

المجلس العالمي للبصمة الكربونية  
GLOBAL CARBON COUNCIL



**Project  
Submission  
Form**

V4.0- 2022

## Project Submission Form

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## Project Submission Form

<b>COVER PAGE- Project Submission Form (PSF)</b>																																																																																			
<i>Complete this form in accordance with the instructions attached at the end of this form.</i>																																																																																			
<b>BASIC INFORMATION</b>																																																																																			
<b>Title of the Project Activity as per LON/LOA</b>	<b>Rio do Vento Complex Project</b>																																																																																		
<b>PSF version number</b>	04																																																																																		
<b>Date of completion / Updating of this form</b>	12-December-2022																																																																																		
<b>Project Owner(s) as per LON/LOA</b> <small>(Shall be consistent with De-registered CDM Type B Projects)</small>	Casa dos Ventos Comercializadora de Energia S/A CDV Holding S.A																																																																																		
<b>Country where the Project Activity is located</b>	Brazil																																																																																		
<b>GPS coordinates of the project site(s)</b>	<table border="1"> <thead> <tr> <th>Facility</th> <th>Aero generator</th> <th>Latitude DMS</th> <th>Longitude DMS</th> <th>Lat DD</th> <th>Lon DD</th> </tr> </thead> <tbody> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>1</td> <td>5°46'40.92"S</td> <td>35°57'53.55"W</td> <td>5.7780 S</td> <td>35.9649 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>2</td> <td>5°46'46.03"S</td> <td>35°57'59.17"W</td> <td>5.7795 S</td> <td>35.9664 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>3</td> <td>5°46'52.22"S</td> <td>35°58'3.26"W</td> <td>5.7812 S</td> <td>35.9676 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>4</td> <td>5°46'56.48"S</td> <td>35°58'10.75"W</td> <td>5.7824 S</td> <td>35.9697 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>5</td> <td>5°47'0.70"S</td> <td>35°58'17.26"W</td> <td>5.7835 S</td> <td>35.9715 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>6</td> <td>5°47'6.56"S</td> <td>35°58'21.78"W</td> <td>5.7852 S</td> <td>35.9727 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>7</td> <td>5°47'12.98"S</td> <td>35°58'25.48"W</td> <td>5.7869 S</td> <td>35.9737 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>8</td> <td>5°47'18.03"S</td> <td>35°58'30.90"W</td> <td>5.7883 S</td> <td>35.9753 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>9</td> <td>5°47'23.44"S</td> <td>35°58'35.89"W</td> <td>5.7898 S</td> <td>35.9766 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>10</td> <td>5°47'30.38"S</td> <td>35°58'39.01"W</td> <td>5.7918 S</td> <td>35.9775 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>11</td> <td>5°47'45.51"S</td> <td>35°58'37.37"W</td> <td>5.7960 S</td> <td>35.9770 W</td> </tr> <tr> <td>VENTOS DE SANTA MARTINA 01</td> <td>12</td> <td>5°47'49.90"S</td> <td>35°58'44.15"W</td> <td>5.7972 S</td> <td>35.9789 W</td> </tr> </tbody> </table>					Facility	Aero generator	Latitude DMS	Longitude DMS	Lat DD	Lon DD	VENTOS DE SANTA MARTINA 01	1	5°46'40.92"S	35°57'53.55"W	5.7780 S	35.9649 W	VENTOS DE SANTA MARTINA 01	2	5°46'46.03"S	35°57'59.17"W	5.7795 S	35.9664 W	VENTOS DE SANTA MARTINA 01	3	5°46'52.22"S	35°58'3.26"W	5.7812 S	35.9676 W	VENTOS DE SANTA MARTINA 01	4	5°46'56.48"S	35°58'10.75"W	5.7824 S	35.9697 W	VENTOS DE SANTA MARTINA 01	5	5°47'0.70"S	35°58'17.26"W	5.7835 S	35.9715 W	VENTOS DE SANTA MARTINA 01	6	5°47'6.56"S	35°58'21.78"W	5.7852 S	35.9727 W	VENTOS DE SANTA MARTINA 01	7	5°47'12.98"S	35°58'25.48"W	5.7869 S	35.9737 W	VENTOS DE SANTA MARTINA 01	8	5°47'18.03"S	35°58'30.90"W	5.7883 S	35.9753 W	VENTOS DE SANTA MARTINA 01	9	5°47'23.44"S	35°58'35.89"W	5.7898 S	35.9766 W	VENTOS DE SANTA MARTINA 01	10	5°47'30.38"S	35°58'39.01"W	5.7918 S	35.9775 W	VENTOS DE SANTA MARTINA 01	11	5°47'45.51"S	35°58'37.37"W	5.7960 S	35.9770 W	VENTOS DE SANTA MARTINA 01	12	5°47'49.90"S	35°58'44.15"W	5.7972 S	35.9789 W
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VENTOS DE SANTA MARTINA 01	13	5°47'54.29"S	35°58'50.67"W	5.7984 S	35.9807 W
VENTOS DE SANTA MARTINA 01	14	5°47'59.59"S	35°58'56.05"W	5.7999 S	35.9822 W
VENTOS DE SANTA MARTINA 01	15	5°48'4.41"S	35°59'2.02"W	5.8012 S	35.9839 W
VENTOS DE SANTA MARTINA 09	1	5°49'9.82"S	35°55'22.34"W	5.8194 S	35.9229 W
VENTOS DE SANTA MARTINA 09	2	5°49'1.48"S	35°55'18.86"W	5.8171 S	35.9219 W
VENTOS DE SANTA MARTINA 09	3	5°48'53.04"S	35°55'16.18"W	5.8147 S	35.9212 W
VENTOS DE SANTA MARTINA 09	4	5°48'45.16"S	35°55'12.28"W	5.8125 S	35.9201 W
VENTOS DE SANTA MARTINA 09	5	5°48'38.58"S	35°55'7.92"W	5.8107 S	35.9189 W
VENTOS DE SANTA MARTINA 09	6	5°48'31.89"S	35°55'4.58"W	5.8089 S	35.9179 W
VENTOS DE SANTA MARTINA 09	7	5°47'50.99"S	35°55'9.24"W	5.7975 S	35.9192 W
VENTOS DE SANTA MARTINA 09	8	5°47'42.45"S	35°54'59.48"W	5.7951 S	35.9165 W
VENTOS DE SANTA MARTINA 09	9	5°47'36.85"S	35°54'54.65"W	5.7936 S	35.9152 W
VENTOS DE SANTA MARTINA 09	10	5°47'31.35"S	35°54'49.33"W	5.7920 S	35.9137 W
VENTOS DE SANTA MARTINA 09	11	5°47'25.19"S	35°54'44.75"W	5.7903 S	35.9124 W
VENTOS DE SANTA MARTINA 09	12	5°47'20.11"S	35°54'39.23"W	5.7889 S	35.9109 W
VENTOS DE SANTA MARTINA 09	13	5°47'14.35"S	35°54'34.72"W	5.7873 S	35.9096 W
VENTOS DE SANTA MARTINA 09	14	5°47'8.19"S	35°54'30.63"W	5.7856 S	35.9085 W
VENTOS DE SANTA MARTINA 09	15	5°47'3.63"S	35°54'24.63"W	5.7843 S	35.9068 W
VENTOS DE SANTA MARTINA 10	1	5°51'1.65"S	35°56'30.87"W	5.8505 S	35.9419 W
VENTOS DE SANTA MARTINA 10	2	5°50'55.24"S	35°56'24.76"W	5.8487 S	35.9402 W
VENTOS DE SANTA MARTINA 10	3	5°50'49.42"S	35°56'18.10"W	5.8471 S	35.9384 W
VENTOS DE SANTA MARTINA 10	4	5°50'42.65"S	35°56'12.48"W	5.8452 S	35.9368 W
VENTOS DE SANTA MARTINA 10	5	5°50'35.88"S	35°56'6.86"W	5.8433 S	35.9352 W
VENTOS DE SANTA MARTINA 10	6	5°50'28.79"S	35°56'1.59"W	5.8413 S	35.9338 W
VENTOS DE SANTA MARTINA 10	7	5°50'21.50"S	35°55'56.36"W	5.8393 S	35.9323 W
VENTOS DE SANTA MARTINA 10	8	5°50'13.91"S	35°55'51.77"W	5.8372 S	35.9310 W
VENTOS DE SANTA MARTINA 10	9	5°50'5.96"S	35°55'47.74"W	5.8350 S	35.9299 W
VENTOS DE SANTA MARTINA 10	10	5°49'57.95"S	35°55'44.12"W	5.8328 S	35.9289 W
VENTOS DE SANTA MARTINA 10	11	5°49'49.90"S	35°55'40.54"W	5.8305 S	35.9279 W
VENTOS DE SANTA MARTINA 10	12	5°49'41.62"S	35°55'37.58"W	5.8282 S	35.9271 W

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VENTOS DE SANTA MARTINA 10	13	5°49'33.67"S	35°55'34.61"W	5.8260 S	35.9263 W
VENTOS DE SANTA MARTINA 10	14	5°49'25.76"S	35°55'29.86"W	5.8238 S	35.0861 W
VENTOS DE SANTA MARTINA 10	15	5°49'17.74"S	35°55'26.25"W	5.8216 S	35.9240 W
VENTOS DE SANTA MARTINA 11	1	5°46'59.04"S	35°54'18.67"W	5.7831 S	35.9052 W
VENTOS DE SANTA MARTINA 11	2	5°46'54.06"S	35°54'13.05"W	5.7817 S	35.9036 W
VENTOS DE SANTA MARTINA 11	3	5°46'48.79"S	35°54'7.93"W	5.7802 S	35.9022 W
VENTOS DE SANTA MARTINA 11	4	5°46'42.73"S	35°54'3.77"W	5.7785 S	35.9010 W
VENTOS DE SANTA MARTINA 11	5	5°46'36.47"S	35°53'59.84"W	5.7768 S	35.8999 W
VENTOS DE SANTA MARTINA 11	6	5°46'29.13"S	35°53'57.37"W	5.7748 S	35.8993 W
VENTOS DE SANTA MARTINA 11	7	5°46'22.12"S	35°53'54.41"W	5.7728 S	35.8984 W
VENTOS DE SANTA MARTINA 11	8	5°46'16.75"S	35°53'49.42"W	5.7713 S	35.8971 W
VENTOS DE SANTA MARTINA 11	9	5°46'11.37"S	35°53'44.39"W	5.7698 S	35.8957 W
VENTOS DE SANTA MARTINA 11	10	5°46'5.31"S	35°53'40.20"W	5.7681 S	35.8945 W
VENTOS DE SANTA MARTINA 11	11	5°46'0.46"S	35°53'34.56"W	5.7668 S	35.8929 W
VENTOS DE SANTA MARTINA 11	12	5°45'54.07"S	35°53'30.82"W	5.7650 S	35.8919 W
VENTOS DE SANTA MARTINA 11	13	5°45'49.16"S	35°53'25.21"W	5.7637 S	35.8903 W
VENTOS DE SANTA MARTINA 11	14	5°45'43.55"S	35°53'20.48"W	5.7621 S	35.8890 W
VENTOS DE SANTA MARTINA 11	15	5°45'38.34"S	35°53'15.25"W	5.7607 S	35.8876 W
VENTOS DE SANTA MARTINA 12	1	5°45'33.04"S	35°53'10.19"W	5.7592 S	35.8862 W
VENTOS DE SANTA MARTINA 12	2	5°45'26.55"S	35°53'5.94"W	5.7574 S	35.8850 W
VENTOS DE SANTA MARTINA 12	3	5°45'20.01"S	35°53'0.03"W	5.7556 S	35.8833 W
VENTOS DE SANTA MARTINA 12	4	5°42'58.16"S	35°53'1.59"W	5.7162 S	35.8838 W
VENTOS DE SANTA MARTINA 12	5	5°42'52.93"S	35°52'53.35"W	5.7147 S	35.8815 W
VENTOS DE SANTA MARTINA 12	6	5°42'48.97"S	35°52'44.36"W	5.7136 S	35.8790 W
VENTOS DE SANTA MARTINA 12	7	5°42'37.26"S	35°53'42.89"W	5.7104 S	35.8952 W
VENTOS DE SANTA MARTINA 12	8	5°42'43.72"S	35°53'46.55"W	5.7121 S	35.8963 W
VENTOS DE SANTA MARTINA 12	9	5°42'50.69"S	35°53'49.87"W	5.7141 S	35.8972 W
VENTOS DE SANTA MARTINA 12	10	5°42'57.93"S	35°53'52.76"W	5.7161 S	35.8980 W
VENTOS DE SANTA MARTINA 12	11	5°43'4.61"S	35°53'56.11"W	5.7179 S	35.8989 W
VENTOS DE SANTA MARTINA 12	12	5°43'10.71"S	35°54'0.23"W	5.7196 S	35.9001 W

