



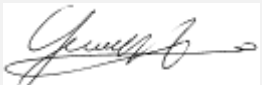
VTRM RENEWABLE ENERGY VERIFICATION REPORT



Document Prepared By RINA Services S.p.A. (RINA)

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Summary:

RINA has performed the verification of the emission reductions reported for the “VTRM Renewable Energy” for the period 01 October 2020 to 31 December 2021, to review and determine the monitored reductions in GHG emissions have occurred as a result of the project activity.

The verification was conducted by means of document review, follow-up interviews and on site inspection, and the resolution of outstanding issues. The review of the VCS monitoring report and the subsequent follow-up interviews and audit have provided RINA with sufficient evidence to determine the fulfilment of stated criteria.

The “VTRM Renewable Energy” located within the geographic are of Brazil, is a Grouped Project, that consists on the implantation and operation of wind power plants (WPPs). All wind power plants supply clean electricity to the Brazilian National Interconnected System (SIN). The project has applied the CDM methodology ACM0002 “Grid-connected electricity generation from renewable sources”, version 19.0.

In summary, it is RINA’s opinion that the project activity “VTRM Renewable Energy” as described in the VCS MR, dated 18 September 2022, meets all relevant VCS requirements for VCS projects and correctly applies the CDM methodology ACM0002 “Grid-connected electricity generation from renewable sources”, version 19.0. In addition, the GHG emission reductions reported for the project in the VCS monitoring report (version 3) of 18 September 2022 are fairly stated. The GHG emission reductions were calculated correctly on the basis of the CDM methodology ACM0002 “Grid-connected electricity generation from renewable sources”, version 19.0.

RINA is able to certify to a reasonable level of assurance that the emission reductions from the project activity “VTRM Renewable Energy” during the period 01 October 2020 to 31 December 2021 amount to 459,705 tonnes CO2 equivalent.

RINA does not assume any responsibility towards the issuance and utilization of the VCU's hereby verified and certified. Request for issuance of VCU's shall be made by the project proponent to an approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration.

The verification of reported emission reductions is based on the information made available to RINA and the engagement conditions detailed in this report. RINA cannot be held liable by a party for decisions made or not made based on this report.

One Clarification Request was raised. No Corrective Action Request and Forward Action Request were raised.

After successful verification, RINA confirms that the project complies with all the requirements of the Verified Carbon Standard, having generated 459,705 equivalents net emission reductions during the present reporting period (01/10/2020 to 31/12/2021).

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1 INTRODUCTION

1.1 Objective

RINA has been commissioned by Votorantim Energia Participações S.A to perform an independent verification of its VCS project “VTRM Renewable Energy”. The objective of the verification is to have an independent evaluation of a project activity by a VVB against the requirements of the VCS version 04.3, on the basis of the project design. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant VCS requirements, VCS Program Guide, Registration & Issuance Process, Validation & Verification Manual, methodology & tools and host Party criteria are validated in order to confirm the correctness of the application of the approved baseline methodologies for the determination of the baseline and estimation of the emission reductions for the applicable crediting period.

The reported GHG emission reductions for the given monitoring period must undergo independent third-party verification and certification of emission reductions as the basis for issuance of Verified Carbon Units (VCUs).

The objectives of this verification exercise are, by reviewing of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD) and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place.
- Monitoring report and other supporting documents are complete.
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Verified Carbon Units (VCUs) without any double counting, and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The verification scope is:

- to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- to evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.

- to verify that reported GHG emission data is sufficiently supported by evidence.

The project is assessed against the of VCS program guide v 4.3, VCS standard v4.3. RINA has, based on the recommendations in the latest version of VCS Validation and Verification Manual v 3.2, and employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

The Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the Monitoring Report.

1.3 Level of Assurance

RINA provides reasonable assurance that the “VTRM Renewable Energy” meets VCS criteria. To ensure complete transparency, any clarification or corrective actions raised have been included in the Appendix 2. The verification expresses a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.

In accordance with the VVS, paragraph 326 the threshold applied for the project activity is (a) 1.0 per cent of the emission reductions or removals for project activities achieving a total emission reduction or removal of between 300,000 and 500,000 tonnes of carbon dioxide equivalent per year. A audit has been performed on 02 August 2022 and it is confirmed that the monitoring arrangements in the monitoring plan are feasible within the project design. The monitoring is based only on data measured. The CERs calculation is based only in data obtained through the monitoring. The data presented in the monitoring report were assessed by reviewing in detail project documentation, collection of monitored data, observation of established monitoring and reporting practices and assessment of the reliability of monitoring equipment. The implementation of the project activity was verified through pictures and videos taken during the audit by PP. Data for energy generation is publicly available by CCEE and emission factor is published available by the Brazilian DNA and could be confirmed.

Therefore, it is RINA's opinion that the claimed emission reductions are free from material errors, omissions or misstatements, with reasonable level of assurance.

All the revisions of the verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent RINA instructions, with reasonable level of assurance.

The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for VCS and CDM validation and verification.

The verification team and the technical reviewers consist of the following personnel.

Role	Last Name	First Name	Country
Lead Assessor	Freitas	Cláudia	Brazil
Technical Reviewer	Carvalho	Thaís	Brazil

1.4 Summary Description of the Project

The “VTRM Renewable Energy” located within the geographic are of Brazil, is a Grouped Project, that consists on the implantation and operation of wind power plants (WPPs). All wind power plants supply clean electricity to the Brazilian National Interconnected System (SIN).

The first instance included in the Grouped Project is a complex called Ventos do Araripe III Complex composed by fourteen WPPs with a total installed capacity of 358.8 MW that generated total GHG emission reductions of 459,705 tCO₂.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Validation and Verification is conducted using RINA procedures in line with the requirements specified in the VCS Standards and applying standard auditing techniques. The verification consisted of the following three phases:

- A desk review of the project documents
- Follow-up interviews with project stakeholders and site inspection.
- The resolution of outstanding issues and the issuance of the Verification report.

