UCR VERIFICATION REPORT FOR

"ENERCON WIND FARM (HINDUSTAN) LTD IN RAJASTHAN"

Project/PoA Title:	Enercon Wind Farm (Hindustan) Ltd in Rajasthan
UCR ID:	105
Internal ID:	UCR.VER.01.22
Customer/ Project Aggregator:	VIVIID Emissions Reductions Universal Pvt Ltd
Date:	28/03/2022
Revision:	01
Prepared By	Ravi Kant Soni (Independent Verifier) Email: ravi.soni@envservices.in Mob: +91 9818561801

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Project Verification Report Form (VR)

BASIC INFORMATION	
Name of approved UCR Project Verifier / Reference No.	**Ravi Kant Soni**
Type of Accreditation	☐ CDM or other GHG Accreditation ☐ ISO 14065 Accreditation Provide details (if any) below for the boxes ticked above including the name of the entity that provided the accreditation and the date of validity (DD/MM/YYYY to DD/MM/YYYY) of the approval. **Not applicable**
Approved UCR Scopes and GHG Sectoral scopes for Project Verification	Sectoral Scope: 1
Validity of UCR approval of Verifier	**From 09/02/2022**
Completion date of this VR	28/03/2022
Title of the project activity	Enercon Wind Farm (Hindustan) Ltd in Rajasthan
Project reference no. (as provided by UCR Program)	UCR Ref.No-105
Name of Entity requesting verification service (can be Project Owners themselves or any Entity having authorization of Project Owners, example aggregator.)	VIVIID Emissions Reductions Universal Pvt. Ltd.

Contact details of the representative of the Entity, requesting verification service (Focal Point assigned for all communications)	Mr. Puneet Katyal Email: puneet.katyal@viviidrenewables.com Phone : +91 98671 65214
Country where project is located	India
Applied methodologies (Approved methodologies by UCR Standard used)	ACM0002, version 06 Title: Grid-connected electricity generation from renewable sources UCR Standard Protocol Emission Factors
GHG Sectoral scopes linked to the applied methodologies	01 Energy industries (Renewable/Non-renewable sources)
Project Verification Criteria: Mandatory requirements to be assessed	☒ UCR Standard ☒ Applicable Approved Methodology ☐ Applicable Legal requirements /rules of host country ☒ Eligibility of the Project Type ☒ Start date of the Project activity ☒ Meet applicability conditions in the applied methodology ☒ Credible Baseline ☐ Do No Harm Test ☒ Emission Reduction calculations ☒ Monitoring Report ☒ No GHG Double Counting ☐ Others (please mention below)
Project Verification Criteria: Optional requirements to be assessed	☒ Environmental Safeguards Standard and do-

	no-harm criteria ☒ Social Safeguards Standard do-no-harm criteria
Project Verifier's Confirmation: The *UCR Project Verifier* has verified the UCR project activity and therefore confirms the following:	The UCR Project Verifier **Ravi Kant Soni**, certifies the following with respect to the UCR Project Activity "***Enercon Wind Farm (Hindustan) Ltd in Rajasthan***". ☒ The Project Owner has correctly described the Project Activity in the Project Concept Note (dated 14/02/2022 and revised PCN dated 21/03/2022) including the applicability of the approved methodology ACM0002 V06 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. ☒ The Project Activity is likely to generate GHG emission reductions amounting to the estimated **104,068** tCO_{2e}, as indicated in the PCN, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable UCR rules, including ISO 14064-2 and ISO 14064-3. ☒ The Project Activity is not likely to cause any net-harm to the environment and/or society

	☒ The Project Activity complies with all the applicable UCR rules[1] and therefore recommends UCR Program to register the Project activity with above mentioned labels.
Project Verification Report, reference number and date of approval	RKS/UCR/VCR/001 Date: 28/03/2022
Name of the authorised personnel of UCR Project Verifier and his/her signature with date	Name: Ravi Kant Soni Date: 28/03/2022 Signature: 

PROJECT VERIFICATION REPORT

Section A. Executive summary

>> The project activity involves electricity generation by wind electric convertors and supplying the generated electricity to the NEWNE Grid. The project being a renewable energy generation activity, it leads to removal of fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and plays beneficial role in the mitigation of climate change.

The project activity consists of 75 WECs (0.8 MW capacity each), making the total installed capacity to be 60 MW in Jaisalmer district in Rajasthan, India. The WECs are of Enercon (E-48) make. Enercon India Limited is the supplier of WECs and the O&M contractor for the project activity. It is to be noted that name of company "Enercon India Limited" is changed as "Wind World (India) Limited from 01/01/2013 onwards, the same is verified through the name change consent issued by Government of India.

The WECs have been commissioned between 26/11/2006 and 25/12/2006. The same was verified against the commissioning certificates/15/.

All 75 WECs are fully functional, and the assessment team verified this during the site visit. The assessment team confirms that the total emission reductions achieved under this monitoring period 15/03/2020 – 31/01/2022 (including both days) is 131,359 tCO_2e.