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VENTOS DE SANTA MARTINA 12	13	5°43'17.49"S	35°54'3.48"W	5.7215 S	35.9010 W
VENTOS DE SANTA MARTINA 12	14	5°43'24.11"S	35°54'6.92"W	5.7234 S	35.9019 W
VENTOS DE SANTA MARTINA 12	15	5°43'29.91"S	35°54'11.37"W	5.7250 S	35.9032 W
VENTOS DE SANTA MARTINA 13	1	5°43'36.85"S	35°54'14.42"W	5.7269 S	35.9040 W
VENTOS DE SANTA MARTINA 13	2	5°43'43.54"S	35°54'17.77"W	5.7288 S	35.9049 W
VENTOS DE SANTA MARTINA 13	3	5°43'50.55"S	35°54'20.66"W	5.7307 S	35.9057 W
VENTOS DE SANTA MARTINA 13	4	5°43'57.13"S	35°54'24.17"W	5.7325 S	35.9067 W
VENTOS DE SANTA MARTINA 13	5	5°44'3.16"S	35°54'28.39"W	5.7342 S	35.9079 W
VENTOS DE SANTA MARTINA 13	6	5°44'9.65"S	35°54'31.99"W	5.7360 S	35.9089 W
VENTOS DE SANTA MARTINA 13	7	5°44'16.46"S	35°54'35.15"W	5.7379 S	35.9098 W
VENTOS DE SANTA MARTINA 13	8	5°44'23.57"S	35°54'38.01"W	5.7399 S	35.9106 W
VENTOS DE SANTA MARTINA 13	9	5°44'29.20"S	35°54'42.71"W	5.7414 S	35.9119 W
VENTOS DE SANTA MARTINA 13	10	5°44'36.41"S	35°54'45.51"W	5.7434 S	35.9126 W
VENTOS DE SANTA MARTINA 13	11	5°44'42.80"S	35°54'49.34"W	5.7452 S	35.9137 W
VENTOS DE SANTA MARTINA 13	12	5°45'8.71"S	35°54'44.96"W	5.7524 S	35.9125 W
VENTOS DE SANTA MARTINA 13	13	5°45'12.18"S	35°54'59.72"W	5.7534 S	35.9166 W
VENTOS DE SANTA MARTINA 13	14	5°45'18.18"S	35°55'3.97"W	5.7551 S	35.9178 W
VENTOS DE SANTA MARTINA 13	15	5°45'24.56"S	35°55'7.80"W	5.7568 S	35.9188 W
VENTOS DE SANTA MARTINA 13	16	5°45'30.72"S	35°55'11.83"W	5.0835 S	35.9200 W
VENTOS DE SANTA MARTINA 14	1	5°46'15.40"S	35°55'15.34"W	5.7709 S	35.9209 W
VENTOS DE SANTA MARTINA 14	2	5°46'23.56"S	35°55'20.80"W	5.7732 S	35.9224 W
VENTOS DE SANTA MARTINA 14	3	5°45'35.40"S	35°56'41.32"W	5.7598 S	35.9448 W
VENTOS DE SANTA MARTINA 14	4	5°45'42.57"S	35°56'44.21"W	5.7618 S	35.9456 W
VENTOS DE SANTA MARTINA 14	5	5°45'48.01"S	35°56'49.83"W	5.7633 S	35.9472 W
VENTOS DE SANTA MARTINA 14	6	5°45'52.86"S	35°56'55.47"W	5.7647 S	35.9487 W
VENTOS DE SANTA MARTINA 14	7	5°45'56.66"S	35°57'2.54"W	5.7657 S	35.9507 W
VENTOS DE SANTA MARTINA 14	8	5°46'1.84"S	35°57'7.76"W	5.7672 S	35.9522 W
VENTOS DE SANTA MARTINA 14	9	5°46'7.51"S	35°57'12.43"W	5.7688 S	35.9535 W
VENTOS DE SANTA MARTINA 14	10	5°46'10.55"S	35°57'20.31"W	5.7696 S	35.9556 W
VENTOS DE SANTA MARTINA 14	11	5°46'14.16"S	35°57'27.50"W	5.7706 S	35.9576 W

## Project Submission Form

	VENTOS DE SANTA MARTINA 14	12	5°46'18.62"S	35°57'33.63"W	5.7718 S	35.9593 W	
	VENTOS DE SANTA MARTINA 14	13	5°46'24.41"S	35°57'38.14"W	5.7734 S	35.9606 W	
	VENTOS DE SANTA MARTINA 14	14	5°46'30.38"S	35°57'42.42"W	5.7751 S	35.9618 W	
	VENTOS DE SANTA MARTINA 14	15	5°46'34.37"S	35°57'49.14"W	5.7762 S	35.9637 W	
	VENTOS DE SÃO JANUÁRIO 23	1	5°53'26.95"S	35°57'38.96"W	5.8908 S	35.9608 W	
	VENTOS DE SÃO JANUÁRIO 23	2	5°53'13.97"S	35°57'35.39"W	5.8872 S	35.9598 W	
	VENTOS DE SÃO JANUÁRIO 23	3	5°53'7.82"S	35°57'31.26"W	5.8855 S	35.9587 W	
	VENTOS DE SÃO JANUÁRIO 23	4	5°53'1.94"S	35°57'26.52"W	5.8839 S	35.9574 W	
	VENTOS DE SÃO JANUÁRIO 23	5	5°52'55.39"S	35°57'19.25"W	5.8821 S	35.9553 W	
	VENTOS DE SÃO JANUÁRIO 23	6	5°52'46.62"S	35°57'16.40"W	5.8796 S	35.9546 W	
	VENTOS DE SÃO JANUÁRIO 23	7	5°52'40.29"S	35°57'12.68"W	5.8779 S	35.9535 W	
	VENTOS DE SÃO JANUÁRIO 23	8	5°52'33.73"S	35°57'9.41"W	5.8760 S	35.9526 W	
	VENTOS DE SÃO JANUÁRIO 23	9	5°52'17.41"S	35°57'7.08"W	5.8715 S	35.9520 W	
	VENTOS DE SÃO JANUÁRIO 23	10	5°52'9.61"S	35°57'1.10"W	5.8693 S	35.9503 W	
	VENTOS DE SÃO JANUÁRIO 23	11	5°52'0.61"S	35°56'57.30"W	5.8668 S	35.9493 W	
	VENTOS DE SÃO JANUÁRIO 23	12	5°51'50.97"S	35°56'55.25"W	5.8642 S	35.9487 W	
	VENTOS DE SÃO JANUÁRIO 23	13	5°51'41.26"S	35°56'53.76"W	5.8615 S	35.9483 W	
	VENTOS DE SÃO JANUÁRIO 23	14	5°51'31.56"S	35°56'51.89"W	5.8588 S	35.1005 W	
	<b>Eligible GCC Project Type as per the Project Standard</b> (Tick applicable project type)	<input checked="" type="checkbox"/> <b>Type A:</b> <input type="checkbox"/> Type A1 <input checked="" type="checkbox"/> Type A2 <input checked="" type="checkbox"/> Sub-Type 1 <input type="checkbox"/> Sub-Type 2 <input type="checkbox"/> Sub-Type 3 <input type="checkbox"/> Sub-Type 4 <input type="checkbox"/> Type A3  <input type="checkbox"/> <b>Type B – De-registered CDM Projects:<sup>1</sup></b> <input type="checkbox"/> Type B1 <input type="checkbox"/> Type B2					

<sup>1</sup> Owners of Type B projects shall fill in the form provided in Appendix 7.



## Project Submission Form

<b>Minimum compliance requirements</b>	<input checked="" type="checkbox"/> Real and Measurable GHG Reductions <input checked="" type="checkbox"/> National Sustainable Development Criteria (if any) <input checked="" type="checkbox"/> Apply credible baseline and monitoring methodologies <input checked="" type="checkbox"/> Additionality <input checked="" type="checkbox"/> Local Stakeholder Consultation Process <input checked="" type="checkbox"/> Global Stakeholder Consultation Process <input checked="" type="checkbox"/> No GHG Double Counting <input checked="" type="checkbox"/> Contributes to United Nations Sustainable Development Goal 13 (Climate Action)
<b>Choose optional and additional requirements</b> <small>(Tick applicable label categories)</small>	<input checked="" type="checkbox"/> Do-no-net-harm Safeguards to address Environmental Impacts <input checked="" type="checkbox"/> Do-no-net-harm Safeguards to address Social Impacts <input checked="" type="checkbox"/> Contributes to United Nations Sustainable Development Goals (in addition to Goal 13)
<b>Applied methodologies including version No.</b> <small>(Shall be approved by the GCC or the CDM)</small>	Large-Scale Consolidated Methodology ACM0002 – Grid-connected electricity generation from renewable sources V21.0 <sup>2</sup>
<b>GHG Sectoral scope(s) linked to the applied methodology(ies)</b>	GHG-SS 1 – Energy (renewable / non-renewable sources)

<sup>2</sup> Available at: <<https://cdm.unfccc.int/methodologies/DB/HF3LP6O41YY0JIP1DK6ZRJO9RSCX3S>>.

## Project Submission Form

Applicable Rules and Requirements for Project Owners	Rules and Requirements	Version	
(Tick applicable Rules and Requirements)	<input checked="" type="checkbox"/> ISO 14064-2		
	<input checked="" type="checkbox"/> Applicable host country legal requirements /rules		
	<input checked="" type="checkbox"/> GCC Rules and Requirements <sup>3</sup>	<input checked="" type="checkbox"/> Project Standard	<a href="#">V3.1</a>
		<input type="checkbox"/> Approved GCC Methodology	
		<input checked="" type="checkbox"/> Program Definitions	<a href="#">V3.1</a>
		<input checked="" type="checkbox"/> Environment and Social Safeguards Standard	<a href="#">V3.0</a>
		<input checked="" type="checkbox"/> Project Sustainability Standard	<a href="#">V3.0</a>
		<input checked="" type="checkbox"/> Instructions in Project Submission Form (PSF)-template	<a href="#">V4.0</a>
		<input checked="" type="checkbox"/> Clarification No. 01	<a href="#">V1.3</a>
		<input type="checkbox"/> Clarification No. 02	
		<input checked="" type="checkbox"/> Clarification No. 03	<a href="#">V1.0</a>
		<input type="checkbox"/> Clarification No. 04	
		<input type="checkbox"/> Clarification No. 05	
		<input checked="" type="checkbox"/> Standard on avoidance of double counting	<a href="#">V1.0</a>
	<input type="checkbox"/> Add rows if required		
	<input checked="" type="checkbox"/> CDM Rules <sup>4</sup>	<input checked="" type="checkbox"/> Approved CDM Methodology (ACM0002 – Grid-connected electricity generation from renewable sources)	<a href="#">V21.0</a>
<input checked="" type="checkbox"/> TOOL 1- Tool for the demonstration and assessment of additionality		<a href="#">V07.0</a>	
<input type="checkbox"/> TOOL 02- Combined tool to identify the baseline			

<sup>3</sup> GCC Program rules and requirements: <http://www.globalcarboncouncil.com/resource-centre/>

<sup>4</sup> CDM Program rules: <https://cdm.unfccc.int/Reference/index.html>

## Project Submission Form

	scenario and demonstrate additionality	
	<input checked="" type="checkbox"/> TOOL 07- Tool to calculate the emission factor for an electricity system	<a href="#">V07.0</a>
	<input type="checkbox"/> TOOL 19- Demonstration of additionality of microscale project activities	
	<input type="checkbox"/> TOOL 21- Demonstration of additionality of small-scale project activities	
	<input type="checkbox"/> TOOL 23- Additionality of first-of-its-kind project activities	
	<input checked="" type="checkbox"/> TOOL 24- Common practice	<a href="#">V3.1</a>
	<input checked="" type="checkbox"/> TOOL 27- Investment analysis	<a href="#">V12.0</a>
	<input type="checkbox"/> TOOL 32- Positive lists of technologies	
	<input type="checkbox"/> Guidelines for objective demonstration and assessment of barriers	
	<input type="checkbox"/> Add rows if required	
<p><b>Choose Third Party Project Verification by approved GCC Verifiers<sup>5</sup></b></p> <p>(Tick applicable verification categories)</p>	<input checked="" type="checkbox"/> GHG emission reductions (i.e., Approved Carbon Credits <b>(ACCs)</b> ) <input checked="" type="checkbox"/> Environmental No-net-harm Label <b>(E<sup>+</sup>)</b> <input checked="" type="checkbox"/> Social No-net-harm Label <b>(S<sup>+</sup>)</b>  <input checked="" type="checkbox"/> United Nations Sustainable Development Goals <b>(SDG<sup>+</sup>)</b> <input type="checkbox"/> Bronze SDG Label <input type="checkbox"/> Silver SDG Label <input type="checkbox"/> Gold SDG Label <input type="checkbox"/> Platinum SDG Label <input checked="" type="checkbox"/> Diamond SDG Label	

<sup>5</sup> **Note:** GCC Verifiers under the Individual Track are not eligible to conduct verifications for GCC Project Activities whose owners intend to supply carbon credits (ACCs) for use within CORSIA.

## Project Submission Form

	<input checked="" type="checkbox"/> CORSIA requirements (C <sup>+</sup> ) <input checked="" type="checkbox"/> Host Country Attestation on Double counting <sup>6</sup>
<p><b>Declaration by the 'Authorized Project Owner<sup>7</sup> and focal point'</b></p> <p>(Tick all applicable statements<sup>8</sup>)</p>	<p>The Project Owner(s) declares that:</p> <p><b>Generic Requirements applicable to all Project Types:</b></p> <p><input type="checkbox"/> We confirm that the Project Activity complies with the eligibility of the applicable project type (A1, A2, A3, B1 or B2) as stipulated by the Project Standard and relevant clarifications.</p> <p><input type="checkbox"/> We confirm that the Project Activity shall start or have started operations, and shall start or have started generating emission reductions, on or after 1 January 2016.</p> <p><input type="checkbox"/> We confirm that the Project Activity is eligible to be registered under the GCC program.</p> <p>We shall ensure the following for the Project Activity (tick at least one of the two options):</p> <p><input type="checkbox"/> No outcomes (e.g., emission reductions, environmental attributes) generated by the Project Activity under GCC will be claimed as carbon credits or environmental attributes under any other GHG/non-GHG<sup>9</sup> program, either for compliance or voluntary purposes, during the entire GCC crediting period; or</p> <p><input type="checkbox"/> If the project activity has been issued with carbon credits or environmental attributes of compensating nature<sup>10</sup> by any other GHG/non-GHG program, either for compliance or voluntary purposes, the ACCs will be claimed only for the remaining crediting period (subject to a maximum of 10 years of crediting period including the periods under other programs and GCC program) for which carbon credits/ environmental attributes of compensating nature have not been issued by any other GHG/non-GHG program.</p> <p><b>Specific requirements applicable to respective Project Types:</b></p> <p><b><u>For Project Type A1:</u></b></p> <p><input type="checkbox"/> For Project Type A1, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other</p>

<sup>6</sup> Will be submitted after project validation, during the verification process.

<sup>7</sup> The Project Owner means the legal entity or organization that has overall control and responsibility for the Project Activity

<sup>8</sup> **Consequences in case of Non-compliance with declaration statements:** If at any point in time non-compliance with the declared statements is established as a result of negligence, fraud or wilful misconduct of the GCC Project Owner/s the GCC project activity will be disqualified, and the registration of the proposed Project Activity will be rejected.