2.2 Document Review

The following tables list the documentation that was reviewed during the verification.

Documents provided by project participants	
/1/	WayCarbon Monitoring Report, version 1 of 30/05/2022, version 2 of 22/08/2022 and version 3 of 18/09/2022.

/2/	WayCarbon: ER spreadsheets ER VA3_V01 version 01 of 30/05/2022 and ER VA3_V02 of 18/09/2022
/3/	Environmental impact assessment (EIA) of the Wind Power Complex
/4/	Geographical coordinates of each aerogenerator and wind plant: VAIII - Aerogeradores.kml
/5/	Environmental licenses Ventos de Santo Estevão I: # 05.22.06.002712-9 issued by Agência Estadual de Meio Ambiente (CPRH) on 13 June 2022 and validity 12 June 2026. Ventos de Santo Estevão II: # 05.22.06.002711-2 issued by Agência Estadual de Meio Ambiente (CPRH) on 13 June 2022 and validity 12 June 2026. Ventos de Santo Estevão III: # 05.22.06.002710-5 issued by Agência Estadual de Meio Ambiente (CPRH) on 13 June 2022 and validity 12 June 2026. Ventos de Santo Estevão IV: # 05.22.06.002709-9 issued by Agência Estadual de Meio Ambiente (CPRH) on 13 June 2022 and validity 12 June 2026. Ventos de Santo Estevão V: # 05.22.06.002749-5 issued by Agência Estadual de Meio Ambiente (CPRH) on 13 June 2022 and validity 12 June 2026. Ventos de São Virgílio 01: # D000202/22 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 01 June 2022 and validity 01 June 2026. Ventos de São Virgílio 02: # D000209/22 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 02 June 2022 and validity 02 June 2026. Ventos de São Virgílio 03: # D000207/22 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 02 June 2022 and validity 02 June 2026. Ventos de Santo Onofre IV: # D000205/22 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 01 June 2022 and validity 01 June 2026. Ventos de Santo Augusto I: # D000661/21 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 24 November 2021 and validity 24 November 2025 Ventos de Santo Augusto II: # D000204/22 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 01 June 2022 and validity 01 June 2026 Ventos de Santo Augusto VI: # D000665/21 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 25 November 2021 and validity 25 November 2025 Ventos de Santo Augusto VII: # D000208/22 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 02 June 2022 and validity 02 June 2026 Ventos de Santo Augusto VIII: # D000203/22 issued by Secretaria de Meio Ambiente e Recursos Hídricos (SEMAR) on 01 June 2022 and validity 01 June 2026
/6/	Simplified Environmental Report (RAS) of the Wind Power Complex
/7/	Local stakeholder consultation: on-going communication. Communication Plan and Actions.zip; https://www.venergia.com.br/en/news/votorantim-energia-realiza-terceiro-ciclo-de-palestras-nas-comunidades-situadas-no-entorno-do-complexo-eolico-ventos-do-piaui/; https://www.venergia.com.br/en/news/programa-votorantim-pela-infancia-e-adolescencia-apresenta-resultados-do-trabalho-desenvolvido-em-santa-filomena-e-araripina/. https://www.venergia.com.br/en/news/votorantim-energia-inaugura-complexo-eolico-ventos-do-piaui/
Standards, methodologies and other guidance by the VCS	

/8/	Verified Carbon Standard: VCS Standard version 4.3 dated 22 June 2022.
/9/	Verified Carbon Standard: VCS Validation and Verification Manual, version 3.2 dated 16 October 2016.
/10/	Verified Carbon Standard: VCS Program Definitions version 4.2 dated 22 June 2022
/11/	CDM Executive Board: Large-scale Consolidated Methodology: ACM0002 – “Grid-connected electricity generation from renewable sources”, version 19.0.
/12/	CDM Executive Board: TOOL01 - Methodological tool “Tool for the demonstration and assessment of additionality”, version 07.0.0.
/13/	CDM Executive Board: TOOL07 - Methodological tool “Tool to calculate the emission factor for an electricity system”, version 07.0
/14/	CDM Executive Board: TOOL24 - Methodological tool “Common Practice”, version 03.1.
/15/	CDM Executive Board: TOOL27 - Methodological tool – “Investment Analysis”, version 08.0.
/16/	CDM Executive Board: Guidelines for Application of materiality in verifications, version 02.0.
/17/	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard. Version 03.

Documents used by Rina to validate / cross-check the information provided by the project participant

/18/	VCS PD for project activity “VTRM Renewable Energy”, version 05 of 12 March 2019.
/19/	Earthhood Services Private Limited: Joint Validation & Verification report for project activity “VTRM Renewable Energy”, version 02 of 12 March 2019.
/20/	CCEE: report of all plants (extracted directly from CCEE website).
/21/	Authorization for operation – ANEEL’s Dispatches: Ventos de Santo Estevão I: # 1,810 dated 22 June 2017 (for UG1 to UG11). Ventos de Santo Estevão II: # 1,243 dated 05 May 2017 (for UG7 to UG11), #1,368 dated 17 May 2017 (for UG1, UG2 and UG6) and #1,615 dated 06 June 2017 (for UG3 and UG5). Ventos de Santo Estevão III: # 3,216 dated 08 December 2016 (for UG1 to UG13). Ventos de Santo Estevão IV: # 3,358 dated 02 October 2017 (for UG1 to UG13). Ventos de Santo Estevão V: # 277 dated 31 January 2017 (for UG11 and UG12) and #3,239 dated 12 December 2016 (for UG1 to UG10). Ventos de São Virgílio I: # 2,714 dated 29 August 2017 (for UG1 to UG13). Ventos de São Virgílio II: # 395 dated 09 February 2017 (for UG1 to UG5), #509 dated 17 February 2017 (for UG6 and UG8) and # 562 dated 23 February 2017 (to UG7, UG9, UG10, UG11, UG12 and UG13).