A.1 Project Verification team, technical reviewer, and approver

Project Verification team:

No.	Role	Last name	First name	Affiliation (e.g. name of central or other office of UCR Project Verifier or outsourced entity)	Involvement in		
					Doc review	Off-Site inspection	Interviews
1.	Team Leader	Soni	Ravi Kant	Independent Verifier	Y	Y	Y
2.	Technical Expert	Soni	Ravi Kant	Independent Verifier	Y	Y	Y

Technical reviewer and approver of the Project Verification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of UCR Project Verifier or outsourced entity)
1.	Technical reviewer	OR	Ahirwar	Vivek	OR
2.	Approver	IE	Soni	Ravi Kant	Independent Verifier

Section C. Means of Project Verification

C.1 Desk/document review

>> A desk review was conducted by the verification team that included

a) A review of the data and information presented to verify its completeness.

b) A review of the registered monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures.

c) An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

C.2 Off-site inspection

Duration of on-site inspection: 25/02/2022				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1	An assessment of the implementation and operation of the registered UCR project activity as per the registered PCN or any approved revised PCN;	Jaisalmer	25/02/2022	Ravi Kant Soni
2	A review of information flows for generating, aggregating and reporting the monitoring parameters;	Jaisalmer	25/02/2022	Ravi Kant Soni
3	Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the registered monitoring plan;	Jaisalmer	25/02/2022	Ravi Kant Soni
5	A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PCN, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline;	Jaisalmer	25/02/2022	Ravi Kant Soni
6	A review of calculations and assumptions made in determining the GHG data and emission reductions;	Jaisalmer	25/02/2022	Ravi Kant Soni
7	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;	Jaisalmer	25/02/2022	Ravi Kant Soni

C.3 Interviews:

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Joshi Shenoy	Poorvi	VERUPL	25/02/2022	Electricity Generation Records (monthly energy statements, Invoices and break up sheets), Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure	Ravi Kant Soni
2.	Kumar	Jeetendra	WWIL	25/02/2022	Monitoring and measuring system, Collection of measurements, Observations of established practices and Data Verification of monitoring parameters	Ravi Kant Soni
3.	Kumar	Manoj	WWIL	25/02/2022	QA/QC procedures, data management, internal audits to maintain data quality & reliability, maintenance Practices Consideration of monitoring period, monitoring methodology, project documentation and emission reduction calculations	Ravi Kant Soni

C.4 Sampling approach:

Not applicable.

C.5 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	-	-	-
General description of project activity	-	CAR #1	-
Application and selection of methodologies and standardized baselines	-	-	-
- Application of methodologies and standardized baselines	-	-	-
- Deviation from methodology and/or methodological tool	-	-	-
- Clarification on applicability of methodology, tool and/or standardized baseline	-	-	-
- Project boundary, sources and GHGs	-	-	-
- Baseline scenario	-	-	-
- Estimation of emission reductions or net anthropogenic removals	-	-	-
- Monitoring Report	-	CAR #3	-
Start date, crediting period and duration	-	-	-
Environmental impacts	-	-	-
Project Owner- Identification and communication	CL #1	-	-

Others (please specify)	-	CAR #2 (double counting)	-
Total	1	3	0

SECTION D. Project Verification findings

D.1 Identification and eligibility of project type

Means of Project Verification	The project activity is a registered UCR project (UCR ref. No-105) and activity meets the eligibility criteria of the Gold Standard as justified below: • The project activity is a large-scale wind power project and fall under renewable energy category. • The project activity involves reducing CO_2 emission by replacing equivalent electricity from the grid of India. • The project activity has also registered under CDM (UNFCCC ref. No-1168) with 10 years fixed crediting period from 15/03/2010 to 14/03/2020.The crediting period under UCR is starting from 15/03/2020. • The project under CDM was registered adopting the approved methodology ACM0002, version 06.0 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”.
Findings	No finding was raised
Conclusion	The project activity meets the requirement of UCR verification standard and UCR project standard. The project owner is Wind World (India) Limited as indicated in the registered UCR PCN and Viviid Emissions Reductions Pvt Ltd is the project aggregator as verified through the UCR communication agreement. The verifier can confirm that the project activity is overall meeting the requirements of UCR Verification standard and UCR project standard.

D.2 General description of project activity

Means of Project Verification	This project activity is the generation of electricity from WECs supplying the generated electricity to the Indian grid. The project is located at Kita and Pithodai Ki Dhani village of Jaisalmer District of Rajasthan state in India and has an installed capacity of 60 MW (75 WECs x 0.8 MW/WEC). This was confirmed from document review of commissioning certificates /15/. The commercial operation of the project activity had been started on 26/11/2006 – 25/12/2006, which was verified vide commissioning certificates/15/ and corroborated by monthly breakup sheets/15/ issued by state utility, indicating the start date of commercial operation. The technical specifications of WECs were verified through the nameplate details (imprinted/placed at the bottom of WEC tower) available at the WECs physically checked during the site visit and were found to be consistent with the details provided in the registered UCR PCN /09/.