<sup>9</sup> Non-GHG programs could be such as I-REC facilitating reliable energy claims with Renewable Energy Certificate (REC) schemes

<sup>10</sup> The environmental attributes of compensating nature are those which are used by captive users (e.g., corporates/industries) for offsetting their GHG emissions

## Project Submission Form

	<p>voluntary program and has not issued or will not issue credits under any other program.</p> <p><b><u>For Project Type A2 (Sub-Type 1):</u></b></p> <p><input checked="" type="checkbox"/> For Project Type A2 Sub-Type 1, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other voluntary program and has not issued or will not issue credits under any other program.</p> <p><b><u>For Project Type A2 (Sub-Type 2 or Sub-Type 3):</u></b></p> <p>For Project Type A2 Sub-Type 2 or Project Type A2 Sub-Type 3, we confirm that for Project Activity, which has been registered with CDM or any GHG/non-GHG Program and we shall (tick at least one of the two options):</p> <p><input type="checkbox"/> Submit a proof for deregistration from CDM; or</p> <p><input type="checkbox"/> Submit a signed &amp; stamped public undertaking, stating that the Project Owner will never submit any request for Issuance of ACCs or request for renewal of crediting period to CDM-EB or under article 6.4 or any authority after submission to GCC Program and shall formally inform CDM-EB or authority under article 6.4 or any authority after submission to GCC Program.</p> <p><input type="checkbox"/> For Project Type A2 Sub-Type 2 or Project Type A2 Sub-Type 3, we confirm that the Project Activity is NOT included as a component Project Activity (CPA) in any registered GHG Programme of Activities (PoA) or any other functionally equivalent grouped/aggregated activities under any GHG program (such as the CDM or any other voluntary program).</p> <p><b><u>For Project Type A2 (Sub-Type 4):</u></b></p> <p>For Project Type A2 Sub-Type 4, we confirm that the Project Activity has been included in a registered CDM-POA and we shall (tick at least one of the two options):</p> <p><input type="checkbox"/> Submit the proof for exclusion of CPA(s) from registered CDM-POA prior to the date of initial submission to the GCC Program; or</p> <p><input type="checkbox"/> Submit the proof of exclusion of CPA(s) from the registered CDM-PoA after the request for registration has been submitted to GCC Program but before the final decision is made by the GCC Steering Committee.</p> <p><b><u>For Project Type A3:</u></b></p> <p><input type="checkbox"/> For Project Type A3, we confirm that the Project Activity is NOT registered as a GHG Project Activity in any other GHG/non-GHG program or any other voluntary program and has not issued or will not issue credits under any other program.</p> <p><b><u>For Project Type B1 or B2:</u></b></p> <p>For Project Type B1 or Project Type B2, we confirm that for Project Activity, which has been registered with CDM or any GHG/non-GHG Program and we shall (tick at least one of the two options):</p>
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## Project Submission Form

	<p><input type="checkbox"/> Submit a proof for deregistration from CDM; or</p> <p><input type="checkbox"/> Submit a signed &amp; stamped public undertaking, stating that the Project Owner will never submit any request for Issuance of ACCs or request for renewal of crediting period to CDM-EB or under article 6.4 or any authority after submission to GCC Program and shall formally inform CDM-EB or authority under article 6.4 or any authority after submission to GCC Program.</p> <p><b>Requirements to avoid double counting:</b></p> <p>We intend to submit or have submitted a written attestation<sup>11</sup> (Host Country Letter of Authorization - HCLOA) from the host country's national focal point or focal point designee for CORSIA eligible units generated beyond 31 December 2020 at the following stages<sup>12</sup> (tick at least one of the three options):</p> <p><input type="checkbox"/> The initial submission for GSC; or</p> <p><input checked="" type="checkbox"/> Along with the submission for a request for registration (after Project Verification is completed); or</p> <p><input type="checkbox"/> Along with the submission for a request for the first or subsequent issuance of ACCs.</p> <p><b>Project specific requirements:</b></p> <p><b><u>CORSIA specific requirements:</u></b></p> <p><input checked="" type="checkbox"/> We confirm that bundled projects or grouped projects shall have registered crediting period starting on or after 1 Jan 2016 for the grouped/aggregated project as a whole.</p> <p><input checked="" type="checkbox"/> We confirm that the Project Activity meets all the requirement of the CORSIA Eligible Emissions Units<sup>13</sup> required for GCC projects and does not fall under the excluded unit types, methodologies, programme elements, and/or procedural classes.</p> <p><input checked="" type="checkbox"/> We confirm that the Project Activity aims to achieve at least Silver or higher SDG+ label (i.e., positively impact at least 3 or more United Nations Sustainability Development Goals).</p> <p><input checked="" type="checkbox"/> We confirm that the Project Activity will be implemented in a country which is UN member state<sup>14</sup>.</p> <p>Provide details (if any) below for the boxes ticked above:</p>
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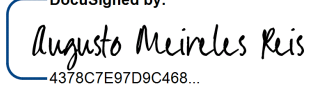

<sup>11</sup>In case of any change of Host Country Letter of Authorisation (HCLOA) the project owner shall inform the GCC operations team immediately

<sup>12</sup> If the host country attestation is not submitted at the initial submission of GSC, the project can be tagged with an indicative CORSIA flag if it's confirmed to be submitted later. If the host country attestation is not submitted at the request for registration, the project can be tagged with an indicative CORSIA flag if at least the PSF and Verification Report confirms to submit this letter, at first issuance. If the host country attestation is not submitted at request for first issuance, the ACCs will not be tagged as CORSIA (C+) compliant if this letter is not submitted.

<sup>13</sup> CORSIA Eligible Emissions Units containing approval and conditions for GCC Program: <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-Emissions-Units.aspx>

<sup>14</sup> The list of UN member states countries can be found at <https://www.un.org/en/about-us/member-states>

## Project Submission Form

	<p>The Project Owner(s) declares that:</p> <p><input checked="" type="checkbox"/> All the information provided in this document, including any supporting documents submitted to the GCC or its registry operator IHS Markit at any time, is true and correct.</p> <p><input checked="" type="checkbox"/> They understand that a failure by them to provide accurate information or data, or concealing facts and information, can be considered as negligence, fraud or willful misconduct. Therefore, they are aware that they are fully responsible for any liability that arises as a result of such actions.</p> <p>Provide details below for the boxes ticked above</p>
<b>Appendixes 1-9</b>	Details about the Project Activity are provided in Appendixes 1 through 9 to this document.
<b>Name, designation, date and signature of the Focal point (as per LON/LOA)</b>	<p>On behalf of Casa dos Ventos Comercializadora de Energia S/A</p> <p>DocuSigned by:    <small>4378C7E97D9C468...</small></p> <p><b>Augusto Reis</b>  <b>Manager</b></p> 
	12-December-2022

## 1. PROJECT SUBMISSION FORM

### Section A. Description of the Project Activity

#### A.1. Purpose and general description of the Project Activity

>> The proposed project activity consists in the implementation and operation of eight new wind electricity generation facilities, Ventos de Santa Martina I, IX, X, XI, XII, XIII, XIV and Ventos de São Januário XXIII, located in the municipalities of Caiçara do Rio do Vento, Ruy Barbosa and Riachuelo, in the Rio Grande do Norte state, Brazil. The project activity will employ 120 horizontal-axis aerogenerators (model: Vestas V150), each with 4.2 MW (total nominal capacity: 504 MW). The windfarms Ventos de Santa Martina I, IX, X, XI, XII, XIV mentioned above will use 15 aerogenerators each, Ventos de Santa Martina XIII will use 16 aerogenerators and São Januário XXIII will use 14 aerogenerators. The physical implementation of the project activity started on 18/05/2021.

The project activity will deliver 2.519.700 MWh/year of renewable electricity to the National Interconnected System (Sistema Interligado Nacional - SIN). In the baseline, electricity delivered to the grid by the project activity would have been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations. Hence, the project activity will promote GHG emissions reductions by displacing fossil fuel-based electricity generation that would otherwise occur.

The project boundary includes CO<sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. Project and leakage emissions are not expected. The project activity contributes to the host country's sustainable development in the following ways:

- Contribution to local environmental sustainability: The project activity will produce renewable electricity from low environmental impact wind power plants;
- Contribution to the net workplace generation: New job posts were created by the project activity, especially during project implementation;
- Contribution towards the diversification of the electric mix and towards energetic security: The period when there is the greatest abundance of wind resources is coincident with the period of the smallest hydraulic availability, in Brazil. Hence, wind-based electricity generation is complementary to hydroelectricity, which contributes to the security of renewable electricity supply throughout the year and, hence, to the diminishment of the dependence upon fossil fuels during the dry season<sup>15</sup>
- Contribution to technological learning and technological development: This type of project can stimulate similar initiatives inside the Brazilian energy sector and encourage the development of modern and more efficient renewable energy units throughout Brazil.

Main goals of the Rio do Vento Complex project include:

- Utilization of the wind potential of Brazil in order to meet increasing electricity demand and maintain energy security.
- Reduction of GHG emissions through increasing share of renewable.

<sup>15</sup> Brasil, Agência Nacional de Energia Elétrica, Atlas de Energia Elétrica do Brasil (Brasília, DF: ANEEL).



## Project Submission Form

- Contribution to economic development by creating direct and indirect job opportunities during construction and operation phases.
- Reduction of import dependency on fossil fuel weighed electricity sector and diversify generation mix through use of local resources.
- Contribution to sustainable development through supporting local communities and local economy.

In terms of local benefits, the project mainly contributes to the reductions of fossil fuel in thermoelectric industries.

The project contributes to 6 SDGs which are SDG 1, 7, 8, 9, 10, 11 and 13.

- **SDG 1 No Poverty:** The project contributes to SDG Target 1.2.1 - Proportion of the population living below the national poverty line, by sex, age, employment status and geographic location (urban/rural), by creating direct and indirect employment opportunities, including long term job posts.
- **SDG 7 Energy:** The project contributes to SDG Target 7.2 “By 2030, increase substantially the share of renewable energy in the global energy mix” by the utilization of biomass as a renewable energy source.
- **SDG 8 Economic Growth:** The project creates direct and indirect employment opportunities during construction and operation phases, so it contributes to SDG Target 8.5 “By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities and equal pay for work of equal value”.
- **SDG 9 Infrastructure, Industrialization:** SDG Target 9.4 requires “By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities”. The project helps the Target 9.4 by implementing a clean, reliable and environmental-friendly infrastructure for clean energy production / up-to-date industrialization.
- **SDG 10 Reduce inequality within and among countries:** Target 10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality.
- **SDG 11 Sustainable Cities and Communities:** The project helps SDG Target 11.6 “By 2030, reduce the adverse per capita environmental impacts of cities, including by paying special attention to air quality and municipal and other waste management.” by decreasing particulate matter caused by fossil fuel emissions in the cities.
- **SDG 13 Climate Change:** The project produces clean renewable energy by diminishing CO<sub>2</sub> emissions. Therefore, it contributes SDG Target 13.3 “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning”.

In addition, the table below provide the main information regarding the total emission reductions estimates as well as annual estimates average emission reductions of the Rio do Vento Complex Project:

**Table 1 - Emission reductions estimates**

<b>Years</b>	<b>Annual estimation of emission reductions in tonnes of CO<sub>2</sub>e</b>
<b>From May 2021</b>	383.099
<b>2022</b>	919.438

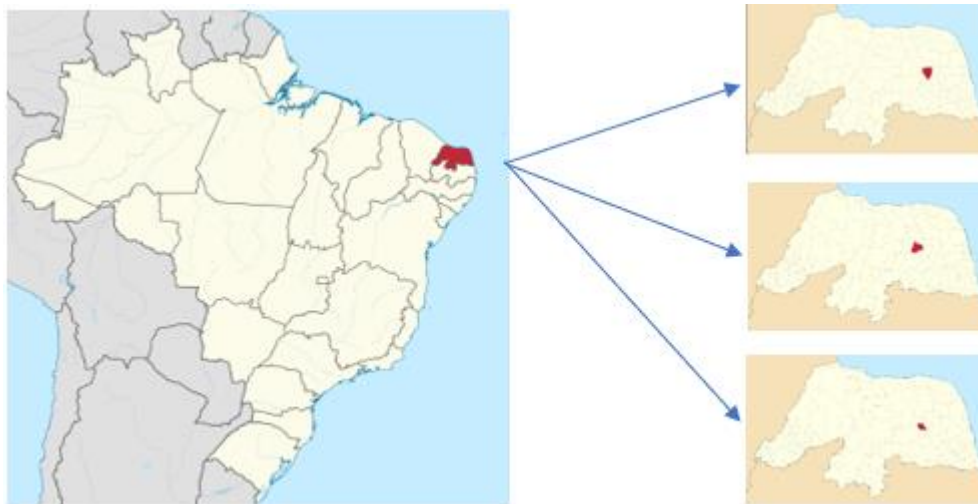
## Project Submission Form

<b>2023</b>	919.438
<b>2024</b>	919.438
<b>2025</b>	919.438
<b>2026</b>	919.438
<b>2027</b>	919.438
<b>2028</b>	919.438
<b>2029</b>	919.438
<b>2030</b>	919.438
<b>2031</b>	536.338
<b>Total estimated reductions (tonnes of CO<sub>2</sub>e)</b>	<b>9.194.379</b>
<b>Total number of crediting years</b>	10
<b>Annual average over the crediting period of estimated reductions (tonnes of CO<sub>2</sub>e)</b>	919.438

## A.2. Location of the Project Activity

>> The project is located in the municipalities of Caiçara do Rio do Vento, Ruy Barbosa and Riachuelo in the Rio Grande do Norte state, Brazilian northeast. The table below shows the address and geodetic coordinates of the physical site of the Project Activity of each SPE.