	Ventos de São Virgílio III: # 3,329 dated 28 September 2017 (for UG1 to UG9). Ventos de Santo Onofre IV: # 1,684 dated 13 June 2017 (for UG1 to UG12). Ventos de Santo Augusto I: # 508 dated 17 February 2017 (for UG1 to UG8). Ventos de Santo Augusto II: # 3,404 dated 28 December 2016 (for UG1 to UG12). Ventos de Santo Augusto VI: # 827 dated 23 March 2017 (for UG1 to UG4) and #836 dated 24 March 2017 (for UG5 to UG13). Ventos de Santo Augusto VII: # 600 dated 03 March 2017 (for UG1 to UG4) and #729 dated 15 March 2017 (for UG5 to UG8). Ventos de Santo Augusto VIII: # 3,382 dated 23 December 2016 (for UG1 to UG8)
/22/	IPCC: 2006 Guidelines on National GHG Inventories.
/23/	National Electric System Operator (ONS): Grid Procedures: Module 12. Procedure for energy meter class: Sub-module 12.2 revision 2.0 valid from 11/11/2011 until 31/12/2016, v2016.12 valid from 01/01/2017 to 03/09/2019 and v2019.08 valid from 04/09/2019 to 01/01/2021. Accuracy: 0.2%. Procedure for calibration: Sub-module 12.3 revision 2.0 valid from 11/11/2011 until 31/12/2016 and v2016.12 valid from 01/01/2017 to 01/01/2021. Available at: http://www.ons.org.br/paginas/sobre-o-ons/procedimentos-de-rede/historico. From 2021: National Electric System Operator. Grid Procedures – Module 7 sub-module 7.11 : Implementation of the measurement system for billing. Grid procedures available at < https://apps08.ons.org.br/ONS.Sintegre.Proxy/ecmprsite/ecmfragmentsdocuments/Subm%C3%B3dulo%207.11-OP_2020.12.pdf
/24/	Assured energy: Available at: https://biblioteca.aneel.gov.br ANEEL's ordinance #169 issued on 07 May 2015 for Ventos de São Virgílio 01. ANEEL's ordinance #170 issued on 07 May 2015 for Ventos de São Virgílio 03. ANEEL's ordinance #180 issued on 08 May 2015 for Ventos de Santo Onofre IV. ANEEL's ordinance #181 issued on 08 May 2015 for Ventos de Santo Estevão IV.
/25/	Interministerial Commission of Global Climate Change (Brazilian DNA): Grid emission factor for the year 2020 and 2021. Available at Brazilian DNA official website: https://www.gov.br/mcti/pt-br/acompanhe-o-mcti/sirene/dados-e-ferramentas/fatores-de-emissao

/26/	Turbines' technical specification. 5.1.2.23.2 - Folhas de Dados - Aerogerador GE (VA3) - GE 2.3.pdf.
/27/	Calibration certificates for electricity meters issued by Institutos Lactec: Serial number MW-1410A004-01 (main meter 1): #CCR 133/21 on 05 February 2021 Serial number MW-1401A151-01 (backup meter 1): #CCR 134/21 on 05 February 2021 Serial number: MW-1410A005-01 (main meter 2): #CCR 135/21 on 05 February 2021. Serial number MW-1401A427-01 (backup meter 2): #CCR 136/21 on 05 February 2021. Calibration certificates for electricity meters issued by 3C Services: Serial number MW-1410A004-01 (main meter 1): #1966/Z-14 on 12 December 2014. Serial number MW-1401A151-01 (backup meter 1): #570/Z-14 on 13 July 2014. Serial number: MW-1410A005-01 (main meter 2): #1967/Z-14 on 12 December 2014. Serial number MW-1401A427-01 (backup meter 2): #526/Z-14 on 12 July 2014.
/28/	Electricity Commercialization Chamber (Câmara de Comercialização de Energia Elétrica in Portuguese - CCEE): Guidelines and Procedures
/29/	Schneider Electric: Technical data sheet electricity meter model PowerLogic ION8650. Available at: https://download.schneider-electric.com/files?p_enDocType=Technical+leaflet&p_File_Name=PLSED310027EN_US_%28web%29.pdf&p_Doc_Ref=PLSED310027EN_Web_US.
/30/	Project registration and issuance in compliance with the VCS requirements. Project page at VERRA's website: https://registry.terra.org/app/projectDetail/VCS/1812 .
/31/	Land lease contracts: SIM-PI481_C.D.U_M5.279.pdf signed on 26 March 2015; ARP-PE410_C.D.U_M12.432.pdf signed on 21 August 2015; ARP-PE315_C.D.U_M8.857.pdf signed on 02 April 2018.
/32/	Brazilian taxes: - ANEEL taxes (TFSEE): Decree 2,410, 28/11/1997 http://www.planalto.gov.br/ccivil_03/decreto/1997/d2410.htm#:~:text=DECRETO%20N%C2%BA%202.410%2C%20DE%2028,1996%2C%20e%20d%C3%A1%20outras%20provid%C3%A2ncias. - PIS/COFINS: Laws 10,637/2002, 10,833/2003. - Income tax: Law 9,718/1998: (presumed profit): http://www.planalto.gov.br/ccivil_03/leis/I9718compilada.htm - Social contribution: Law 9,249/1995: http://www.planalto.gov.br/ccivil_03/leis/I9249.htm Law 9,430/1996: http://www.planalto.gov.br/ccivil_03/leis/I9430.htm.
/33/	Social and environmental programs: Relatório Cumprimento PBA VAIIL.zip
/34/	National content of equipment: https://www.canalenergia.com.br/noticias/53058500/bndes-e-banco-dos-brics-realizam-desembolso-parques-eolicos

	https://www.bndes.gov.br/wps/portal/site/home/financiamento/servicos-online/credenciamento-de-equipamentos/normas-aplicaveis-credenciamento/regulamento-credenciamento-financiamento-aerogeradores https://www.bndes.gov.br/wps/wcm/connect/site/10f19d81-33df-4c4c-95e0-d7909975c911/credenciamento_aerogeradores_anexo1.pdf?MOD=AJPERES&CVID=lmYlw0v .
/35/	SIGA ANEEL. Available at: https://dados.gov.br/dataset/siga-sistema-de-informacoes-de-geracao-da-aneel
/36/	https://cdm.unfccc.int/Projects/projsearch.html
/37/	https://registry.goldstandard.org/projects?q=&page=1