	The WECs belongs to project activity are installed at Jaisalmer connected to various clusters and each cluster have exclusive dedicated metering arrangement at 33kV at project site. Similarly, the WECs of other project developers (non-project activity) are also connected to separate clusters having exclusive dedicated metering arrangement at 33kV at project site. All the cluster meters (for the project activity and non-project activity are further connected at 220 kV Wind World sub-station (Bhu sub-station, Jaisalmer) through 33 kV bus, from where the electricity supplied to DISCOM sub-station (400 kV Akal GSS, Jaisalmer). At the Akal substation the electricity generated by all the WECs (project and non-project) has been fed to the Indian grid through two separate lines. Each line having one set of meters (main and check meter) and monthly reading is taken by the RRVPNL representatives in the presence of WWIL officials in the form of JMR. It was observed during the site visit that, the WECs (project activity and non-project) are connected to the sub-station meters (common metering points). Hence, to calculate the net electricity exported to the grid by the WECs of the project activity alone, an apportioning procedure is followed which has been correctly described in section B.1 of the MR/06/. The rated capacity of transformers was also indicated at the metering points located in the DISCOM substation/18/ and the same was found to be consistent with description given in the approved PCN. The PP has signed PPA/17/ with state utility for the sale of electricity to the grid and has been supplying electricity in compliance with the PPA as confirmed from the monthly invoices /14/. The project was registered as a UCR project, and this is the first verification of the project activity covering the period from 15/03/2020 to 31/01/2022.
Findings	CAR #1 was raised and resolved.
Conclusion	In view of the information verified during the site visit, it can be confirmed that all physical features (technology, project equipment, and monitoring and metering equipment) of the registered UCR project activity are in place and that the project participants have operated the project activity as per the approved PCN.

D.2 Application and selection of methodologies and standardized baselines

(.a.i) Application of methodology and standardized baselines

Means of Project Verification	The project is registered under UCR adopting the large-scale methodology ACM0002, version 06.0 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, which is UCR approved methodology. It is verified that the project activity applies the applicability and monitoring requirements of version 06 of the methodology ACM0002.
Findings	No finding was raised.
Conclusion	It can be concluded that: • All applied methodological tools are valid and approved. • The applied methodology and methodological tools derived from UNFCCC CDM website. • All methodology applicability conditions are met. • The project is in line with all requirements and stipulations mentioned in all sections of the applied methodology.

(.a.ii) Clarification on applicability of methodology, tool and/or standardized baseline

Means of Project Verification	Not applicable
Findings	Not applicable
Conclusion	Not applicable

(.a.iii) Project boundary, sources and GHGs

Means of Project Verification	To assess the project boundary in accordance with applicable related verification requirements in the UCR standard, the verifier has reviewed the registered PCN and the applied CDM methodology ACM0002 V 06.0. All sources and GHGs are included in the project boundary as required by the monitoring methodology and UCR project standard. The spatial (geographical) boundaries of the project are described in the registered PCN/09/.
Findings	No finding was raised.
Conclusion	It can be concluded that: • The spatial (geographical) boundaries of the project are clearly defined at the PDD. • The methodology allows choosing whether a source and/or gas are to be included. The choice is sufficiently explained and justified.

(.a.iv) Baseline scenario

Means of Project Verification	The baseline scenario and the emission reduction calculations have been performed as per the registered PCN /09/. The emission factor of grid, in the UCR registered PCN is directly sourced from UCR standard, in line with the provisions of applied methodology ACM0002 version 06.0. However, following the UCR requirement the value of emission factor is considered as 0.9 tCO_2e/MWh.
Findings	No finding was raised.
Conclusion	All data sources and assumptions are appropriate, and calculations are correct as applicable to the project activity and will result in an accurate and conservative estimate of the emission reductions. The baseline scenario is in accordance with UCR project verification standard and UCR project standard.

(.a.v) Estimation of emission reductions or net anthropogenic removal

Means of Project Verification	The baseline emissions are the product of net electricity supplied to the grid expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor. Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors. $BE_y = EG_y * EF_y$ Where: BE_y = Baseline emissions in year y (tCO_2/yr) EG_y = Net electricity supplied to the grid in year y (MWh/yr) EFy = Combined margin CO2 emission factor for grid connected power

	generation in year y, considered as default value as mentioned in the UCR standard" (tCO2/MWh) As per the approved UCR PCN, combined margin emission factor is 0.9 tCO2 /MWh. Hence the baseline emissions for the project activity for the current monitoring period are as follows. BEy = 145978.650 *0.9 = 131,359 tCO2e **Project Emissions**: The approved UCR PCN and applied monitoring methodology does not prescribe any project emissions to be considered. The onsite visit and project design also did not reveal any potential source to be considered in this regard. **Leakage Emissions**: The approved UCR PCN and applied monitoring methodology does not prescribe any leakage emissions to be considered. The onsite visit and project design also did not reveal any potential source to be considered in this regard.
Findings	No finding was raised.
Conclusion	a) The calculations of baseline GHG emissions or baseline net GHG removals, project GHG emissions or actual net GHG removals, and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered PCN, the applied methodology. b) All assumptions used in emission or removal calculations have been justified. c) Appropriate emission factors and other reference values were correctly applied.