**Figure 1 - Geographic location of the project activity. Left figure the localization of the Rio Grande do Norte state within Brazil in red. Right figure the localization of the municipality of Caiçara do Rio do Vento, Ruy Barbosa and Riachuelo in the Rio Grande**



Project Submission Form

Figure 2 - Ventos de São Martina 01 - aerogenerators

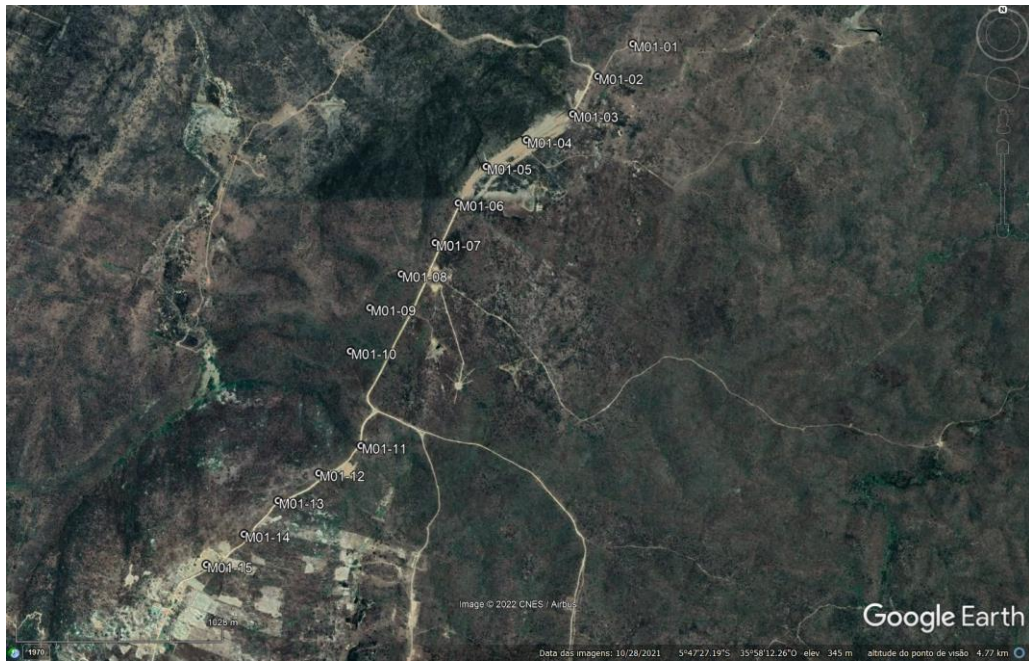
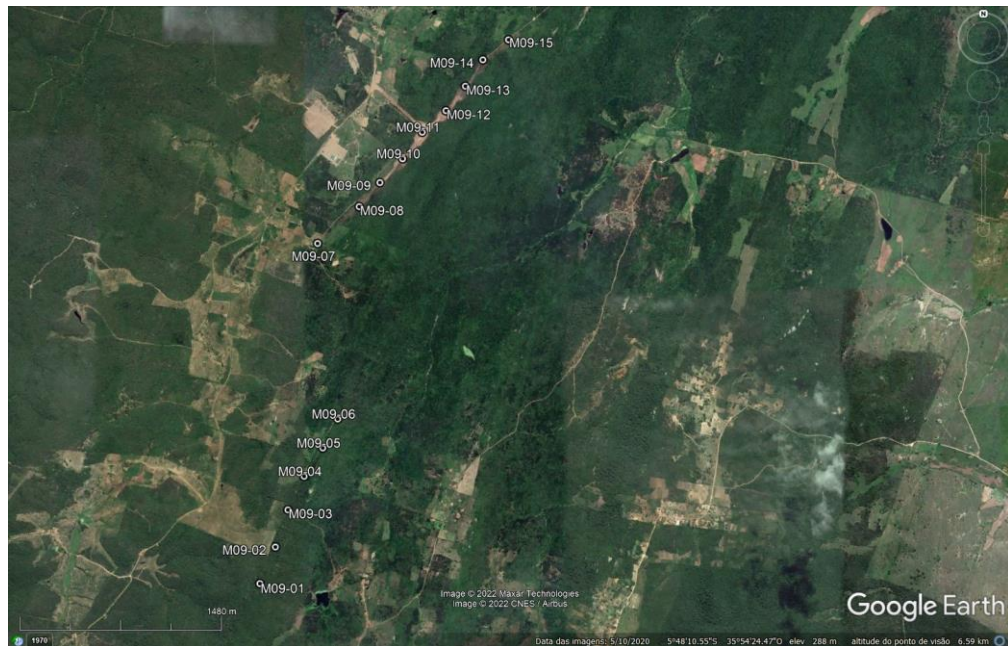


Figure 3 - Ventos de São Martina 09 - aerogenerators

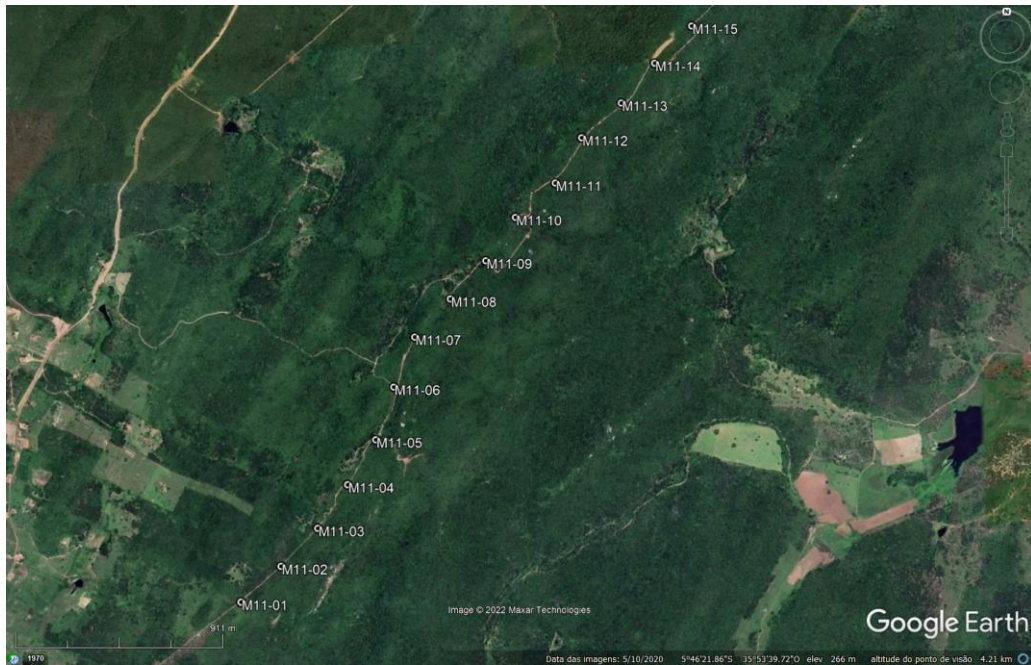


Project Submission Form

Figure 4 - Ventos de São Martina 10 - aerogenerators



Figure 5 - Ventos de São Martina 11 - aerogenerators



Project Submission Form

Figure 6 - Ventos de São Martina 12 - aerogenerators



Figure 7 - Ventos de São Martina 13 - aerogenerators



Project Submission Form

Figure 8 - Ventos de São Martina 14 - aerogenerators

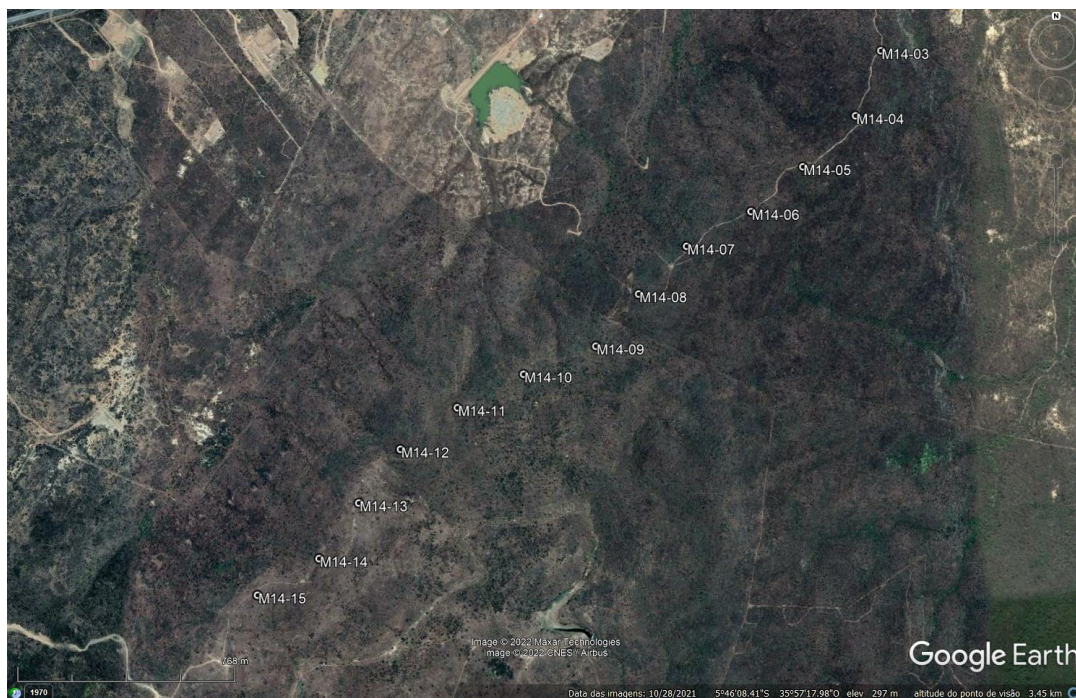


Figure 9 - Ventos de São Januário 23 - aerogenerators

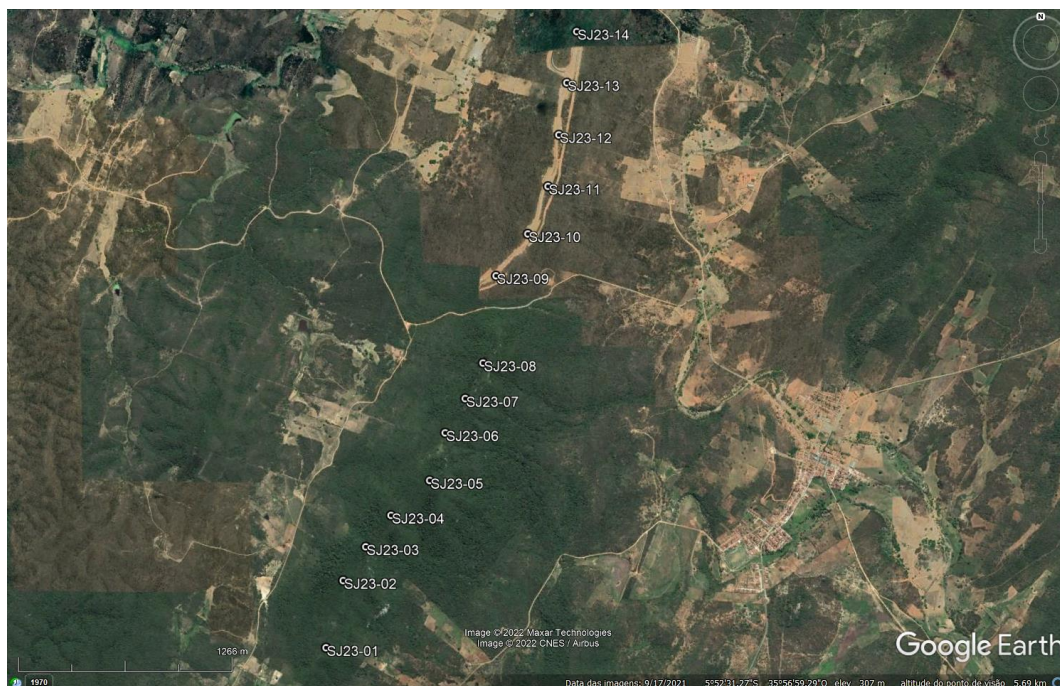


Table 2 - Address and geodetic coordinates of the physical site of the Project Activity

## Project Submission Form

Facility	Physical address	Aerogenerator	Latitude DMS	Longitude DMS	Lat DD	Lon DD
VENTOS DE SANTA MARTINA 01	Fazenda Laginha, Zona Rural, Municipality of Caçara do Rio do Vento/RN.	1	5°46'40.92"S	35°57'53.55"W	5.7780 S	35.9649 W
VENTOS DE SANTA MARTINA 01		2	5°46'46.03"S	35°57'59.17"W	5.7795 S	35.9664 W
VENTOS DE SANTA MARTINA 01		3	5°46'52.22"S	35°58'3.26"W	5.7812 S	35.9676 W
VENTOS DE SANTA MARTINA 01		4	5°46'56.48"S	35°58'10.75"W	5.7824 S	35.9697 W
VENTOS DE SANTA MARTINA 01		5	5°47'0.70"S	35°58'17.26"W	5.7835 S	35.9715 W
VENTOS DE SANTA MARTINA 01		6	5°47'6.56"S	35°58'21.78"W	5.7852 S	35.9727 W
VENTOS DE SANTA MARTINA 01		7	5°47'12.98"S	35°58'25.48"W	5.7869 S	35.9737 W
VENTOS DE SANTA MARTINA 01		8	5°47'18.03"S	35°58'30.90"W	5.7883 S	35.9753 W
VENTOS DE SANTA MARTINA 01		9	5°47'23.44"S	35°58'35.89"W	5.7898 S	35.9766 W
VENTOS DE SANTA MARTINA 01		10	5°47'30.38"S	35°58'39.01"W	5.7918 S	35.9775 W
VENTOS DE SANTA MARTINA 01		11	5°47'45.51"S	35°58'37.37"W	5.7960 S	35.9770 W
VENTOS DE SANTA MARTINA 01		12	5°47'49.90"S	35°58'44.15"W	5.7972 S	35.9789 W
VENTOS DE SANTA MARTINA 01		13	5°47'54.29"S	35°58'50.67"W	5.7984 S	35.9807 W
VENTOS DE SANTA MARTINA 01		14	5°47'59.59"S	35°58'56.05"W	5.7999 S	35.9822 W
VENTOS DE SANTA MARTINA 01		15	5°48'4.41"S	35°59'2.02"W	5.8012 S	35.9839 W
VENTOS DE SANTA MARTINA 09	Fazenda Riacho do Xavier, s/n, Zona Rural, Municipality of Riachuelo/RN and Ruy Barbosa/RN.	1	5°49'9.82"S	35°55'22.34"W	5.8194 S	35.9229 W
VENTOS DE SANTA MARTINA 09		2	5°49'1.48"S	35°55'18.86"W	5.8171 S	35.9219 W
VENTOS DE SANTA MARTINA 09		3	5°48'53.04"S	35°55'16.18"W	5.8147 S	35.9212 W
VENTOS DE SANTA MARTINA 09		4	5°48'45.16"S	35°55'12.28"W	5.8125 S	35.9201 W
VENTOS DE SANTA MARTINA 09		5	5°48'38.58"S	35°55'7.92"W	5.8107 S	35.9189 W
VENTOS DE SANTA MARTINA 09		6	5°48'31.89"S	35°55'4.58"W	5.8089 S	35.9179 W
VENTOS DE SANTA MARTINA 09		7	5°47'50.99"S	35°55'9.24"W	5.7975 S	35.9192 W
VENTOS DE SANTA MARTINA 09		8	5°47'42.45"S	35°54'59.48"W	5.7951 S	35.9165 W
VENTOS DE SANTA MARTINA 09		9	5°47'36.85"S	35°54'54.65"W	5.7936 S	35.9152 W
VENTOS DE SANTA MARTINA 09		10	5°47'31.35"S	35°54'49.33"W	5.7920 S	35.9137 W
VENTOS DE SANTA MARTINA 09		11	5°47'25.19"S	35°54'44.75"W	5.7903 S	35.9124 W
VENTOS DE SANTA MARTINA 09		12	5°47'20.11"S	35°54'39.23"W	5.7889 S	35.9109 W
VENTOS DE SANTA MARTINA 09		13	5°47'14.35"S	35°54'34.72"W	5.7873 S	35.9096 W
VENTOS DE SANTA MARTINA 09		14	5°47'8.19"S	35°54'30.63"W	5.7856 S	35.9085 W
VENTOS DE SANTA MARTINA 09		15	5°47'3.63"S	35°54'24.63"W	5.7843 S	35.9068 W
VENTOS DE SANTA MARTINA 10	Fazenda Boqueirão, s/n, Zona Rural, access through BR 304 - Km 232, Municipality of Ruy Barbosa/RN.	1	5°51'1.65"S	35°56'30.87"W	5.8505 S	35.9419 W
VENTOS DE SANTA MARTINA 10		2	5°50'55.24"S	35°56'24.76"W	5.8487 S	35.9402 W
VENTOS DE SANTA MARTINA 10		3	5°50'49.42"S	35°56'18.10"W	5.8471 S	35.9384 W
VENTOS DE SANTA MARTINA 10		4	5°50'42.65"S	35°56'12.48"W	5.8452 S	35.9368 W
VENTOS DE SANTA MARTINA 10		5	5°50'35.88"S	35°56'6.86"W	5.8433 S	35.9352 W