2.3 Interviews

	Date	Name and Role	Organization	Topic
/a/	02 August 2022	Henrique de P Barbosa - O&M Wind Complexes Manager	Auren Energia	Technical features Project operation Energy measurements,
/b/		José Guilherme da S Amato - Carbon Business Manager	Auren Energia	Project implementation Project monitoring
/c/		Kalleb de S Oliveira - Sustainability Analyst Wind Complexes	Auren Energia	Project operation and Project monitoring
/d/		Juliana J Pedott - Sustainability Consultant	Auren Energia	Project implementation Project monitoring
/e/		Eduardo Baltar - Consultant	WayCarbon	Monitoring report and ER calculations
/f/		Eduardo D de Araujo - Maintenance Supervisor Wind Complexes	Auren Energia	Project operation
/g/		Alankecio P de Lima - Maintenance Technician Wind Complexes	Auren Energia	Project operation Energy measurements
/h/		Marcos V Pereira - Maintenance Technician Wind Complexes	Auren Energia	Project operation Energy measurements
/i/		Eduardo R da Costa - Work Safety Technician of Wind Complexes	Auren Energia	Project operation
/d/	15 August 2022	Juliana Pedott - Sustainability Consultant	Auren Energia	Complete on-site audit
/a/		Henrique de P Barbosa - O&M Wind Complexes Manager	Auren Energia	Complete on-site audit

/b/		<i>José Guilherme da S Amato – Carbon Business Manager</i>	Auren Energia	Complete on-site audit
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2.4 Site Inspections

Site inspection: 02/08/2022 in the Wind Power Complex and 15/08/2022 in the Auren Energy Office.

No.	Activity performed on-site	Site location	Date	Team member
1	Implementation and operation of the project activity. Checked the monitoring equipment, interviewed key personnel of the plant to confirm operational and data collection procedures, cross-checked between information provided in the monitoring report and data plant.	Fourteen wind farms and support office Municipalities of Araripina (PE), Simões and Curral Novo (PI)	02/08/2022	Cláudia Freitas
2	Physical inspection of the site			
3	Reviewed information flows for generating, aggregating and reporting the monitoring parameters			
4	Checked calibration performance, reviewed calculations and assumptions made in determining the GHG data and emission reductions.			
5	Checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters			
6	Cross-checked between information provided in the monitoring report and data evidence.			

2.5 Resolution of Findings

The objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for RINA's positive conclusion on the project description. To guarantee transparency any findings raised during the audit are incorporated in the Appendix A to this report.

A corrective action request (CAR) is raised if one of the following occurs:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- The VCS Version 4.3 standard have not been met;
- There is a risk that the emission reductions cannot be monitored or calculated;
- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

One CL was raised in this monitoring period. No CAR.

2.5.1 Forward Action Requests

A forward action request (FAR) should be issued, where:

1. the actual project monitoring and reporting practices requires attention and /or adjustment for the next consecutive verification period, or
2. an adjustment of the MP is recommended.

No FAR was identified in this verification period.

2.6 Eligibility for Validation Activities

Not applicable.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project activity is not registered or seeking registration under other GHG program(s); moreover, there is no evidence of the project's rejection from any other GHG programs as per the GS /37/ and CDM /36/ project data base .

3.2 Methodology Deviations

No methodology deviations has been applied to the project activity in this monitoring period.

3.3 Project Description Deviations

No project description deviations applied to the project activity in this monitoring period.

3.4 Grouped Project

No new project activity instances into the (grouped) project, in this monitoring period

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

As part of the audit, RINA was able to confirm that the project implementation is in accordance with the project description contained in the VCS PD&MR (version 05 of 12 March 2019) /18/.

The verification team confirmed through the inspection and document review that all physical features of the proposed grouped project including data collection systems and storage systems have been implemented in accordance with the registered VCS PD&MR /18/. RINA confirmed during the audit that the project is completely operational.

“VTRM Renewable Energy” is a grouped project that consists in the implementation and operation of wind power plants in Brazil. All plants supply clean electricity to the Brazilian National Interconnected System.

The first and unique project activity instance included in the grouped project is a complex called Ventos do Araripe III Complex composed by fourteen wind power plants located at Araripina, Pernambuco state and Simões and Curral Novo do Piauí, Piauí state with total installed capacity of 358.8 MW.

The project activity instance was implemented and the commercial operation date for the wind power plants have been verified from the ANEEL Dispatches /21/.

The geographical coordinates of the proposed project activity, including positioning of each WTG of the power plants, were validated by RINA and is presented in the document VAIII – Aerogeradores KML file /4/. The first WTG of the power plants was presented in the VCS MR /1/ and was validated by RINA through the ANEEL/SIGA website //35/.