(.a.vi) Monitoring Report

Means of Project Verification	The project has been registered with the **"**Consolidated methodology for grid-connected electricity generation from renewable resources" ACM0002 version 6.0/10/. The assessment team verified the revised monitoring plan against ACM0002 version 6.0 and confirms that the approved registered monitoring plan is in accordance with the approved methodology applied by the project activity. The monitoring parameter relevant to this project activity described in the applied methodology is: $\mathbf{EG_{,y}}$ – Electricity supplied to the grid by the project However, the following parameters are defined in the approved monitoring plan as described in the registered UCR PCN: i. $\Sigma_{Project}\ E_{WEC,\ Export,j}$ – Summation of gross electricity exported (at substation point) by all the WECs of the project activity. Where j is any WEC between 1 to 75 of the project activity connected to main meter & backup meter at Akal substation and secondary backup meter at Bhu substation. ii. $\Sigma_{Project}\ E_{WEC,\ Import,j}$ – Summation of electricity imported (at substation point) by all the WECs of the project activity. Where, j is any value between 1 to 75 representing WECs of the project activity connected to main meter & backup meter at Akal substation and

secondary backup meter at Bhu substation.

In accordance with the actual practice followed at site, the parameter EG_y is calculated using the apportioning procedure as described in the monitoring plan report.

During the onsite visit, representatives of O&M contractor were interviewed and confirmed that they implement the apportioning procedure described in the section B.1 of the MR.

In view of the above discussion, the assessment team confirms that the apportioning procedure revealed under section B.1 of the MR is the actual procedure implemented by the O&M contractor, provides completeness of the monitoring plan, and reflect the actual monitoring practices and procedure implemented at project site.

The applied methodology ACM0002 version 06 requires the monitoring of "Electricity generation from the project activity". The net electricity supplied by the project activity is a calculated parameter; however, input values used in calculation are measured from energy meters installed at state utility substation and the LCS meters installed at individual WECs. Hence, it can be concluded that registered monitoring plan complies with the approved monitoring methodology applied to the project activity.

Data and parameters monitored:

Parameter 1: Net electricity supplied to the grid by the Project Activity, EGy (MWh)

Determine / Assessment Criteria	Assessment Remarks
The monitoring of parameter in the registered PDD has been implemented in accordance with the registered monitoring plan.	The parameter is calculated as difference of $EG_{Export,y}$ and $EG_{Import,y}$ in line with the approved monitoring plan. $EG_y = \Sigma_{Project} E_{WEC,\ Export} - \Sigma_{Project} E_{WEC,\ Import}$ Where, $\Sigma_{Project} E_{WEC,\ Export}$ = Summation of gross electricity exported (at substation point) by all the WECs of the project activity. Where j is any WEC between 1 to 75 of the project activity connected to main meter & backup meter at Akal substation and secondary backup meter at Bhu substation. $\Sigma_{Project} E_{WEC,\ Import}$ = Summation of electricity imported (at substation point) by all the WECs of the project activity. Where, j is any value between 1 to 75 representing WECs of the project activity connected to main meter & backup meter at Akal substation and secondary backup meter at Bhu substation.

	The equipment used for monitoring is controlled and calibrated in accordance with the registered monitoring plan, the applied methodologies, the applied standardized baselines, Board guidance, local/national standards, or as per the manufacturer's specification;	No monitoring equipment is used as this parameter is calculated.
	Monitoring results are consistently recorded as per the approved frequency;	Yes. In line with the approved monitoring plan, this parameter is recorded on monthly basis in the breakup sheets issued by state utility.
	Quality assurance and quality control procedures have been applied in accordance with the registered monitoring plan.	Yes, all the stakeholders, namely, the Grid Authority (DISCOM), and the WWIL (O&M Contractor), implemented the adequate QA/QC procedures.
	Describe how it verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for the parameter including the values in the monitoring report.	The data transfer process for the said parameter is as follows: The Joint meter reading at all the metering points at DISCOM substation is taken by the representatives of DISCOM (RRVPNL) in the presence of WWIL officials in the form of JMRs. Based on the data recorded in the JMRs and generation recorded at WECs panel meters, electricity exported/imported to/from the grid by the project activity is calculated by O&M contractor, using the apportioning procedure and breakup sheets for each project developer is prepared which is endorsed by state utility (DISCOM). Cumulative value of EG_y for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the breakup sheets issued by state utility and found to be consistent. Value of this parameter for the current monitoring period is 145,978.65 MWh.
	The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;	Monthly reported values of EG_y for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /14/ to state utility and found to be consistent.

The calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the project participants at a frequency specified in the applied methodologies, the applied standardized baselines and/or the registered monitoring plan.	Not applicable.