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VENTOS DE SANTA MARTINA 10		6	5°50'28.79"S	35°56'1.59"W	5.8413 S	35.9338 W
VENTOS DE SANTA MARTINA 10		7	5°50'21.50"S	35°55'56.36"W	5.8393 S	35.9323 W
VENTOS DE SANTA MARTINA 10		8	5°50'13.91"S	35°55'51.77"W	5.8372 S	35.9310 W
VENTOS DE SANTA MARTINA 10		9	5°50'5.96"S	35°55'47.74"W	5.8350 S	35.9299 W
VENTOS DE SANTA MARTINA 10		10	5°49'57.95"S	35°55'44.12"W	5.8328 S	35.9289 W
VENTOS DE SANTA MARTINA 10		11	5°49'49.90"S	35°55'40.54"W	5.8305 S	35.9279 W
VENTOS DE SANTA MARTINA 10		12	5°49'41.62"S	35°55'37.58"W	5.8282 S	35.9271 W
VENTOS DE SANTA MARTINA 10		13	5°49'33.67"S	35°55'34.61"W	5.8260 S	35.9263 W
VENTOS DE SANTA MARTINA 10		14	5°49'25.76"S	35°55'29.86"W	5.8238 S	35.0861 W
VENTOS DE SANTA MARTINA 10		15	5°49'17.74"S	35°55'26.25"W	5.8216 S	35.9240 W
VENTOS DE SANTA MARTINA 11	Fazenda Melosa I, Zona Rural, Municipality of Riachuelo/RN.	1	5°46'59.04"S	35°54'18.67"W	5.7831 S	35.9052 W
VENTOS DE SANTA MARTINA 11		2	5°46'54.06"S	35°54'13.05"W	5.7817 S	35.9036 W
VENTOS DE SANTA MARTINA 11		3	5°46'48.79"S	35°54'7.93"W	5.7802 S	35.9022 W
VENTOS DE SANTA MARTINA 11		4	5°46'42.73"S	35°54'3.77"W	5.7785 S	35.9010 W
VENTOS DE SANTA MARTINA 11		5	5°46'36.47"S	35°53'59.84"W	5.7768 S	35.8999 W
VENTOS DE SANTA MARTINA 11		6	5°46'29.13"S	35°53'57.37"W	5.7748 S	35.8993 W
VENTOS DE SANTA MARTINA 11		7	5°46'22.12"S	35°53'54.41"W	5.7728 S	35.8984 W
VENTOS DE SANTA MARTINA 11		8	5°46'16.75"S	35°53'49.42"W	5.7713 S	35.8971 W
VENTOS DE SANTA MARTINA 11		9	5°46'11.37"S	35°53'44.39"W	5.7698 S	35.8957 W
VENTOS DE SANTA MARTINA 11		10	5°46'5.31"S	35°53'40.20"W	5.7681 S	35.8945 W
VENTOS DE SANTA MARTINA 11		11	5°46'0.46"S	35°53'34.56"W	5.7668 S	35.8929 W
VENTOS DE SANTA MARTINA 11		12	5°45'54.07"S	35°53'30.82"W	5.7650 S	35.8919 W
VENTOS DE SANTA MARTINA 11		13	5°45'49.16"S	35°53'25.21"W	5.7637 S	35.8903 W
VENTOS DE SANTA MARTINA 11		14	5°45'43.55"S	35°53'20.48"W	5.7621 S	35.8890 W
VENTOS DE SANTA MARTINA 11		15	5°45'38.34"S	35°53'15.25"W	5.7607 S	35.8876 W
VENTOS DE SANTA MARTINA 12	Fazenda Ubaia, access through BR-304, Km 229, s/n, Zona Rural, Municipality of Bento Fernandes/RN.	1	5°45'33.04"S	35°53'10.19"W	5.7592 S	35.8862 W
VENTOS DE SANTA MARTINA 12		2	5°45'26.55"S	35°53'5.94"W	5.7574 S	35.8850 W
VENTOS DE SANTA MARTINA 12		3	5°45'20.01"S	35°53'0.03"W	5.7556 S	35.8833 W
VENTOS DE SANTA MARTINA 12		4	5°42'58.16"S	35°53'1.59"W	5.7162 S	35.8838 W
VENTOS DE SANTA MARTINA 12		5	5°42'52.93"S	35°52'53.35"W	5.7147 S	35.8815 W
VENTOS DE SANTA MARTINA 12		6	5°42'48.97"S	35°52'44.36"W	5.7136 S	35.8790 W
VENTOS DE SANTA MARTINA 12		7	5°42'37.26"S	35°53'42.89"W	5.7104 S	35.8952 W
VENTOS DE SANTA MARTINA 12		8	5°42'43.72"S	35°53'46.55"W	5.7121 S	35.8963 W
VENTOS DE SANTA MARTINA 12		9	5°42'50.69"S	35°53'49.87"W	5.7141 S	35.8972 W
VENTOS DE SANTA MARTINA 12		10	5°42'57.93"S	35°53'52.76"W	5.7161 S	35.8980 W
VENTOS DE SANTA MARTINA 12		11	5°43'4.61"S	35°53'56.11"W	5.7179 S	35.8989 W
VENTOS DE SANTA MARTINA 12		12	5°43'10.71"S	35°54'0.23"W	5.7196 S	35.9001 W



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VENTOS DE SANTA MARTINA 12		13	5°43'17.49"S	35°54'3.48"W	5.7215 S	35.9010 W
VENTOS DE SANTA MARTINA 12		14	5°43'24.11"S	35°54'6.92"W	5.7234 S	35.9019 W
VENTOS DE SANTA MARTINA 12		15	5°43'29.91"S	35°54'11.37"W	5.7250 S	35.9032 W
VENTOS DE SANTA MARTINA 13	Fazenda Cachoeira do Sapo, access through BR 304 - Km 229, s/n, Zona Rural, Municipality of Riachuelo/RN and Bento Fernandes/RN.	1	5°43'36.85"S	35°54'14.42"W	5.7269 S	35.9040 W
VENTOS DE SANTA MARTINA 13		2	5°43'43.54"S	35°54'17.77"W	5.7288 S	35.9049 W
VENTOS DE SANTA MARTINA 13		3	5°43'50.55"S	35°54'20.66"W	5.7307 S	35.9057 W
VENTOS DE SANTA MARTINA 13		4	5°43'57.13"S	35°54'24.17"W	5.7325 S	35.9067 W
VENTOS DE SANTA MARTINA 13		5	5°44'3.16"S	35°54'28.39"W	5.7342 S	35.9079 W
VENTOS DE SANTA MARTINA 13		6	5°44'9.65"S	35°54'31.99"W	5.7360 S	35.9089 W
VENTOS DE SANTA MARTINA 13		7	5°44'16.46"S	35°54'35.15"W	5.7379 S	35.9098 W
VENTOS DE SANTA MARTINA 13		8	5°44'23.57"S	35°54'38.01"W	5.7399 S	35.9106 W
VENTOS DE SANTA MARTINA 13		9	5°44'29.20"S	35°54'42.71"W	5.7414 S	35.9119 W
VENTOS DE SANTA MARTINA 13		10	5°44'36.41"S	35°54'45.51"W	5.7434 S	35.9126 W
VENTOS DE SANTA MARTINA 13		11	5°44'42.80"S	35°54'49.34"W	5.7452 S	35.9137 W
VENTOS DE SANTA MARTINA 13		12	5°45'8.71"S	35°54'44.96"W	5.7524 S	35.9125 W
VENTOS DE SANTA MARTINA 13		13	5°45'12.18"S	35°54'59.72"W	5.7534 S	35.9166 W
VENTOS DE SANTA MARTINA 13		14	5°45'18.18"S	35°55'3.97"W	5.7551 S	35.9178 W
VENTOS DE SANTA MARTINA 13		15	5°45'24.56"S	35°55'7.80"W	5.7568 S	35.9188 W
VENTOS DE SANTA MARTINA 13		16	5°45'30.72"S	35°55'11.83"W	5.0835 S	35.9200 W
VENTOS DE SANTA MARTINA 14	Fazenda Catolé, access through BR 304 - Km 224, s/n, Zona Rural, Municipality of Caiçara do Rio do Vento/RN.	1	5°46'15.40"S	35°55'15.34"W	5.7709 S	35.9209 W
VENTOS DE SANTA MARTINA 14		2	5°46'23.56"S	35°55'20.80"W	5.7732 S	35.9224 W
VENTOS DE SANTA MARTINA 14		3	5°45'35.40"S	35°56'41.32"W	5.7598 S	35.9448 W
VENTOS DE SANTA MARTINA 14		4	5°45'42.57"S	35°56'44.21"W	5.7618 S	35.9456 W
VENTOS DE SANTA MARTINA 14		5	5°45'48.01"S	35°56'49.83"W	5.7633 S	35.9472 W
VENTOS DE SANTA MARTINA 14		6	5°45'52.86"S	35°56'55.47"W	5.7647 S	35.9487 W
VENTOS DE SANTA MARTINA 14		7	5°45'56.66"S	35°57'2.54"W	5.7657 S	35.9507 W
VENTOS DE SANTA MARTINA 14		8	5°46'1.84"S	35°57'7.76"W	5.7672 S	35.9522 W
VENTOS DE SANTA MARTINA 14		9	5°46'7.51"S	35°57'12.43"W	5.7688 S	35.9535 W
VENTOS DE SANTA MARTINA 14		10	5°46'10.55"S	35°57'20.31"W	5.7696 S	35.9556 W
VENTOS DE SANTA MARTINA 14		11	5°46'14.16"S	35°57'27.50"W	5.7706 S	35.9576 W
VENTOS DE SANTA MARTINA 14		12	5°46'18.62"S	35°57'33.63"W	5.7718 S	35.9593 W
VENTOS DE SANTA MARTINA 14		13	5°46'24.41"S	35°57'38.14"W	5.7734 S	35.9606 W
VENTOS DE SANTA MARTINA 14		14	5°46'30.38"S	35°57'42.42"W	5.7751 S	35.9618 W
VENTOS DE SANTA MARTINA 14		15	5°46'34.37"S	35°57'49.14"W	5.7762 S	35.9637 W
VENTOS DE SÃO JANUÁRIO 23	Sitio Fontainha, access through BR 304, Km 221, - Zona Rural,	1	5°53'26.95"S	35°57'38.96"W	5.8908 S	35.9608 W
VENTOS DE SÃO JANUÁRIO 23		2	5°53'13.97"S	35°57'35.39"W	5.8872 S	35.9598 W
VENTOS DE SÃO JANUÁRIO 23		3	5°53'7.82"S	35°57'31.26"W	5.8855 S	35.9587 W

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VENTOS DE SÃO JANUÁRIO 23	Municipality of Ruy Barbosa, RN	4	5°53'1.94"S	35°57'26.52"W	5.8839 S	35.9574 W
VENTOS DE SÃO JANUÁRIO 23		5	5°52'55.39"S	35°57'19.25"W	5.8821 S	35.9553 W
VENTOS DE SÃO JANUÁRIO 23		6	5°52'46.62"S	35°57'16.40"W	5.8796 S	35.9546 W
VENTOS DE SÃO JANUÁRIO 23		7	5°52'40.29"S	35°57'12.68"W	5.8779 S	35.9535 W
VENTOS DE SÃO JANUÁRIO 23		8	5°52'33.73"S	35°57'9.41"W	5.8760 S	35.9526 W
VENTOS DE SÃO JANUÁRIO 23		9	5°52'17.41"S	35°57'7.08"W	5.8715 S	35.9520 W
VENTOS DE SÃO JANUÁRIO 23		10	5°52'9.61"S	35°57'1.10"W	5.8693 S	35.9503 W
VENTOS DE SÃO JANUÁRIO 23		11	5°52'0.61"S	35°56'57.30"W	5.8668 S	35.9493 W
VENTOS DE SÃO JANUÁRIO 23		12	5°51'50.97"S	35°56'55.25"W	5.8642 S	35.9487 W
VENTOS DE SÃO JANUÁRIO 23		13	5°51'41.26"S	35°56'53.76"W	5.8615 S	35.9483 W
VENTOS DE SÃO JANUÁRIO 23		14	5°51'31.56"S	35°56'51.89"W	5.8588 S	35.1005 W

### A.3. Technologies/measures

>> Wind energy is defined as the Kinect energy contained by moving air masses (wind). Its use to produce electricity occurs by means of the conversion of translational Kinect energy in rational Kinect energy and then, by means of the conversion of the former form of energy into electricity, by means of the employment of wind turbines or aerogenerators.

Environmental pros of wind-bases electricity generation recognizably include contribution for atmospheric emissions reduction (including non-GHG gases) by thermoelectric plants, smaller demand for the construction of new large hydropower plants reservoirs, and the reduction of the risk derived from hydrological seasonality, in light of aforementioned complementary nature of wind-based and hydroelectric electricity generation in Brazil.

As previously mentioned, the proposed project activity consists in the implementation and operation of eight new wind electricity generation facilities, Ventos de Santa Martina I, IX, X, XI, XII, XIII, XIV and Ventos de São Januário XXIII, located in the municipalities of Caiçara do Rio do Vento, Ruy Barbosa and Riachuelo, in the Rio Grande do Norte state, Brazil, at sites where no electricity generation facilities existed prior to the implementation of the project activity. The project activity will employ 120 horizontal-axis aerogenerators (model: Vestas V150), each with 4.2 MW (total nominal capacity: 504 MW). The facilities Ventos de Santa Martina 01, 09, 10, 11, 12 and 14 will use 15 aerogenerators each. The facilities Ventos de Santa Martina 13 will use 16 aerogenerators and the Ventos de São Januário 23 will use 14 aerogenerators.