Wind power plant	Geographical coordinates /24/	
	Latitude	Longitude
Ventos de Santo Estevão I	321255	9143642
Ventos de Santo Estevão II	320284	9143197
Ventos de Santo Estevão III	317101	9145380
Ventos de Santo Estevão IV	324189	9145598
Ventos de Santo Estevão V	315470	9141884
Ventos de São Virgílio I	313781	9149811
Ventos de São Virgílio II	309448	9138340
Ventos de São Virgílio III	317237	9138340
Ventos de Santo Onofre IV	309831	9139278
Ventos de Santo Augusto I	315254	9143755
Ventos de Santo Augusto II	314913	9140526
Ventos de Santo Augusto VI	315140	9146958
Ventos de Santo Augusto VII	314800	9145704
Ventos de Santo Augusto VIII	314992	9140684

The brief description of the wind power plants is detailed below:

Wind power plant	Installed capacity (MW) /24/	Nr. WTGs	Assured energy (MW-ave) /24/	PLF (%)	Location /5/	Commercial operation date /21/
Ventos de Santo Estevão I	25.3	11	12,40	49,0%	Municipality of Araripina, Pernambuco state	23 June 2017
Ventos de Santo Estevão II	25.3	11	11,90	47,0%	Municipality of Araripina, Pernambuco state	06 May 2017
Ventos de Santo Estevão III	29.9	13	14,20	47,5%	Municipality of Araripina, Pernambuco state	09 December 2016
Ventos de Santo Estevão IV	29.9	13	14,20	47,5%	Municipality of Araripina, Pernambuco state	03 October 2017

Ventos de Santo Estevão V	27.6	12	13,60	49,3%	Municipality of Araripina, Pernambuco state	13 December 2016
Ventos de São Virgílio I	29.9	13	15,20	50,8%	Municipality of Simões, Piauí state	30 August 2017
Ventos de São Virgílio II	29.9	13	16,70	55,9%	Municipalities of Simões and Curral Novo do Piauí, Piauí state	10 February 2017
Ventos de São Virgílio III	20.7	9	9,20	44,4%	Municipality of Simões, Piauí state	29 September 2017
Ventos de Santo Onofre IV	27.6	12	13,60	49,3%	Municipality of Simões, Piauí state	14 June 2017
Ventos de Santo Augusto VIII	18.4	8	9,00	48,9%	Municipality of Simões, Piauí state	18 February 2017

The verification team has determined whether the monitoring plan has been properly implemented and followed by PP that the monitoring has been carried out in accordance with the registered monitoring plan; and determined whether all parameters including project emission parameters, baseline emission parameters used for emission reduction calculation stated in the registered monitoring plan are monitored or used appropriately as per the registered VCS PD&MR.

During the verification all monitoring parameters listed in Section 4.2 of MR were compared with monitoring parameters and the monitoring plan of the registered VCS PD&MR and have been verified with regard to appropriateness of the applied measurement / determination method, the correctness of the values applied for ER calculation, the accuracy and applied QA/QC measures.

The verification team has reviewed all the documents like operation start dates /21/, monthly electricity reports /20/, calibration records /27/ etc. In line with Guidelines for Application of materiality in verifications /16/, a reasonable level of assurance is defined for the verification of the project by complete verification of all the values indicated in the emission reduction spreadsheet at the document review stage and site. There are no material errors, omissions or misstatements.

An inspection carried out by RINA during the audit confirmed that the control system at the wind power plants is automated and assures continuous operation.

There are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology.

The project has not participated or been rejected under any other GHG programs since validation or previous verification.

The project has not received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification.

The GHG emission reductions or removals generated by the project have not become included in an emissions trading program or any other mechanism that includes GHG allowance trading.

The grouped project contributes to sustainable development of its region as follows:

- reduces greenhouse gas emissions (CO₂) from the Brazilian Interconnected System /30/;
- generates extra income for the landowners, while they can continue using the area for other activities, thus it increases and diversifies the lands productivity /31/;
- stimulates the regional economy by increasing tax revenues /32/ for the local government and direct and indirect job opportunities for local workers and service suppliers;
- general improvement of the local infrastructure such as road, electricity transmission system and stimulus for education /33/;

- uses equipment which have a domestic content and therefore induce the development of national technology and improvement of domestic know-how /34/;
- stimulates the development of a proficient tertiary sector in the region, thus creating opportunities for education, professionalization and employment /34/;
- - important complement and diversification to the run-of-river hydroelectric generation /24/.

The project proponents of the project activity are: VTRM ENERGIA PARTICIPAÇÕES S.A. and Waycarbon Soluções Ambientais e Projetos de Carbono Ltda.

4.2 Safeguards

4.2.1 No Net Harm

For wind power projects, an environmental impact assessment is required as part of the environmental licensing. As described in the MR and verified by RINA through the Environmental Impact Assessment (EIA) /6/, there are no significant negative environmental and social impacts, only low or medium impacts. The main impacts are the following:

- Noise during pre-construction, construction and operational activities;
- Dust generation during construction;
- Soil vibration during Geotechnical studies;
- Decrease of animal's habitats;
- Risks with accidents with birds during operational phase;
- Increase of organic waste generation;
- Change on the dynamics of the ecosystem;
- Impacts on archeological heritage;
- Tension over population related to job creation;
- Risk of soil contamination during construction;
- Increase of soil erosion;
- Increasing of traffic of vehicles in the region;
- Risk of incidents with animals and people during construction activities;
- Impacts on the original landscape;
- Loss of vegetal coverage;
- Decrease of jobs after construction phase;

- Impacts on the community's quality of life.

RINA verified that the wind farms were granted the Environmental Operation License /5/.

In order to mitigate the potential negative environmental and socio-economic impacts, project proponents presented several actions in the Environmental Basic Project (PBA) /6/ such as:

Environmental Plan During Construction:

- Construction Signaling Program;
- Local Workers Training Program;
- Program of Workers Protection and Safety;
- Protection Program of Permanent Preservation Areas;
- Program of Rational Vegetal Suppression;
- Erosion Monitoring and Prevention;
- Wastewater Monitoring Program;
- Waste Management Program;
- Degraded Areas Program.

Environmental Management Plan:

- Monitoring Plan of Pre-Construction Environmental;
- Social Communication Plan;
- Environmental Education Program;
- Fauna Rescue Program;
- Fauna Monitoring Program;
- Water Quality Monitoring Program;
- Noise Monitoring Program;
- Monitoring Program of Environmental and Social indicators of the region;
- Monitoring Program of Violence Indicators;
- Health Monitoring Program of communities;
- Program for creation of a Committee of families impacted by the project;
- Monitoring plan of land structure of the direct impacted area.