Parameter 2: Summation of gross electricity exported (at substation point) by all the WECs of the project activity, $\Sigma_{Project} E_{WEC, Export,j}$, (MWh)

Determine / Assessment Criteria	Assessment Remarks
The monitoring of parameter in the registered PDD has been implemented in accordance with the registered monitoring plan.	The parameter is the summation of electricity exported to the grid by all the WECs included in the project activity.
The equipment used for monitoring is controlled and calibrated in accordance with the registered monitoring plan, the applied methodologies, the applied standardized baselines, Board guidance, local/national standards, or as per the manufacturer's specification;	The accuracy of the monitoring equipment (energy meters) used to measure the input values used to calculate $E_{WEC,Export,j}$ is 0.2s as verified from the physical inspection of the project activity, which is as per the revised PCN/09/ which is as per the norm defined in the PPA/17/.
Monitoring results are consistently recorded as per the approved frequency;	Yes. In line with the approved monitoring plan this parameter is recorded on monthly basis in the breakup sheets issued by state utility.
Quality assurance and quality control procedures have been applied in accordance with the registered monitoring plan.	Yes, all the stakeholders, namely, the Grid Authority (RRVPNL), and the WWIL (O&M Contractor), implemented the adequate QA/QC procedures.
Describe how it verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for the parameter including the values in the monitoring report.	The data transfer process for the said parameter is as follows: The Joint meter reading at all the metering points at DISCOM substation is taken by the representatives of RRVPNL in the presence of WWIL officials in the form of JMRs. Based on the data recorded in the JMRs and generation recorded at WTGs panel meters, electricity exported/imported to/from the grid by the project activity is calculated by O&M contractor, using the apportioning procedure and monthly breakup sheets

		for each project developer is prepared. Cumulative value of $\Sigma_{Project} E_{WEC, Export,j}$ for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the monthly breakup sheets/15/ issued by state utility and found to be consistent. Value of this parameter for the current monitoring period is 146151.662 MWh.
	The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis.	Monthly values of $\Sigma_{Project} E_{WEC, Export,j}$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /14/ to state utility and found to be consistent.
	The calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the project participants at a frequency specified in the applied methodologies, the applied standardized baselines and/or the registered monitoring plan.	Delay in calibration of meters identified during the current monitoring period and the project participant has addressed the same in line with the requirements of paragraph 366(a) of VVS PA V 03.0

Parameter 3: Summation of gross electricity imported (at substation point) by all the WECs of the project activity, $\Sigma_{Project} E_{WEC, Import,j}$, (MWh)

Determine / Assessment Criteria	Assessment Remarks
The monitoring of parameter in the registered PDD has been implemented in accordance with the registered monitoring plan.	The parameter is the summation of electricity imported from the grid by all the WECs included in the project activity.
The equipment used for monitoring is controlled and calibrated in accordance with the registered monitoring plan, the applied methodologies, the applied standardized baselines, Board guidance, local/national standards, or as per the manufacturer's specification;	The accuracy of the monitoring equipment (energy meters) used to measure the input values used to calculate $E_{WEC,import,j}$ is 0.2s as verified from the physical inspection of the project activity, which is as per the revised approved PDD/09/ which is as per the norm defined in the PPA/17/.
Monitoring results are consistently recorded as per the approved frequency;	Yes. In line with the approved monitoring plan this parameter is recorded on monthly basis in the breakup sheets issued by state utility.
Quality assurance and quality control procedures have been applied in accordance with the registered monitoring plan.	Yes, all the stakeholders, namely, the Grid Authority (RRVPNL), and the WWIL (O&M Contractor), implemented the adequate QA/QC procedures.
Describe how it verified the information flow (from data generation, aggregation, to recording, calculation and reporting) for the parameter	The data transfer process for the said parameter is as follows: The Joint meter reading at all the

	including the values in the monitoring report.	metering points at DISCOM substation is taken by the representatives of RRVPNL in the presence of WWIL officials in the form of JMRs. Based on the data recorded in the JMRs and generation recorded at WTGs panel meters, electricity exported/imported to/from the grid by the project activity is calculated by O&M contractor, using the apportioning procedure and monthly breakup sheets for each project developer is prepared. Cumulative value of $\Sigma_{Project} E_{WEC, Import,j}$ for entire monitoring period is reported in the monitoring report, however monthly values are reported in the ER calculation sheet. The monthly values were verified from the monthly breakup sheets/15/ issued by state utility and found to be consistent. Value of this parameter for the current monitoring period is 173.012 MWh.
	The information provided in the monitoring report has been cross-checked with other sources such as plant logbooks, inventories, purchase records and laboratory analysis;	Monthly values of $\Sigma_{Project} E_{WEC, Import,j}$ for the current monitoring period were further cross-checked with the monthly invoices raised by the PP /17/ to state utility and found to be consistent.
	The calibration of the measuring equipment that has an impact on the claimed GHG emission reductions or net anthropogenic GHG removals is conducted by the project participants at a frequency specified in the applied methodologies, the applied standardized baselines and/or the registered monitoring plan.	Delay in calibration of meters identified during the current monitoring period and the project participant has addressed the same in line with the requirements of paragraph 366(a) of VVS PA V 03.0.

Compliance with the calibration frequency requirements for measuring instruments:

As per the monitoring plan in the revised UCR PCN/09/ the meters are to be tested and calibrated once in a year. The latest calibration reports of meters have been checked and confirmed that the meters were working satisfactorily, and the errors observed within permissible limits.