The Table 3 below summarizes the information about each electricity generation facilities with the current plant load factor of the project activity.

**Table 3 - Main information about each electricity generation facilities**

Unit Name	Numbers of aerogenerators (unit) <sup>16</sup>	Model <sup>17</sup>	Installed capacity (%) <sup>18</sup>	Net Capacity Factor (P50)
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<sup>16</sup> According to Camargo Schubert Reports, Ref. C&S-CPE-2862/18 Complexo Eólico Rio do Vento II

<sup>17</sup> According to Camargo Schubert Reports, Ref. C&S-CPE-2862/18 Complexo Eólico Rio do Vento II

<sup>18</sup> According to Camargo Schubert Reports, Ref. C&S-CPE-2862/18 Complexo Eólico Rio do Vento II

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				<b>(MW)<sup>19</sup></b>
Ventos de Santa Martina 01	15	V150-4.2MW, hh-90m <sup>20</sup>	63	62.8
Ventos de Santa Martina 09	15	V150-4.2MW, hh-90m	63	50.4
Ventos de Santa Martina 10	15	V150-4.2MW, hh-90m	63	65.9
Ventos de Santa Martina 11	15	V150-4.2MW, hh-90m	63	49.5
Ventos de Santa Martina 12	15	V150-4.2MW, hh-90m	63	50.1
Ventos de Santa Martina 13	16	V150-4.2MW, hh-90m	67.2	60.7
Ventos de Santa Martina 14	15	V150-4.2MW, hh-90m	63	63.0
Ventos de São Januário 23	14	V150-4.2MW, hh-90m	58.8	53.7

**Table 4 - Basic information regarding each electricity generation facilities**

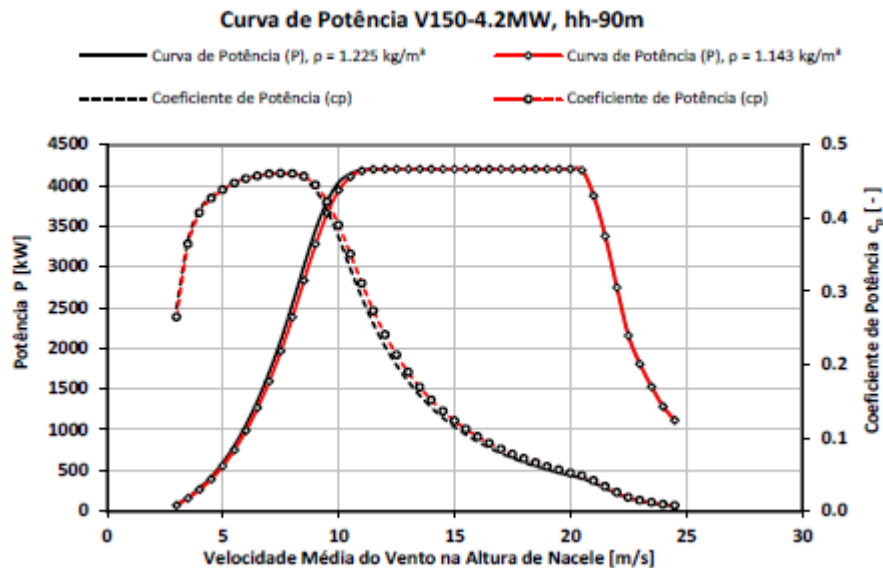
<b>General Information</b>	
Model	V150-4.2MW
Manufacturer	Vestas
Rated Power	4200 kW
Rotor diameter	150 m
Rotor shaft height	90 m
Power control	Pitch
Turbine IEC Class	S
Performance Curves (Power, Cp and Ct)	"V150-4.0/4.2 MW 50/60 Hz, Document no.: 0067-7067 V08, 2017-12-21"

<sup>19</sup> According to Camargo Schubert Reports, Ref. C&S-CPE-2862/18 Complexo Eólico Rio do Vento II

<sup>20</sup> Vestas V150-5.2MW. Available at: <https://www.vestas.com/en/products/4-mw-platform/V150-4-2-MW>

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Figure 10 - Power Curve V150-4.2MW, hh-90m



Vestas, the aerogeneration supplier to the project activity belongs to the Vestas Group, the energy industry's global partner on sustainable energy solutions. We design, manufacture, install, and service wind turbines across the globe, and with +154 GW of wind turbines in 87 countries, we have installed more wind power than anyone else. Through our industry-leading smart data capabilities and +132 GW of wind turbines under service, we use data to interpret, forecast, and exploit wind resources and deliver best-in-class wind power solutions. Together with our customers, Vestas' more than 29,000 employees are bringing the world sustainable energy solutions to power a bright future.<sup>21</sup>

#### A.4. Project Owner(s)

Location/ Country	Project Owner(s)	Where applicable <sup>22</sup> , indicate if the host country has provided approval (Yes/No)
Brazil	Casa dos Ventos Comercializadora de Energia S/A	Yes

#### A.5. Declaration of intended use of Approved Carbon Credits (ACCs) generated by the Project Activity

>> The Project Activity is expected to generate ACCs for a full 10-year crediting period and supply the credits to offset the following GHG emissions:

<sup>21</sup> More information available at: <https://www.vestas.com/en/about/this-is-vestas/history>

<sup>22</sup> For example, *Project Coordination Form* is to be filled-in by Project Owners for projects located in Qatar. A written attestation from the host country's national focal point or the focal point's designee, as required by CORSIA (Refer section A.5 of the PSF guidelines).

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Period		Name of the Entities	Purpose and Quantity of ACCs to be supplied
From	To		
18/05/2021	17/05/2031	Casa dos Ventos Comercializadora de Energia S/A	For offsetting Greenhouse gases 9,194,379 tCO <sub>2</sub> e for 10- year period

The project owner confirms that the ACC's generated from the project will not be double counted in any other mechanism.

#### A.6. Additional requirements for CORSIA

>> Please see Section E and F.

## Section B. Application of selected methodology(ies)

### B.1. Reference to methodology(ies) and tools applied in the project

>> The United Nations approved consolidated baseline methodology applicable to this project is ACM 0002 "Consolidated methodology for grid-connected electricity generation from renewable sources", Version 21.0<sup>23</sup>.

This methodology also refers to the latest approved versions of the following tools<sup>24</sup>:

- TOOL 01: "Tool for the demonstration and assessment of additionality. Latest approved version at the time of conclusion of the PSF: Version 7.0.0.
- TOOL 07: "Tool to calculate the emission factor for an electricity system". Latest approved version at the time of conclusion of the PSF: Version 7.0.
- TOOL 24: "Common Practice". Latest approved version at the time of conclusion of the PSF: Version 3.1.
- TOOL 27: "Investment Analysis". Latest approved version at the time of conclusion of the PSF: Version 12.0.

### B.2. Applicability of methodology(ies) and tools applied in the project

>> The proposed project activity consists in the installation of a grid-connected renewable power generation facility at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant). This is in accordance with the applicability conditions of ACM0002 Version 20.0. Therefore, this methodology was applied to the project activity.

Furthermore, the project activity fulfills the remaining applicability conditions of ACM0002 Version 20.0 which presents the following requirements:

<sup>23</sup> Available at: <<https://cdm.unfccc.int/methodologies/DB/HF3LP6O41YY0JIP1DK6ZRJO9RSCX3S>>

<sup>24</sup> Available at: <<https://cdm.unfccc.int/Reference/tools/index.html>>

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- The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, **solar power plant/unit**, wave power plant/unit or tidal power plant/unit”.
- The project activity does not involve:
  - Switching from fossil fuels to renewable energy sources at the site of the project activity.
  - Biomass fires power plants.
  - Hydro power plants that result in a new reservoir or in the increase in existing reservoirs where the power density of the power plant is less than 4 w/m<sup>2</sup>.

<b>Applicability Conditions – ACM0002</b>	<b>Project</b>
3. This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).	The project consists of an install a greenfield power plant
4. The methodology is applicable under the following conditions: (a) The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit; (b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	The project activity includes a photovoltaic power plant
5. In case of hydro power plants, one of the following conditions shall apply: 1 (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m <sup>2</sup> ; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m <sup>2</sup> ; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m <sup>2</sup> , all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m <sup>2</sup> ; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density	Not applicable, this is not a hydro power plant.

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lower than or equal to 4 W/m <sup>2</sup> shall be: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.	
In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity.	Not applicable, this is not a hydro power plant.
The methodology is not applicable to: (a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units	Not applicable
In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	Not applicable, this is not a retrofit project.

This methodology also refers to the latest approved versions of the following tools. In the table below, a small summary of the applicability of the tools follows.

Reference TOOL	Applicability	Applicable in this project
TOOL 1 " Tool for the demonstration and assessment of additionality" 07.0	The use of the "Tool for the demonstration and assessment of additionality" is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool. 10. Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.	Yes
TOOL 2 "Combined tool to identify the baseline scenario and demonstrate additionality" V07.0	4. The tool is applicable to all types of proposed project activities. However, in some cases, methodologies referring to this tool may require adjustments or additional explanations as per the guidance in the respective methodologies. This could include, inter alia, a listing of	No

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	relevant alternative scenarios that should be considered in Step 1, any relevant types of barriers other than those presented in this tool and guidance on how common practice should be established.	
TOOL 3 “Tool to calculate project or leakage CO <sub>2</sub> emissions from fossil fuel combustion” V03.0	2.1 This tool it can be used in cases where CO <sub>2</sub> emissions from fossil fuel combustion are calculated based on the quantity of fuel combusted and its properties. Methodologies using this tool should specify to which combustion process this tool is being applied.	No
TOOL 5 “Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation” V03.0	<p>5. If emissions are calculated for electricity consumption, the tool is only applicable if one out of the following three scenarios applies to the sources of electricity consumption: (a) Scenario A: Electricity consumption from the grid. The electricity is purchased from the grid only, and either no captive power plant(s) is/are installed at the site of electricity consumption or, if any captive power plant exists on site, it is either not operating or it is not physically able to provide electricity to the electricity consumer; (b) Scenario B: Electricity consumption from (an) off-grid fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants are installed at the site of the electricity consumer and supply the consumer with electricity. The captive power plant(s) is/are not connected to the electricity grid; or (c) Scenario C: Electricity consumption from the grid and (a) fossil fuel fired captive power plant(s). One or more fossil fuel fired captive power plants operate at the site of the electricity consumer. The captive power plant(s) can provide electricity to the electricity consumer. The captive power plant(s) is/are also connected to the electricity grid. Hence, the electricity consumer can be provided with electricity from the captive power plant(s) and the grid.</p> <p>6. This tool can be referred to in methodologies to provide procedures to monitor amount of electricity generated in the project scenario, only if one out of the following three project scenarios applies to the recipient of the electricity generated: (a) Scenario I: Electricity is supplied to the grid; (b) Scenario II: Electricity is supplied to consumers/electricity consuming facilities; or (c) Scenario III: Electricity is supplied to the grid and consumers/electricity consuming facilities.</p> <p>7. This tool is not applicable in cases where captive renewable power generation technologies are installed to provide electricity in the project activity, in the baseline scenario or to sources of leakage. The tool only accounts for CO<sub>2</sub> emissions.</p>	No
TOOL 7 “Tool to calculate the emission factor for an electricity system” V07.7	<p>3. This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).</p> <p>4. Under this tool, the emission factor for the project electricity system can be calculated either for grid power</p>	Yes



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	<p>plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project participants, i.e. option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.</p> <p>5. In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.</p> <p>6. Under this tool, the value applied to the CO<sub>2</sub> emission factor of biofuels is zero.</p>	
TOOL 10 “Tool to determine the remaining lifetime of equipment” V01.0	<p>The tool may, be used for project activities which involve the replacement of existing equipment with new equipment or which retrofit existing equipment as part of energy efficiency improvement activities.</p> <p>Methodologies referring to this tool should clearly specify for which equipment the remaining lifetime should be determined. The remaining lifetime of relevant equipment shall be determined prior to the implementation of the project activity. Project participants using this tool shall document transparently in the CDM-PDD how the remaining lifetime of applicable equipment has been determined, including (references to) all documentation used.</p> <p>Under this tool, impacts on the lifetime of the equipment due to policies and regulations (e.g. environmental regulations) or changes in the services needed (e.g. increased energy demand) are not considered.</p>	No
TOOL 11 “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period” V03.0.1	<p>This tool provides a stepwise procedure to assess the continued validity of the baseline and to update the baseline at the renewal of a crediting period, as required by paragraph 49 (a) of the modalities and procedures of the clean development mechanism. The tool consists of two steps. The first step provides an approach to evaluate whether the current baseline is still valid for the next crediting period. The second step provides an approach to update the baseline in case that the current baseline is not valid anymore for the next crediting period.</p>	No
TOOL 24 “Common practice” V03.1	<p>3. This methodological tool is applicable to project activities that apply the methodological tool “Tool for the demonstration and assessment of additionality”, the methodological tool “Combined tool to identify the baseline scenario and demonstrate additionality”, or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality.</p>	Yes

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	4. In case the applied approved baseline and monitoring methodology defines approaches for the conduction of the common practice test that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	
TOOL 27 " Investment analysis"	2.This methodological tool is applicable to project activities that apply the methodological tool "Tool for the demonstration and assessment of additionality", the methodological tool "Combined tool to identify the baseline scenario and demonstrate additionality", the guidelines "Non-binding best practice examples to demonstrate additionality for SSC project activities", or baseline and monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario. 3. In case the applied approved baseline and monitoring methodology contains requirements for the investment analysis that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.	Yes
TOOL 32 "Positive lists of technologies" V04.0	4. The use of this methodological tool is not mandatory for the project participants of a CDM project activity or CDM PoA for demonstrating their additionality. 5. This methodological tool shall be applied in conjunction with a small-scale or large-scale methodology which refers to this tool. 6. The positive lists as contained in section 5 of this tool are valid up to 10 March 2025. Notwithstanding the provisions on the validity of new, revised and previous versions of methodologies and methodological tools in the "Procedure: Development, revision and clarification of baseline and monitoring methodologies and methodological tools", there will be no grace period for the application of this tool and the validity of the positive list after this date, including in cases where further technologies are added to the positive list through revisions of this tool before this date.	No