Special Plans:

- Plan for Archeological Identification, Rescue and Monitoring;
- Plan for Paleontological Identification, Rescue and Monitoring;
- Soil Vibration Monitoring Program;
- Demobilization Plan.

RINA was able to confirm the implementation of the mitigation actions /33/.

4.2.2 Local Stakeholder Consultation

A public audience has been held as part of the environment impact assessment and one of the main channels of community participation at a local level before project construction. The local stakeholder consultation was conducted prior to validation as required by Para 3.16.2 of VCS Standard version 4.3 /8/.

According to VCS PD&MR /18/a public hearing was performed and no negative comments were received..

There are channels of communication with stakeholders to allow complaints and suggestions of local community.

4.3 .AFOLU-Specific Safeguards

Not applicable since the VTRM Renewable Energy is not an AFOLU projects.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The GHG emissions reductions for the first and unique project activity instance under the grouped project were calculated correctly on the basis of the baseline and monitoring methodology ACM0002 “Grid-connected electricity generation from renewable sources” version 19.0 /11/ and the formulae given in the VCS PD&MR /18/.

For the monitoring period from 01 October 2020 to 31 December 2021, the emission reduction calculations are based on the following parameters:

Data and parameters fixed ex ante

The parameter available at the validation stage, which do not need to monitor during the crediting period, as per the registered VCS PD&MR /18/ are:

- The percentage share of total installed capacity of the specific technology: RINA verified that the value of 10.4% applied is correct as described in the registered VCS PD&MR /18/.
- The total installed capacity of the technology: RINA verified that the value of 12,537,943 MW applied is correct as described in the registered VCS PD&MR /18/.

Data and parameters monitored

According to the monitoring plan of the registered VCS PD&MR, there are two parameters to be monitored:

- Quantity of net electricity supplied by the project plant/unit to the grid in year y;
- Combined margin CO2 emission factor for grid connected power generation in year y.

The tables below describe for each parameter, which is to be measured according to the monitoring plan and how RINA has verified that the actual monitoring complies with the monitoring plan and that ii) data have been assessed to correctly support the emission reductions being claimed.

	Assessment / Observation			
Data/ Parameter: (as in monitoring plan):	EG _{facility,y} – Quantity of net electricity generation supplied by the project plant to the grid in year y Calculated according to measurement parameters (EG _{facility,y}).			
Measured / calculated / default:				
Value(s) of monitored parameter:	Year	Month	EG _{facility,y} (MWh)	
	2020	October	91,097.30	
		November	77,201.88	
		December	75,738.23	
	2021	January	78,348.41	
		February	18,873.52	
		March	-	
		April	2,177.19	
		May	107,541.04	
		June	75,775.39	
		July	123,642.11	
		August	118,734.89	
		September	92,293.43	
		October	90,248.06	
		November	43,682.70	
		December	50,285.91	
	Total 2020	244.037.40		
	Total 2021	801,602.66		
	Measuring / Reading / Recording frequency:			Verified during the site visit that data is continuously monitored, registered every 5 minutes and monthly recorded.

Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment	Bidirectional electricity meters manufactured by Power logic, model ION 8650, accuracy class 0.2% /29/. The following energy meters are applicable to the monitoring period and confirmed during the site visit: Curral Novo do Piauí 2 Substation Serial number: MW-1410A004-01 (main meter 1) and MW-1401A151-01 (backup meter 1). Serial number: MW-1410A005-01 (main meter 2) and MW-1401A427-01 (backup meter 2).
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	The accuracy class of the electricity meters is 0.2% of full-scale rating /29/ and in accordance with national standards /23/.
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	The accuracy is valid for the entire measuring range.
Calibration frequency /interval:	From 2017 onwards 5 years. Before 2017, 2 years /23/.
Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications (if local/national standards or the manufacturer's specifications are not available, international standards may be used)?	The 2 years and 5 years calibration frequency are in accordance with national standards /23/.

Is the calibration of measuring equipment carried out by an accredited person or institution?	The calibration was carried out by Institutos Lactec: /27/. Serial number MW-1410A004-01 (main meter 1): #CCR 133/21 on 05 February 2021 Serial number MW-1401A151-01 (backup meter 1): #CCR 134/21 on 05 February 2021 Serial number: MW-1410A005-01 (main meter 2): #CCR 135/21 on 05 February 2021. Serial number MW-1401A427-01 (backup meter 2): #CCR 136/21 on 05 February 2021. Calibration certificates for electricity meters issued by 3C Services: Serial number MW-1410A004-01 (main meter 1): #1966/Z-14 on 12 December 2014. Serial number MW-1401A151-01 (backup meter 1): #570/Z-14 on 13 July 2014. Serial number: MW-1410A005-01 (main meter 2): #1967/Z-14 on 12 December 2014. Serial number MW-1401A427-01 (backup meter 2): #526/Z-14 on 12 July 2014.
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Yes, however it was verified a delay in calibration in the period 01/10/2020 to 28/02/2021.

