verification opinion:

The project verification was conducted on the basis of UCR Program Manual/1/, UCR General project eligibility criteria and guidance/2/, UCR Verification standard /3/, Project Concept Note (PCN)/4/, Monitoring Report (MR)/5/6/ AMS-I.D: Grid connected renewable electricity generation– Version 18.0/10/, Commissioning Certificate/12/, wheeling agreement/13/, Purchase invoices/15/, and documents mentioned in Appendix-2.

Verification team raised 03 Nos. of Clarification Requests (CLs) and 01 Nos. of Corrective Actions Requests (CARs) and they were closed satisfactorily.

It is certified with reasonable level of assurance that the emission reductions from the project Small Scale wind power project in Kutch district (UCR ID - 378) for the period 25/02/2022 to 31/12/2022 amounts to **5154** CoUs (5154 tCO₂e).

6 Competence of team members and technical reviewers

No.	Last name	First name	Role and Affiliation	Technical Competence
1.	Mandliya	Shyam	GHG Assessor and Technical Expert - NSPL	Mr. Shyam Mandliya holds master's degree in Chemical Engineering. He has expertise in environmental audits. He has performed environmental monitoring of different industries in Gujarat for air, water, and hazardous waste. He has also contributed to the community-based biogas project development.
2.	Prajapati	Divya	Trainee Assessor - NSPL	Ms. Divya Prajapati is having M. Tech. in Environmental Engineering. She has experience is performing Environmental Impact Assessments of Various industries. She has also conducted Environmental Audit of CETP and TSDF sites and quantified GHG emissions from Solid Waste Disposal sites.
3.	Amin	Shardul	Technical Reviewer - NSPL	Mr. Shardul Amin holds M.Tech degree in Thermal System Design. He has more than 7 years of experience in the field of waste-to-energy, thermochemical conversion technologies, and emission study. He is experienced GHG Auditor and has verified more than 50 emission reduction projects.

Appendix 1: Abbreviations

Abbreviations	Full texts
UCR	Universal Carbon Registry
CPCB	Central Pollution Control Board
GETCO	Gujarat Energy Transmission Corporation Limited
GEDA	Gujarat Energy Development Agency
DGVCL	Dakshin Gujarat Vij Company Limited.
CEA	Central Electricity Authority
NSPL	Naturelink Solutions Private Limited
MR	Monitoring report
PCN	Project Concept Note
VR	Verification Report
VS	Verification Statement
DAA	Avoidance of Double Accounting Agreement
COD	Commercial Operation Date
PO	Project Owner
PA/ PP	Project Aggregator / Project Proponent
PPA	Power Purchase Agreement
ER	Emission Reduction
CoUs	Carbon offset Units
tCO ₂ e	Tons of Carbon Dioxide Equivalent
kWh	Kilo-Watt Hour
MWh	Mega-Watt Hour
kW	Kilo-Watt
MW	Mega-Watt
CDM	Clean Development Mechanism
SDG	Sustainable Development Goal
CAR	Corrective Action Request
CL	Clarification Request
FAR	Forward Action Request
GHG	Green House Gas

Appendix 2: Document reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	UCR	UCR Program Manual	Version 4.0, August 2022	UCR website
2.	UCR	UCR General project eligibility criteria and guidance (CoU Standard)	Version 6.0, August 2022	UCR website
3.	UCR	UCR Program Verification standard	Version 2.0, August 2022	UCR website
4.	Creduce	Project concept note	Version 1.0, dated 18/10/2023	PA
5.	Creduce	Monitoring report	Version 1.0, dated 01/11/2023	PA
6.	Creduce	Monitoring report	Version 2.0 dated 04/01/2024	PA
7.	Creduce	Emission reduction excel – “Small scale wind power project in Kutch district”	Version 1.0, dated 01/11/2023	PA
8.	Creduce	Emission reduction excel – “Small scale wind power project in Kutch district”s	Version 2.0, dated 04/01/2024	PA
9.	Creduce	Assurance to avoid double accounting by project owners	Double accounting agreement signed on 24/11/2023	PA
10.	CDM	AMS-I. D: Grid connected renewable electricity generation	Version 18.0	CDM website
11.	GETCO	Certificate for share of electricity generated by the wind farm	-	PA
12.	GEDA	Commissioning certificate	Dated 09/06/2022	PA
13.	DGVCL & PO	Wheeling agreement	Dated 03/02/2022	PA
14.	Suzlon	Technical specification brochure of 2.1 MW WTG	-	PA
15.	Suzlon Energy	Purchase Invoices of Wind turbine components	1. 2118000037 - 28/02/2022 2. 2103000625 - 22/06/2021 3. 2125000949 - 27/12/2021 4. 2125001223 - 18/02/2022 5. 2125001068 - 19/01/2022	PA
16.	PO	Single line diagram	Dated 14/06/2021	PA