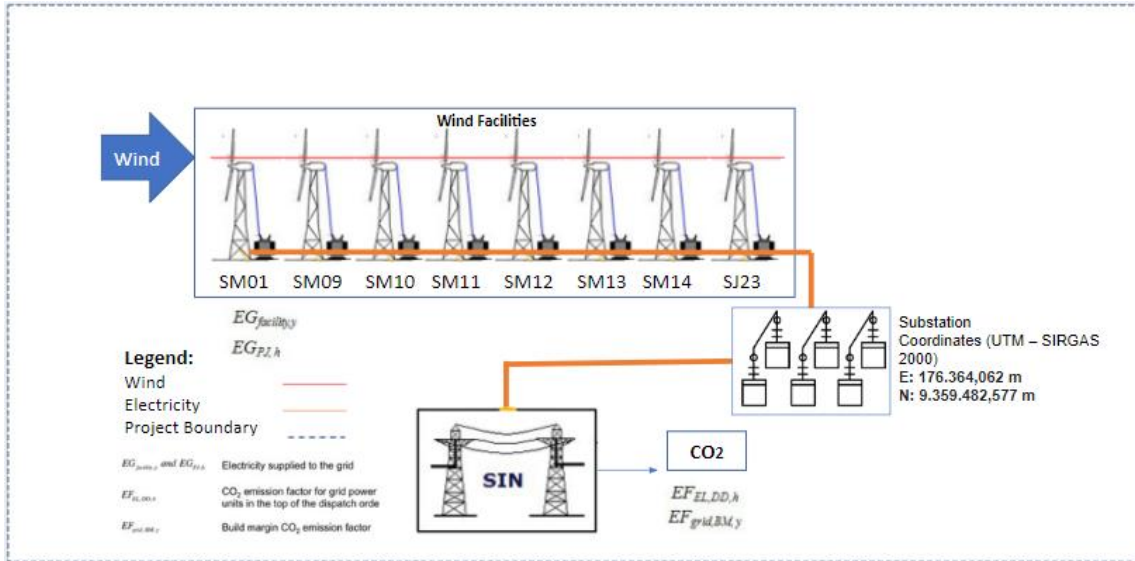
### B.3. Project boundary, sources and greenhouse gases (GHGs)

>> The spatial extent of the project boundary includes the project power plants (i.e., Ventos de São Martina 01, Ventos de São Martina 09, Ventos de São Martina 10, Ventos de São Martina 11, Ventos de São Martina 12, Ventos de São Martina 13, Ventos de São Martina 14, Ventos de São Januário 23) and all plants connected physically to the electricity system that the CDM Project power plant is connected to the i.e., SIN. Emissions sources and gases included in the project boundary are described in Table 1.

A flow diagram of the project boundary, physically delineating the project activity, representing emissions sources and gases included in the project boundary and the monitoring variables, is described in Figure 1.

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**Figure 11 - Project boundary. Monitored variables are depicted. Baseline emissions consist of CO<sub>2</sub> emissions from fossil fuel combustion for the generation of electricity by the plants connected to SIN as reflected in its combined margin.**



The table below provides an overview of the emissions sources included or excluded from the project boundary for determination of baseline and project emissions.

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**Table 5 - Emissions sources included in the project boundary, as per ACM0002 Version 21.0**

Source		GHG	Included?	Justification/Explanation	
Baseline	Electricity Generation	CO <sub>2</sub>	Yes	Main emission source	
		CH <sub>4</sub>	No	Minor emissions source. Excluded by simplification	
		N <sub>2</sub> O	No	Minor emissions source. Excluded by simplification	
Project Activity	For geothermal power plants, fugitive emissions of CH <sub>4</sub> and CO <sub>2</sub> from non-condensable gases contained in geothermal steam. CO <sub>2</sub> emissions from combustion of fossil fuel from electricity generation in solar thermal power plants and geothermal power plants	CO <sub>2</sub>	No	Not applicable. Project is not a geothermal power plant.	
		CH <sub>4</sub>	No	Not applicable. Project is not a geothermal power plant.	
		N <sub>2</sub> O	No	Not applicable. Project is not a geothermal power plant.	
		CO <sub>2</sub>	No	Not applicable. Project is a wind power plant.	
	Source 2 For hydro power plants, emissions of CH <sub>4</sub> from the reservoir	CH <sub>4</sub>	No	Not applicable. Project is a wind power plant.	
		N <sub>2</sub> O	No	Not applicable. Project is a wind power plant.	
		CO <sub>2</sub>	No	Not applicable. Project is not a hydro power plant.	
		CH <sub>4</sub>	No	Not applicable. Project is not a hydro power plant.	
	---	For geothermal power plants, fugitive emissions of CH <sub>4</sub> and CO <sub>2</sub> from non-condensable gases contained in geothermal steam.	N <sub>2</sub> O	No	Not applicable. Project is not a hydro power plant.
			CO <sub>2</sub>	No	Not applicable. Project is not a geothermal power plant.
			CH <sub>4</sub>	No	Not applicable. Project is not a geothermal power plant.
			N <sub>2</sub> O	No	Not applicable. Project is not a geothermal power plant.

**B.4. Establishment and description of the baseline scenario**

>> As per ACM0002 Version 21.0, since the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following:

*“Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the tool “Tool to calculate the emission factor for an electricity system”.*

**B.5. Demonstration of additionality**

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>> As per ACM0002 Version 21.0, the additionality of the project activity shall be demonstrated and assessed using the latest version of the “Tool for the demonstration and assessment of additionality”.

Therefore, the demonstration of additionality was developed according to version 07.0.0 of the CDM “Tool for the demonstration and assessment of additionality<sup>2516</sup>”. This tool provides a stepwise approach to demonstrate and assess the additionality of a project activity.

These steps are:

- Step 0: Demonstration whether the proposed project activity is the first-of-its-kind;
  - Step 1: Identification of alternatives to the project activity.
  - Step 2: Investment analysis.
  - Step 3: Barriers analysis; and
  - Step 4: Common practice analysis
- **Step 0. Demonstration whether the proposed project activity is the first-of-its-kind**

This step is not applied once the proposed project activity is not considered as the first-of-its-kind.

- **Step 1. Identification of alternatives to the project activity consistent with current laws and Regulations**

Define realistic and credible alternatives to the project activity(s) through the following Sub-steps:

Sub-step 1a. Define alternatives to the project activity:

The realistic alternatives to the project activity are:

P1: The project activity not implemented as an emission reduction project activity.

P2: The continuation of the current situation, that is to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance. The additional power generated under the project would be generated in existing and new grid-connected power plants in the electricity system.

Sub-step 1b. Consistency with mandatory laws and regulations:

Both scenarios described on the previous step are in compliance with mandatory laws and regulations. The installation of renewable and non-renewable power plants (with or without emission reduction project activities) is permitted by the Brazilian regulatory framework.

A brief description of Brazilian Regulatory is presented in this section:

The Brazilian Regulatory Framework underwent different structural and conceptual changes in the last two decades, resulting in three models for the electric sector: a state-based model, a free-market model and the current model, adopted in 2004. Under the state model, the electric sector was

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<sup>25</sup> The tool is available at: <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

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dominated almost exclusively by state-owned and vertical companies that covered the energy generation, transmission, and distribution segments.

Following the free market model, which faced some difficulties in terms of allocating investments to supply a growing demand for energy generation, the current model was adopted. Under this model, the Brazilian Government oversees planning and sets sector policies, while promoting private sector investments to finance the need to expand generation capacity. This new regulatory model provided a more efficient mechanism of power procurement between generators and distributors, primarily by creating two parallel electricity trading environments: the Regulated Contracting Environment, referred to as ACR (*Ambiente de Contratação Regulada*), where energy is finally contracted based on the lowest tariffs defined by a regulated auctioning process, and the Free Contracting Environment, referred to as ACL (*Ambiente de Contratação Livre*).

As previously stated, private entities are free to make decisions regarding their investments under the electric sector, as long as they comply to the existing regulatory framework. Hence, both alternatives to the project activity are plausible and consistent with mandatory laws and regulations.

- **Step 2. Investment analysis**

According to the “Tool for the demonstration and assessment of additionality”, project participants shall determine whether the proposed project activity is not:

- a) The most economically or financially attractive alternative.
- b) Economically or financially feasible, without the revenue from the sale of Verified Emission Reductions (VERs).

The investment analysis follows the CDM “Methodological tool Investment analysis”, version 12.0<sup>26</sup>. To conduct the investment analysis, the following steps must be used:

### Sub-step 2a. Determine appropriate analysis method

Three methods are available to determine the investment analysis. If the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income, then apply the simple cost analysis (Option I). Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III).

Since the alternatives identified in Step 1 generate financial or economic benefits other than carbon credits related income (namely the sale of electricity), then the investment comparison analysis (Option II) or the benchmark analysis (Option III) shall be used. The benchmark analysis will be applied, as requested under section 5.2(b) of ACM0002, the methodology applied for this project.

Therefore, the Option III was chosen.

### Sub-step 2b – Option III. Apply benchmark analysis financial indicator identification

The Project’s Internal Return Rate (IRR) is selected as an appropriated financial indicator. The IRR was calculated in real terms, i.e. without considering the impact of inflation, and after payment of

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<sup>26</sup> Tool available at: <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-27-v12.pdf>

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taxes. The resulting financial indicator therefore is a post-tax project IRR given in real terms and therefore compatible with the benchmark defined in the following lines.

The project IRR calculation provided below complies with requirements of the CDM “Methodological Tool Investment Analysis”, version 12.0.

**Benchmark identification:** as per the referred tool, local commercial lending rates as considered appropriate lending rates for a project IRR. Therefore, the Brazilian Treasury Note Series B (NTN-B) was defined as an appropriate benchmark.

- **Sub-step 2c. Calculation and comparison of financial indicators**

Under this sub-step, the suitable financial indicators for the project activity shall be calculated.

The cash flow of Rio do Vento Complex is presented in detail for the Project Verifier that will perform Project Verification and to any entity linked to the GCC that request it for assessing the project additionality. In addition, key assumptions used on the calculation of the Project IRR are further described below:

1. **Assessment Period:** The cash flow considers a period of twenty-three years. Such period includes an initial period for the investment and implementation of Rio do Vento Complex (2019 to 2021) and a twenty year period of effective energy generation (from 2021 to 2041). This is in line with the provisions of paragraph 6 of the CDM Methodological tool Investment Analysis, version 12.0, which defines that the IRR calculation must preferably reflect the expected operational lifetime of the project activity. The expected operational life was defined as twenty years, based on Casa dos Ventos documentation.<sup>27</sup>
2. **Fair value:** The fair value of the project’s assets was not included and the end of the assessment period, as the assessment period covers more than 20 years, which is generally considered the operational lifetime of the wind power projects.
3. **Validity of assumptions and parameters:** input values and assumptions considered on the cash flow presented were valid and applicable at the time of the investment decision taken by the project participant. Such decision was made in May 2019, prior to the purchase of wind turbines from Vestas.
4. **Cost of financing expenditures:** even though Casa dos Ventos has incurred in significant financing expenditures (loans repayment), these items were not considered on the cash flow presented for the assessment of project additionality.
5. **Nature of the Cash Flow:** The project cash flow has been performed in nominal terms. However, the Internal Rate of Return of the Project was calculated in real terms, i.e. without considering the impact of inflation.

The tables below provide the main input values used on the cash flow of Rio do Vento Complex.

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<sup>27</sup> According to the VESTAS V150 4.2MW Lifecycle assessment of electricity production from an onshore V150 – 4.2MW wind plant.

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**Table 6 - Financial Assumptions**

Item	Description	Unit	Values
<b>Installed Capacity</b>	Installed Capacity, as evidenced by the Energy Certification Report <sup>2818</sup>	MW	<b>504</b>
<b>Electricity generated for sale</b>	The P90 energy generation scenario was considered, as evidenced by the Energy Certification Report.	MWh/year	<b>1,920,805</b>
<b>Plant Load Factor</b>	The P90 energy generation scenario was considered, as evidenced by the Energy Certification Report	%	49.72
<b>Electricity Price</b>	The energy price of a Power Purchase Agreement signed by Casa dos Ventos with a major corporation in Brazil in April 2019 was considered as the reference for the expected energy price.	R\$/MWh	<b>106.00</b>

**Table 7 - Investments and Operational costs**

Item	Description	Unit	Values
<b>Investment (CAPEX)</b>	CAPEX includes the purchase of Wind turbines, electrical components, project development, civil construction, and other items. The cost of wind turbines represents more than 76% of total CAPEX, this value was taken from a contract for the purchase of Wind turbines signed by Casa dos Ventos and Vestas.	R\$	2,011,380,143
<b>O&amp;M Costs</b>	O&M costs include the costs for maintenance of wind Power Plant and the transmission lines. These costs have been sourced from Casa dos Ventos financial model.	R\$/year (average over assessed period)	57,421,828.62

**Table 8 - Taxes**

Item	Description	Unit	Values
<b>PIS/COFINS</b>	Budgeted as applicable Brazilian Law 10,637, Law 10,833 and Normative Instruction 247.	%	PIS: 0.65% COFINS: 3,00%
<b>CSLL</b>	Budgeted as applicable Brazilian Law 9,249 and Law 9,431	%	9%
<b>IRPJ</b>	Budgeted as applicable Brazilian Law 9,249 and Law 9,430 (up to income = R\$ 240,000)	%	25%



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**Investment analysis results**

The Project Internal Rate of Return, in real terms, resulting of the cash flow based on the assumptions is presented in the table below:

**Table 9 - Project Indicators X Benchmark**

<b>Project IRR</b>	<b>Benchmark (Treasury Note)</b>
2.85%	5.21%

The investment analysis was carried out in accordance with option III of the “Tool for the demonstration and assessment of additionality” and the result shows that the financial result of the project is lower than the benchmark. Therefore, it is possible to conclude that the project activity cannot be considered financially attractive.

- **Sub-step 2d. Sensitivity analysis**

The main variables that can affect the project's finances are:

- (i) Expected energy generation;
- (ii) Energy sale price (energy tariff)
- (iii) CAPEX
- (iv) O&M costs for Wind turbines.

The sensitivity analysis considers only those scenarios that would lead to an increase in the economic and financial attractiveness of the project, as a credibility test on the analysis provided under the previous sub-steps. The Table below presents how changes in the main parameters affect project IRR.

**Table 10 - Sensitivity Analysis**

<b>Parameter</b>	<b>Variation</b>	<b>IRR</b>	<b>Required variation for Project IRR exceed the benchmark</b>
Expected energy generation	+5%	3.54%	+18.25%
	+10%	4.20%	
	+20%	5.41%	
Energy sale price	+5%	3.53%	+18.60%
	+10%	4.18%	
	+20%	5.37%	
CAPEX	-5%	3.32%	-23.50%
	-10%	3.81%	
	-20%	4.83%	
O&M costs	-5%	2.95%	Impossible value
	-10%	3.05%	

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Parameter	Variation	IRR	Required variation for Project IRR exceed the benchmark
	-20%	3.24%	

A brief discussion regarding the likelihood of each scenario is presented as follows.