Is(are) calibration(s) valid for the whole reporting period?	No. It was verified a delay in the calibration of the four meters for the entire monitoring period. Hence, paragraphs 365 to 371 of the “Clean Development Mechanism Validation and Verification Standard” /17/ were used to calculate the discount to be applied in the emission reductions for this period where the meters were out of calibration. According to paragraphs 365 to 371 of the Clean Development Mechanism Validation and Verification Standard /17/ project participants should apply the maximum error between the maximum permissible error of the instrument according to the manufacture and the result of the delayed calibration to all the measured values of the period which the calibration was delayed. Since the error showed in the calibration certificate (see table below) /27/ was smaller than the maximum permissible error of the electricity meter (0.2%) /23/, the maximum permissible error of the electricity meter was discounted from all values of electricity generated for the entire monitoring period. <table border="1"> <thead> <tr> <th>Serial number</th><th>Error showed in the calibration</th></tr> </thead> <tbody> <tr> <td>MW-1410A004-01</td><td>0.14%</td></tr> <tr> <td>MW-1401A151-01</td><td>0.14%</td></tr> <tr> <td>MW-1410A005-01</td><td>0.11%</td></tr> <tr> <td>MW-1401A427-01</td><td>0.12%</td></tr> </tbody> </table>	Serial number	Error showed in the calibration	MW-1410A004-01	0.14%	MW-1401A151-01	0.14%	MW-1410A005-01	0.11%	MW-1401A427-01	0.12%
Serial number	Error showed in the calibration										
MW-1410A004-01	0.14%										
MW-1401A151-01	0.14%										
MW-1410A005-01	0.11%										
MW-1401A427-01	0.12%										
If applicable, has the reported data been cross-checked with other available data?	Data in the monitoring report was cross checked against data collected from the meters available at outsourced agent’s platform /3/ and electricity reports /20/ provided by CCEE - Electricity Chamber Company (energy meters’ readings located at the Curral Novo do Piauí 2 substation)										
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	N/A										

How were the values in the monitoring report verified?	Data in the monitoring report was cross checked against data collected from the meters available at outsourced agent's platform /3/ and electricity reports /20/ provided by CCEE - Electricity Chamber Company (energy meters' readings located at the Curral Novo do Piauí 2 substation).
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. Data management was found to be reliable and appropriate.

	Assessment / Observation						
Data/ Parameter: (as in monitoring plan):	EF _{grid,CM,y} – CO2 emission factor of the Brazilian grid electricity during the year y						
Measured / calculated / default:	Calculated as the weighted average of the dispatch data analysis Operating Margin (OM) and Build Margin (BM) from the Brazilian DNA. BM = 0.0979 tCO ₂ e/MWh for 2020.0 BM = 0.0540 tCO ₂ e/MWh for 2021. Values for 2020 and 2021 have been used to determine OM /25/.						
Value(s) of monitored parameter:	<table> <tr> <th>Year</th><th>EF_{grid,CM,y} (tCO₂/MWh)</th></tr> <tr> <td>2020</td><td>0.3649</td></tr> <tr> <td>2021</td><td>0.4624</td></tr> </table>	Year	EF _{grid,CM,y} (tCO ₂ /MWh)	2020	0.3649	2021	0.4624
Year	EF _{grid,CM,y} (tCO ₂ /MWh)						
2020	0.3649						
2021	0.4624						
Measuring / Reading / Recording frequency	Annually						
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes.						
Type of monitoring equipment:	N/A						
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	N/A						
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	N/A						
Calibration frequency interval	N/A						

Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications (if local/national standards or the manufacturer's specifications are not available, international standards may be used)?	N/A
Is the calibration of measuring equipment carried out by an accredited person or institution?	N/A
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	N/A
Is(are) calibration(s) valid for the whole reporting period?	N/A
If applicable, has the reported data been cross-checked with other available data?	N/A
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	N/A
How were the values in the monitoring report verified?	Data in the monitoring report was cross checked against the Brazilian DNA website /25/.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes. Data management was found to be reliable and appropriate

RINA confirms that appropriate methods and formulae for calculating baseline emissions, project emissions and leakage have been followed, and the assumptions, emission factors and default values that are applied in the calculation have been justified.

According to the applied methodology ACM0002, "Grid-connected electricity generation from renewable sources", version 19.0 /11/, the emission reductions have been calculated based on the following formula:

$ER_y = BE_y$, as project emissions (PE_y) and leakage (LE_y) are zero.

Where,

ER_y – Emission reductions in year y (tCO_2e/y);

BE_y – Baseline emissions in year y (tCO_2e/y).

Baseline emissions (BE_y in tCO_2) are the product of the combined margin emission factor ($EF_{grid,CM,y}$ in tCO_2/MWh) times the net electricity supplied by the project activity to the grid ($EG_{facility,y}$ in MWh).

The combined margin emission factor of the applicable electricity system is determined using the procedures in the “Tool to calculate the emission factor for an electricity system” version 07.0 /13/.

The OM emission factor ($EF_{grid,OM,y}$) is calculated ex-post for the grid by the Brazilian DNA applying the dispatch data analysis: Brazilian interconnected system, calculated as $0.4539 tCO_2/MWh$ and $0.5985 tCO_2/MWh$ based on public available data from 2020 and 2021 respectively since the emission factor is determined for the year in which the project activity displaces grid electricity /25/.

The BM emission factor ($EF_{grid,BM,y}$) is determined ex-post for the grid by the Brazilian DNA applying option 2: Brazilian interconnected system, calculated as $0.0979 tCO_2/MWh$ based on public available data from 2020 and $0.0540 tCO_2/MWh$ data from 2021. The emission factor is determined for the year in which the project activity displaces grid electricity /25/.

The CM emission factor ($EF_{grid,CM,y}$), expressed in tCO_2e/MWh , is established as $0.3649 tCO_2/MWh$ for 2020 and $0.4624 tCO_2/MWh$ for 2021 respectively for Brazilian interconnected system and is calculated ex-post based on data published by the DNA /25/.

RINA verified that the grid emission factor is in accordance with data available by the Brazilian DNA /25/.

$EG_{facility,y}$ is the net electricity generation supplied to the grid, which was derived from the main meters located at Curral Novo do Piauí substation in the period from 01 October 2020 to 31 December 2021, which was verified by RINA and cross-checked by CCEE reports /20/.

The resulting total net electricity generated by the project for this 3rd monitoring period is 1,045,640.06 MWh .

Data source and the emission reductions calculations were verified and are considered accurate. Detailed information regarding the resulted emission reductions is available in the CERs calculation spreadsheet /2/.

The formulas and calculations used for the CERs determination are correctly applied and the resulted emissions calculation is reliable.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

RINA was able to confirm that the calculations are based on continuous and monthly recorded electricity generation records /3/ /20/. The spreadsheet used to calculate the yearly certified emission reduction calculations and all figures were tracked, 100% check and found to be consistent;

4.6 Non-Permanence Risk Analysis.

Not applicable.