The project activity metering has been physically inspected during the site visit. The details of monitoring equipment involved in the project activity and their calibration dates are mentioned in Section B.1 of the MR/06/ and are summarised in the tables below. All the meters installed at state electricity board substation are of accuracy class of 0.2s and a calibration frequency of once in a year.

Meter Location	**Meter Sr.No**	**Date of calibration**	**Validity date of calibration**
Akal	Main meter: 15624842	20/01/2020	20/01/2021

	<table><tr><td rowspan="3">Substation (400 kV, Electricity Board substation)</td><td></td><td>15/03/2021</td><td>15/03/2022</td></tr><tr><td rowspan="2">Check meter: 15624844</td><td>20/01/2020</td><td>20/01/2021</td></tr><tr><td>15/03/2021</td><td>15/03/2022</td></tr></table> The above meter details have been verified through the following means: i. Physical inspection of the meters during the site visit ii. Interviewing the staff at the sub-station iii. The SCADA of the O&M service provider located at the site iv. Calibration certificates It is evident from the above table that calibration for the billing meters installed at Akal substation has not been conducted as per the calibration frequency mentioned in the revised PCN/09/. **Assessment of delay in calibration of billing meters:** It is verified from calibration certificates, calibration of meter (earliest) was done on 20/01/2020 (next calibration was due on 20/01/2021) and subsequent calibration was done on15/03/2021. Hence calibration of meters considered to be delayed for the period 20/01/2021 to 14/03/2021, since the billing cycle starts from 1st day of every month to the last day of the month, hence the PP has applied the error factor to related parameters for entire month of Jan 2021, Feb 2021, and March 2021. The approach followed by the PP is found to be conservative and in line para 366(a) of CDM VVS for PAs version 03.0, hence accepted. The verification team has checked the latest calibration certificates of energy meters and confirmed that meter was working satisfactorily and error within the permissible limits. The meters are duly approved, installed, tested, sealed and in the custody of the state utility. The PP has no control over the same. CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006/19/ which is considered as national standard mentions that “All interface meters shall be tested at least once in five years.” Hence, the calibration frequency of once in a year, mentioned in the approved PCN for the meters is appropriate.
Findings	CAR #3 was raised and resolved.
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The calibration is conducted at the frequency following the relevant industry standard as specified by the methodology /10/ and the monitoring plan contained in the approved PCN. The calibration delay is addressed appropriately, and the error has been applied: (a) In a conservative manner, such that the adjusted measured values of the delayed calibration shall result in fewer claimed GHG emission reductions or net anthropogenic GHG removals. (b) For all measured values taken during the period between the scheduled date of calibration and the actual date of calibration.

SECTION E. Start date, crediting period and duration

Means of Project Verification	The starting date of the project activity 05/08/2004 which is the of placement of purchase order for the wind energy generators. The operational lifetime of the project activity is 20 years as per the CDM

	PDD, UCR PCN and presented evidence. The current monitoring period is from 15/03/2020 until 31/01/2022. The commercial operation of the project activity had been started on 26/11/2006 and remaining project life is well ahead of current monitoring period. All the WTGs belongs to the project activity were functioning during the current monitoring period as verified during physical inspection of site and generation records.
Findings	No findings
Conclusion	It can be concluded that start date and crediting period duration specified in the PCN is in line with the relevant requirements in the UCR verification standard and UCR project standard.

Section F. Positive Environmental impacts

Means of Project Verification	The precautionary principles have been applied in this project. The environment is protected by several Laws and Regulations in the Host country (India). The purpose of the "Law on Environmental Protection" is to protect the environment with principles of sustainable development and environment. Project owner has conducted the EIA (Environmental Impact Assessment) to study impacts on the environment resulting from the project activity. EIA study demonstrated that there is no major impact on the environment due to the installation and operation of the windmills.
Findings	No findings
Conclusion	No adverse environmental impact has been envisaged in the project activity, still all the necessary clearances from the state pollution control board, public works department, department of irrigation and local villages as well the ministry of environment and forests has been obtained. It is worthy to note that a comprehensive ESIA had been conducted for the project activity by a third party. The ESIA report was referred by assessment team and it can be concluded that no adverse impact of the project has been anticipated.

Section G. Project Owner- Identification and communication

Means of Project Verification	The project owner is Wind World (India) Limited and Viviid Emissions Reductions Pvt. Ltd from India, is the entity having authorization of Project Owner. The project participant is correctly listed in table under section A.4 of the PDD and information is consistent with the contact details provided in Appendix 1 of the PDD.
Findings	CL #1 was raised and resolved.
Conclusion	Identification of the project owner is confirmed through communication agreement signed between project owner and aggregator/20/. The identification of project owner and communication correctly meets the requirement of project verification and UCR project standard.

Section H. Positive Social Impact

Means of Project Verification	A positive impact is verified with the project activity with the increase of the quality of employment with installation and operations of the plant. Also, most of the staff of WWIL is from the local areas however it does have some senior personal from outside. The local contracts were also found from the local nearby areas. The assessment team has interviewed the guards and observed that almost all of the personnel were unemployed before taking up the job of security guards with the project developer.

Findings	No findings
Conclusion	The assessment team is in opinion that the project activity has positive social impact.