17.	CEA	Central Electricity Authority (Installation and Operation of Meters) (Amendment) Regulations, 2019	Dated 23/12/2019	-
18.	CEA	CO ₂ baseline database for the Indian Power sector	Version 18.0 dated December 2022	-

Appendix 3: Clarification request, corrective action request and forward action request

Table 1. CLs from this Project Verification

CL ID	01	Section no.: 3.3.6	Monitoring Report	Date: 11/12/2023
Description of CL				
<i>Section C.10, MR V1.0 dated 01/11/2023, energy meter and calibration details are missing in the monitoring plan as per the requirements mentioned in the Clause 6 AMS.I.D -V 18.0 and UCR CoU Standard V. 6.0, page 8.</i>				
Project Owner's response				Date: 04/01/2024
<i>Energy meter calibration report for the year 2022 is not available with us however calibration report for the year is provided.</i>				
Documentation provided by Project Owner				
<i>Energy meter calibration report for the year 2023</i>				
UCR Project Verifier assessment				Date: 08/01/2024
Since the energy meter calibration report for the year 2022 is not available with Project proponent, as per CDM, EB52 report, annex-60, page -1; clause 4 for delayed calibration the trimming of emission reductions is done as per IS 14697:1999 table 11, considering maximum permissible error limit (i.e. 0.2%) for class 0.2S energy meter.				

CL ID	02	Section no.: 3.4	Start date, crediting period and duration	Date: 11/12/2023
Description of CAR				
<i>Justify the deviation in the start date of monitoring period mentioned in the section A.1.3, A.1.4, A.5, C.9, C.10 of MR V1.0 dated 01/11/2023 with the document provided PCN version 1.0 dated 18/10/2023 and Commissioning certificate provided by GEDA</i>				
Project Owner's response				Date: 04/01/2024
<i>We have revised the start date of monitoring period as per commissioning certificate provided by GEDA and made consistent with PCN ver. 1.0</i>				
Documentation provided by Project Owner				
<i>Monitoring report ver.2.0</i>				
UCR Project Verifier assessment				Date: 08/01/2024
Start date of the crediting period is checked against the commissioning certificate provided by GEDA and found to be appropriate, hence CL 02 is closed.				

CL ID	03	Section no.: 3.7	Others (Double counting of credits)	Date: 11/12/2023
Description of CAR				
<i>An agreement stating that the project activity will not cause double counting as per clause 1.8, Universal Carbon Registry Program Manual (Ver 4.0) August 2022 is pending.</i>				
Project Owner's response				Date: 04/01/2024
<i>Double accounting agreement is provided</i>				
Documentation provided by Project Owner				
<i>Double accounting agreement</i>				
UCR Project Verifier assessment				Date: 08/01/2024
<i>Double accounting agreement is checked and found to be conforming as per clause 1.8, Universal Carbon Registry Program Manual (Ver 4.0) August 2022, hence CL 03 is closed.</i>				

Table 2. CARs from this Project Verification

CAR ID	01	Section no.: 3.3.5	Estimation of emission reductions or net anthropogenic removal	Date: 11/12/2023
Description of CAR				
<ol style="list-style-type: none"> 1. Energy generation reported in cell no. M6 of Emission reduction calculation sheet is not matching with the Certificate for share of electricity generated by wind farm for the Month Dec-2022 issued by GETCO. 2. In the section A.1.1 & C.5.1 of MR V1.0 dated 01/11/2023, total energy generation is reported inconsistently as per as per Clause 5.5.1.1 of AMS-I.D - V 18.0 and CoU standard V.6.0 page-8 				
Project Owner's response				Date: 04/01/2024
<ol style="list-style-type: none"> 1. Energy generation for the month Dec-2022 is corrected as per Certificate for share of electricity generated by wind farm issued by GETCO. 2. Total energy generation reported is corrected and made In line with emission reduction sheet. 				
Documentation provided by Project Owner				
MR Version 2.0 and Revised Emission Reduction Calculation Sheet				
UCR Project Verifier assessment				Date: 08/01/2024
<ol style="list-style-type: none"> 1. Revised emission reduction calculation sheet is checked against the Certificate for share of electricity generated by wind farm for the Month Dec-2022 issued by GETCO and found to be conforming. 2. Total energy reported in MR version 2.0 is verified and found to be appropriate. Hence CAR 01 is closed. 				

Table 3. FARs from this Project Verification

FAR ID	--	Section no.		Date:
Description of FAR				
Project Owner's response				Date:
Documentation provided by Project Owner				