5 VERIFICATION CONCLUSION

RINA conducted the verification on the basis of the approved methodology ACM0002 (version 19.0), the monitoring plan contained in the VCS monitoring report dated 18 September 2022 a (version 3). The verification included i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and ii) the collection of evidence supporting the reported data.

RINA's verification approach draws on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. RINA planned and performed the verification by obtaining evidence and other information and explanations that RINA considers necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions of the "VTRM Renewable Energy" for the period 01 October 2020 to 31 December 2021 are fairly stated in the VCS monitoring report dated 18 September 2022.

The GHG emission reductions were calculated correctly on the basis of the approved methodology ACM0002 (version 19.0) and the monitoring plan contained in the VCS monitoring report dated 18 September 2022.

RINA is able to certify that the emission reductions from the "VTRM Renewable Energy" during the period 01 October 2020 to 31 December 2021 amount to 459,705 tonnes of CO₂ equivalent, detailed as below.

Verification period: From 01 October 2020 to 31 December 2021.

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2020	89,049	0	0	89,049
2021	370,656	0	0	370,656
Total	459,705	0	0	459,705

APPENDIX 1: ABBREVIATIONS

Abbreviations	Full texts
ANEEL	Brazilian Electricity Energy Agency
BE	Baseline Emissions
BM	Build Margin
CAR	Corrective Action Request
CCEE	Electricity Commercialization Chamber (in Portuguese Câmara de Comercialização de Energia Elétrica)
CDM	Clean Development Mechanism
CER(s)	Certified Emission Reduction(s)
CL	Clarification Request
CM	Combined Margin
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CPRH	Environmental Agency of the State of Pernambuco (in Portuguese Agência Estadual de Meio Ambiente – Estado de Pernambuco)
DNA	Designated national Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
LE	Leakage Emission
MP	Monitoring Plan

MR	Monitoring Report
OM	Operating Margin
ONS	National Electric System Operator (in Portuguese Operador Nacional do Sistema)
PBA	Environmental Basic Project
PD&MR	Joint Project Description & Monitoring Report
PE	Project Emissions
PLF	Plant Load Factor
PP	Project Participant
QA/QC	Quality Assurance / Quality Control
RAS	Simplified Environmental Report
RINA	RINA Services Spa
SEMAR	Secretary of Environment of the State of Piauí (in Portuguese Secretaria de Meio Ambiente e Recursos Hídricos do Estado do Piauí)
SIN	Brazilian National Interconnected System
TA(s)	Technical Area(s)
tCO ₂ e	Tonnes of Carbon Dioxide Equivalent
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit
VTRM	Votorantim
VVS	Validation and Verification Standard
WPP	Wind Power Plant
WTG	Wind Turbine Generator

APPENDIX 2: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUEST

Table 1. FAR from validation and/or previous verifications

FAR ID	xx	Section no.		Date: DD/MM/YYYY
Description of FAR				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Table 2. CL from this verification

CL ID	1	Section no.		Date: 02/08/2022
Description of CL				
<i>PP is required to present all the environmental operational licenses</i>				
Project participant response				Date: 12/09/2022
<i>Environmental operational licenses are provided to DOE.</i>				
Documentation provided by project participant				
<i>All the fourteen environmental licenses for each wind farm in the Complex.</i>				
DOE assessment				Date: 16/09/2022
<i>RINA verified that environmental licenses were available and all are valid. This CL is closed.</i>				

Table 3. CAR from this verification

CAR ID	xx	Section no.		Date: DD/MM/YYYY
Description of CAR				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY



CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES*

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Thais De Lima Carvalho

è qualificato come:
is qualified as:

TEC, VAL, VER, TL, ITRP

per le seguenti aree tecniche:
for the following technical areas:

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal energy generation	1
1.2	Renewables	1
2.1	Electricity distribution	2
13.1	Solid waste and wastewater	13

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)

Responsabile di schema
Scheme Leader
Rita Valeroso



*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

RINA Services S.p.A. è accreditato/recognized by

RINA Services S.p.A. is accredited/recognized by

UNFCCC	quali Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects
VCSA	per condurre la Validazione e la Verifica di Progetti VCS to carry out Validation and Verification of VCS Projects
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS to carry out Validation and Verification of GS Projects
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS to carry out Validation and Verification of SCS Reports
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR to carry out Validation and Verification of ACR projects
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB to carry out Validation and Verification of co-benefit CCB projects



**CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE**

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Claudia FREITAS

è qualificato come¹:
is qualified as:

TL – VAL – VER – TEC – REG-EXP²

nello schema²:
for the scheme:

CDM – JI – VCS – SCS – CCB – UER – ISO14064-2

per le seguenti aree tecniche:
for the following technical areas:

1.1 - 1.2 - 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal Energy generation	1
1.2	Renewables	1
13.1	Waste Handling and Disposal	13

in accordo alle istruzioni dell'Unità responsabile (OU) per sostenibilità & cambiamenti climatici.
in accordance with the instructions of the responsible unit (OU) for the sustainability & climate change.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	27/07/2018	-
4	22/02/2022	Detail of countries relevant to REG-EXP qualification

Il Resp. CEINS
Head of CEINS



¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
REG-EXP: Regional Expert
ITR: Independent Reviewer
DET: Determiner

² Legend:

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS4GG: Gold Standard for Global Goals
SCS: SocialCarbon Standard
JI: Joint Implementation
ISO14064-2: International standard 14064 part 2
UER: Upstream Emission Reduction
CCB: The Climate, Community & Biodiversity Alliance

² Germany, Brazil, Paraguay, Panama, Argentina, Indonesia

RNA Services S.p.A. è accreditata da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di Progetti SCS.

RNA Services S.p.A. is accredited by the UNFCCC as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS4GG Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports.

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