Section I. Sustainable development aspects (if any)

Means of Project Verification	Not applicable
Findings	Not applicable
Conclusion	Not applicable

Section J. Internal quality control

>> Final documentation including the verification report must undergo an internal quality control by the Technical Reviewer. Each person who is part of the assessment team, has confirmed the no conflict of interest as the verifier/technical reviewer, having no other engagement with either aggregator or project owner directly or indirectly.

Section K. Project Verification opinion

We have has performed the independent verification of the emission reductions for the UCR project activity “Enercon Wind Farm (Hindustan) Ltd in Rajasthan” (UCR ref.No-105) in India for the monitoring period 15/03/2020 to 31/01/2022 (including both days) as reported in the Monitoring Report (Final) Version 1.1 dated 21/03/2022. The Wind World (India) Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity. It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

The verification has commenced based on the baseline and monitoring methodology ACM0002 Version 06; the monitoring plan contained in the revised UCR PCN Version 1.1 dated 21/03/2022.

The verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. We have planned and performed the verification by obtaining evidence and other information and explanations that considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 15/03/2020 to 31/01/2022 (including both days) are fairly stated in the Monitoring Report (final) Version 1.1 dated 21/03/2022. The GHG emission reductions were calculated correctly based on the approved baseline and monitoring methodology ACM0002, version 06 and the monitoring plan contained in the revised UCR PCN Version 1.1 dated 21/03/2022.

We can certify that the emission reductions from the UCR project activity “Enercon Wind Farm (Hindustan) Ltd in Rajasthan” (UCR ID-105) in India during the period 15/03/2020 to 31/01/2022 (including both days) amount to 131,359 tCO2e.

Appendix 1. Abbreviations

Abbreviations	Full texts
ABT	Availability Based Tariff
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
EB	Executive Board
EF	Emission Factor
EPC	Engineering, Procurement and Construction
ER	Emission Reductions
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CL	Clarification Request
DOE	Designated Operational Entity
DNA	Designated National Authority
EIL	Enercon (India) Limited
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GOI	Government of India
IPCC	Intergovernmental Panel on Climate Change
JMR	Joint Meter Reading
MP	Monitoring Plan
MR	Monitoring Report
MWh	Megawatt hour
PCN	Project Concept Note
PPA	Power Purchase Agreement
PP	Project Participant
PRC	Post Registration Changes
PS	Project Standard
RERC	Rajasthan Electricity Regulatory Commission
RMP	Revised Monitoring Plan
RPTCL	Rajasthan Power Transport Company Limited
RRVPNL	Rajasthan Rajya Vidyut Prasaran Nigam Limited
TR	Technical Review
UCR	Universal Carbon Registry
VVS	Validation and Verification Standard
UID	Unique Identification number
WEC	Wind Energy Convertor
WEG	Wind Energy Generator
WTG	Wind Turbine Generator
WWIL	Wind World India Limited

Appendix 2. Competence of team members and technical reviewers

Name: Ravi Kant Soni (Verifier)
Ravi Kant Soni is a certified lead auditor for Lead Auditor ISO 14001:2004&Lead Auditor ISO 14064:2006 GHG Inventory and verification. He has more than 10 years of work experience across Climate Change, Environmental Management & Monitoring, Health & Safety Management, and Statutory Compliance. He was involved in more than 100 CDM validation and verifications activities and Gold Standard, VER projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1 technical area 1.2. He has done Mater in Technology (Energy Management) from a premier institute, School of Energy & Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from M.I.T.S Gwalior Jiwaji University Gwalior, India

Name: Vivek Ahirwar (Technical Reviewer)

Vivek Kumar Ahirwar is a BEE-Certified Energy Auditor by Govt of India with over eight years of relevant experience in energy efficiency, energy audit, thermal and electrical energy generation technology from renewable source and energy conservation in energy intensive industries, designated consumers and commercial buildings, implementation of energy conservation building codes, research, process and green building projects. He is a certified lead auditor for ISO 14001 EMS and 14064. He has experience under various categories of projects stating from renewable to waste to supercritical projects and WCD. He has successfully audited more than 100 GHG (CDM/VCS/GS) projects in different states across the India. He has done Mater in Technology (Energy Management) from a premier institute, School of Energy & Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from Govt. Engineering college, Rewa, RGPV, India.

Appendix 3. Document reviewed or referenced

No.	Author	Title	References to the document	Provider
1	UCR	UCR Program Verification Guidance Document	Ver. 01.0, dated August 2021	Others
2	UCR	Universal Carbon Registry Program Manual	Ver. 02.0, dated August 2021	Others
3	UNFCCC	Standard: CDM VVS for PAs	Ver. 03.0	Others
4	UCR	UCR Standard	Jan 2022	Others
5	PP	Monitoring Report	Ver.1, dated 19/02/2022	PP
6	PP	Monitoring Report (revised/final)	Ver.1.1, dated 21/03/2022	PP
7	PP	ER Spread sheet (draft)	Ver.1, dated 19/02/2022	PP
8	PP	ER Spread sheet (revised/final)	Ver.1.1, dated 21/03/2022	PP
9	PP	Revised UCR PCN	Ver.1.1, dated 21/03/2022	PP
10	UNFCCC	Consolidated baseline methodology for grid-connected electricity generation from renewable sources ,ACM0002,version 6.0	dated 19/05/2006	
11	UCR	Project Webpage	https://www.ucarbonre	Others

			gistry.io/Registry/Details?id=94VJyZvBRYBUQj2Em7eEyQ%3D%3D	
12	WWIL	Monthly breakup sheets prepared by O&M contractor	For the period 15/03/2020 to 31/01/2022	PP
13	RRVPNL	Monthly JMRs issued by state utility		
14	PP	Monthly Invoices raised by the PP to state utility	For the period 15/03/2020 to 31/01/2022	PP
15	RRVPNL	Commissioning certificates for project WTGs issued by state utility	-	PP
16	Yadav measurements Pvt. Ltd. and Darsh Calibrations Pvt. Ltd.	Calibration certificates for all the meters	-	PP
17	RRVPNL	Power purchase agreements signed between WWIL and state electricity board.	Dated 28/03/2006	PP
18	Verifier	Site visit observation and photographs	Dated 23/11/2017	PP
19	CEA	CEA Notification No. 502/70/CEA/DP&D	Dated 17/03/2006	Others
20	PP	Communication agreement b/w PP and aggregator	-	PP

Appendix 4. Clarification request, corrective action request and forward action request

Table 1. CLs from this Project Verification

CL ID	01	**Section no.**	G	**Date:**14/03/2022
Description of CL				
Please clarify why the total ERs achieved during the monitoring period is not reported under section A.1 of the MR. Name of the PP as mentioned under section A.3 of the MR is not consistent with the same as mentioned in the approved PCN.				
Project Owner's response				**Date:** 21/03/2022
The total ERs achieved during the monitoring period is reported under section A.1 of the revised MR. Revised PCN is submitted to DOE, in which the name of PP is made consistent with MR.				
Documentation provided by Project Owner				
Revised MR, v 1.1 *Revised PCN v 1.1*				
UCR Project Verifier assessment				**Date:** 24/03/2022

The PP has corrected the value of total ERs achieved during the monitoring period under section A.1 of the revised MR, found to be appropriate. The PP has updated the name and contact details of the representative (aggregator) in the revised PCN, found to be consistent with the communication agreement, hence accepted. CL #1 is closed.

Table 2. CARs from this Project Verification

CAR ID	01	**Section no.**	D.2	**Date:** 14/03/2022
Description of CAR				
Please clarify why the actual project implementation status is not described under section B.1 of the MR, in line with the UCR PCN.				
Project Owner's response				**Date:** 21/03/2022
The actual project implementation status is described under section B.1 of the revised MR				
Documentation provided by Project Owner				
Revised MR V1.1				
UCR Project Verifier assessment				**Date:** 24/03/2022
The PP has updated the actual implementation status of the project under section B.1 of the MR, found to be in line with the revised UCR PCN. CAR #1 is closed.				

CAR ID	02	**Section no.**	D.2	**Date:** 14/03/2022
Description of CAR				
The project is also registered under other GHG programme (CDM & GS). Please clarify why the details of previously issued carbon credits is not provided under section C.3 of MR in accordance with the MR template guidelines. Identification of the grid as mentioned under section C.4 is not appropriate.				
Project Owner's response				**Date:** 21/03/2022
The details of previously issued carbon credits is provided under section C.3 of revised MR Correction has been made for the identification of the grid as mentioned under section C.4 of the revised MR.				
Documentation provided by Project Owner				
Revised MR V1.1				
UCR Project Verifier assessment				**Date:** 24/03/2022
The project owner has reported the details of previously issued carbon credits under section C.3 of revised MR, found to be satisfactory. The grid identification is mentioned correctly in the MR. CAR #2 is closed.				

CAR ID	03	**Section no.**	D.2	**Date:** 14/03/2022
Description of CAR				
Please clarify why the value of the monitoring parameters is not reported under section C.10 of the monitoring report. Serial numbers and calibration details of the monitoring equipment's used to monitor the electricity generation/supplied to grid is not provided in the MR.				
Project Owner's response				**Date:** 21/03/2022
The value of the monitoring parameters is reported under section C.10 of the revised monitoring report. Serial numbers and calibration details of the monitoring equipment's used to monitor the electricity generation/supplied to grid is provided in section C.10 of the revised MR.				
Documentation provided by Project Owner				
Revised MR				
UCR Project Verifier assessment				**Date:** 24/03/2022

The PP has reported the value of the monitoring parameters under section C.10 of the monitoring report, found consistent with the ER sheet. The project owner has reported the calibration details of the energy meters used to monitor the electricity generation/supplied to grid in the MR, found to be appropriate. CAR #3 is closed.

Table 3. FARs from this Project Verification

FAR ID	xx	**Section no.**		**Date:** DD/MM/YYYY
Description of FAR				
Project Owner's response				**Date:** DD/MM/YYYY
Documentation provided by Project Owner				
UCR Project Verifier assessment				**Date:** DD/MM/YYYY