- **Expected energy generation:**

The expected energy generation is likely to fluctuated on any given wind power project. However, the financial model considered the P90 energy generation scenario, which is a realistic scenario that was determined as part of the Project Development for Rio do Vento Complex. In addition, Rio do Vento Complex P90 scenario indicates a Plant Load Factor of 49.72%, which is a high Plant Load Factor for wind power projects.

Information from a monthly report of ONS in May 2019 indicates that the average Plant Load Factors of wind power plants operating at that time was 41.3% for the last twelve months<sup>29</sup>. Therefore, given the uncertainties involved in determining the expected energy generation, an increase of 18.25% on the P90 value was not a reasonable assumption at the time of investment decision, considering the long-term nature of the investment.

- **Energy sale price:**

The energy sale price is also subject to variation and uncertainty. Rio do Vento Complex was expected to sell most of its electricity under the ACL, where prices vary significantly. However, for a long-term planning and decision making, Casa dos Ventos has considered a fix energy price based on a Power Purchase Agreement signed with a large corporation in Brazil on April, 2019, prior to the moment of investment decision.

Therefore, a price of R\$106,00 was considered for the energy sold. This price is in accordance with price levels available at the time. Information from the Brazilian Electric Energy Commercialization Chamber (*Câmara de Comercialização de Energia Elétrica – CCEE*) indicate energy prices on Auctions held between December 2018 and May 2019 (a six months period prior to the investment decision) averaged R\$94.50<sup>30</sup>, which is 11% lower than the price considered by Casa dos Ventos. In addition, at that time, Casa dos Ventos had also sold a small amount of energy in an Auction with a price of R\$89.00.

Therefore, considering a price increase of 18.60% (energy price of R\$125.72) was not a reasonable assumption for Casa dos Ventos at the time of investment decision.

- **CAPEX**

The sensitivity analysis indicates a reduction of 23.50% on the CAPEX would be required for the project IRR reach the expected benchmark. Such variation is not reasonable, as the CAPEX considered on the financial decision by Casa dos Ventos was based on a contract signed with Vestas, which stipulated the price for acquiring the Wind turbines. Wind turbines alone represent more than

<sup>29</sup>Information taken from ONS Monthly Report from May, 2019, available at: <http://www.ons.org.br/AcervoDigitalDocumentosEPublicacoes/Boletim%20Mensal%20de%20Gera%C3%A7%C3%A3o%20E%C3%B3lica%202019-05.pdf>. The average Plant Load Factor was taken from Section 6.9, Page 31

<sup>30</sup> Information taken from CCEE Prices Dashboard available at: <https://www.ccee.org.br/web/guest/precos/painel-precos>. Prices were obtained from the Section "Planilhas para download dos dados históricos", which allows downloading historical average data.

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76% of total CAPEX and, since this cost was already defined, any variation on the CAPEX would have to be marginal.

- **O&M costs**

The sensitivity analysis indicates no variation of the O&M costs would make the Project IRR reach the benchmark, even if these costs were excluded from consideration. Even so, no significant variation of O&M costs was expected, since a significant part of O&M costs are related to wind turbines and prices were considered according to a contract signed between Casa dos Ventos and Vestas.

As demonstrated above, the sensitivity analysis indicates the Project is not expected to be financially/economically attractive. Therefore, the demonstration of additionality proceeds to Step 3 or Step 4, as described below.

- **Step 3. Barrier analysis**

This step is optional and was not applied for this project. Continue to step 04.

- **Step 4. Common practice analysis**

Sub-step 4a. Analyze other activities similar to the proposed project activity:

The common practice analysis follows the stepwise approach suggested by CDM tool Common practice, version 03.1. Each step and respective result are presented below:

**Step 1:** calculate applicable capacity or output range as +/-50% of the total design capacity or output of the proposed project activity.

Outcome: The installed capacity of Rio do Vento Wind Power Plant is 504 MW. Therefore, the capacity range applicable is from 252 MW to 756 MW.

**Step 2:** identify similar projects (both CDM and non-CDM) which fulfil all the following conditions:

- a) The projects are located at the applicable geographical area.
- b) The projects apply the same measure as the proposed project activity.
- c) The projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity.
- d) The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant;
- e) The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1;

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- f) The projects started commercial operation before the project design document (CDM-PDD) is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity.

- **Outcome:**

To develop this step, the following procedure was applied:

- All operational plants connected to the Grid. Source were identified at ONS (National Operator System database)<sup>3121</sup>. ONS is the entity responsible for the operation of the Brazilian Interconnected System.
- Selection of renewable plants (applying the same measure).
- Considering the Start date of the Project Activity as the day the plant begins to operate (May, 2019), all renewable plants that were in commercial operation at this time were selected.
- Only plants with the capacity output calculated on STEP 1 were selected (252 MW to 756 MW).
- For Wind Power Plants, it was used database supplied by Casa dos Ventos. This database was used to identify Wind Power Complexes, which include several power plants under the same structure. Wind Power Complexes were used as they are similar to Rio do Vento Complex. At other available databases (such as ANEEL and NOS), operational plants of each complex are only presented individually, so using Casa dos Ventos database is considered a better source of information for the analysis of common practice.

The outcome is presented at the table below:

**Table 11 - Outcomes**

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<sup>31</sup> Information taken from ONS Database. A spreadsheet with the Installed operation capacity was taken from: <https://dados.ons.org.br/dataset/?tags=Gera%C3%A7%C3%A3o>

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Plant number	Energy Source	Plant	Installed Capacity (MW)
1	BIOMASS	BRENCO	305
2	BIOMASS	B BIOENERGIA	294
3	HYDRO	AIMORÉS	330
4	HYDRO	APOLÔNIO SALES	400
5	HYDRO	BAIXO IGUAÇU	350
6	HYDRO	BARRA GRANDE	690
7	HYDRO	BRACELL	409
8	HYDRO	CACHOEIRA DOURADA	698
9	HYDRO	CANA BRAVA	450
10	HYDRO	CAPIVARA	643
11	HYDRO	CHAVANTES	414
12	HYDRO	COLÍDER	300
13	HYDRO	CORUMBÁ I	375
14	HYDRO	DARDANELOS	261
15	HYDRO	GOV. JAYME CANET	363
16	HYDRO	GOV. PARIGOT DE SOUZA	260
17	HYDRO	HENRY BORDEN EXT.	404
18	HYDRO	HENRY BORDEN SUB.	485
19	HYDRO	IRAPÉ	399

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<b>20</b>	HYDRO	ITAPEBI	462
<b>21</b>	HYDRO	ITAÚBA	500
<b>22</b>	HYDRO	JAGUARA	424
<b>23</b>	HYDRO	MASCARENHAS DE MORAES	478
<b>24</b>	HYDRO	MIRANDA	408
<b>25</b>	HYDRO	NILO PEÇANHA	380
<b>26</b>	HYDRO	NOVA AVANHANDAVA	347
<b>27</b>	HYDRO	NOVA PONTE	510
<b>28</b>	HYDRO	PAULO AFONSO II	443
<b>29</b>	HYDRO	PEIXE ANGICAL	498
<b>30</b>	HYDRO	PORTO COLÔMBIA	328
<b>31</b>	HYDRO	PROMISSÃO	264
<b>32</b>	HYDRO	ROSANA	354
<b>33</b>	HYDRO	SANTO ANTÔNIO DO JARI	392
<b>34</b>	HYDRO	SÃO MANOEL	700
<b>35</b>	HYDRO	SIMPLÍCIO	333
<b>36</b>	HYDRO	SINOP	401
<b>37</b>	HYDRO	TAQUARUÇU	525
<b>38</b>	HYDRO	TRÊS MARIAS	396
<b>39</b>	HYDRO	VOLTA GRANDE	380

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40	SOLAR	Alex	247
41	SOLAR	JUAZEIRO	277
42	SOLAR	PIRAPORA	248
43	SOLAR	SÃO GONÇALO	575
44	SOLAR	SOL DO SERTÃO	312
45	WIND	Conj. Araripe III	357
46	WIND	Conj. Campo Largo	326
47	WIND	Conj. Cutia	312
48	WIND	Conj. Gentio do Ouro I	303
49	WIND	Conj. Lagoa dos Barros	318
50	WIND	Conj. Paulino Neves	329
51	WIND	Conj. Santa Vitória do Palmar	583
52	WIND	Conj. Umburanas	360

Step 3: within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number Nall 52.

Outcome: Three plants were identified as CDM Project (Conj. Campo Largo, Conj. Santa Vitória do Palmar and Conj. Umburanas).

Therefore Nall = 49.

**Step 4:** within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number Ndiff.

**Outcome:** 37 plants are hydro power plants, 2 are thermoelectric (Biomass) and 5 are solar power plants. Therefore Ndiff = 44.

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**Step 5:** calculate factor  $F = 1 - N_{diff}/N_{all}$  representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.

Outcome:  $F = 1 - 44/49 = 0.10$

According to the tool, the project activity is a “common practice” within a sector in the applicable geographical area if the factor  $F$  is greater than 0.2 and  $N_{all} - N_{diff}$  is greater than 3.

$F = 0.10$  and  $N_{all} - N_{diff} = 5$ , therefore, the project activity is not a common practice. After following all steps, it can be concluded that the project is additional.

## B.6. Estimation of emission reductions

>> Detailed below.

### B.6.1. Explanation of methodological choices

#### >> **Baseline emissions**

The baseline emissions are to be calculated as follows:

$$(1) BE_y = EGP_{J,y} \times EF_{grid,CM,y}$$

Where:

$BE_y$  = Baseline emissions in year  $y$  (tCO<sub>2</sub>/yr)

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

$EF_{grid,CM,y}$  = Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year  $y$  calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO<sub>2</sub>/MWh)

Calculation of  $EGP_{J,y}$

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

$$(2) EGP_{J,y} = EG_{facility,y}$$

Where:

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

$EG_{facility,y}$  = Quantity of net electricity generation supplied by the project plant/unit to the grid in year  $y$  (MWh/yr)

Calculation of  $EF_{grid,CM,y}$



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The project plants will serve Brazilian Interconnected System (SIN). The Brazilian DNA has published the delineation of SIN to be adopted for the purposes of CDM projects. As per Resolution N° 8 of the Brazilian DNA, the electric grid considered in this project activity is considered as a single system consisted by the sub-markets of SIN as the definition of the electric system of the project. Off-grid plants will not be included in the calculation of  $EF_{grid,CM,y}$

$EF_{grid,CM,y}$  will be calculated using the latest version of the “Tool to calculate the emission factor for an electricity system”. The following formula apply:

$$(3) \quad EF_{grid,CM,y} = EF_{grid,OM,y} * w_{OM} + EF_{grid,BM} * w_{BM}$$

Where:

$EF_{grid,CM,y}$  = Combined margin CO<sub>2</sub> emission factor in year y (tCO<sub>2</sub>/MWh);  $EF_{grid,BM,y}$  = Build margin CO<sub>2</sub> emission factor in year y (tCO<sub>2</sub>/MWh);  $EF_{grid,OM,y}$  = Operating margin CO<sub>2</sub> emission factor in year y (tCO<sub>2</sub>/MWh);  $w_{OM}$  = Weighting of operating margin emissions factor (75%);

$w_{BM}$  = Weighting of build margin emissions factor (25%).

The weighting factors for build and operating margin were selected according to guidance provided in the “Tool to calculate the emission factor for an electricity system”.

The  $EF_{grid,OM,y}$  will be calculated according to the dispatch data analysis. As per this method OM emission factor is determined based on the grid power units that are actually dispatched at the margin during each hour h where the project is producing electricity and  $EF_{grid,OM-DD,y}$  is calculated as follows:

$$(4) \quad EF_{grid,OM-DD,y} = \frac{\sum_h EG_{PJ,h} \cdot EF_{EL,DD,h}}{EG_{PJ,y}}$$

Where:

$EF_{grid,OM-DD,y}$  = Dispatch data analysis operating margin CO<sub>2</sub> emission factor in year y (tCO<sub>2</sub> /MWh);  $EG_{PJ,h}$  = Electricity generation by the project activity in hour h of year y (MWh);

$EF_{EL,DD,h}$  = CO<sub>2</sub> emission factor for grid power units in the top of the dispatch order in hour h in year y (tCO<sub>2</sub>/MWh);

$EG_{PJ,y}$  = Total electricity displaced by the project activity in year y (MWh); h = Hours in year y in which the project activity is generating electricity; y = Year in which the project activity is displacing grid electricity.

For the crediting period, the build margin emission factor will be updated annually, ex-post, including those units built up to the year of registration of the project activity or, if information up to the year of registration is not yet available, including those units built up to the latest year for which information is available.

The parameters  $EF_{grid,OM,y}$  and  $EF_{grid,BM,y}$  are calculated and published by the Brazilian Inter-ministerial Commission for Global Climate Change, the Brazilian Designated National Authority, according to the most recent version of the “Tool to calculate the emission factor for an electricity system”.

### • Project Emissions

As per ACM0002 Version 2.0, since the project activity is neither a geothermal, solar nor a hydropower plant,  $PE_y = 0$ .

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- **Leakage**

According to ACM0002, version 21.0, “no leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g., extraction, processing, transport). These emissions sources are neglected.”

- **Emissions reductions**

The emission reduction by the project activity during a given year y is calculated as follows:

$$(5) ER_y = BE_y - PE_y$$

Where:

$ER_y$  = Emissions reductions of the project activity during the year y (tCO<sub>2</sub>e)  
 $BE_y$  = Baseline emissions during the year y (tCO<sub>2</sub>e)

$PE_y$  = Project emissions during the year y (tCO<sub>2</sub>e)

## B62. Data and parameters fixed ex ante

### >> Data / Parameter Table 1.

Data / Parameter:	W <sub>OM</sub>
Methodology reference	ACM0002 – Grid-connected electricity generation from renewablesources – Version 21.0
Data unit	Fraction
Description	Weighting of operating margin emissions factor
Measured/calculated /default	Calculated
Data source	“Tool to calculate the emission factor for an electricity system”, version07.0
Value(s) of monitored parameter	75%
Measurement/ Monitoring equipment (if applicable)	Not applicable
Measuring/reading/ recording frequency (if applicable)	Not applicable
Calculation method (if applicable)	Not applicable
QA/QC procedures	Not applicable
Purpose of data	Emission factor calculation

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Additional comments	Not applicable
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<b>Data / Parameter:</b>	<b>W<sub>BM</sub></b>
Methodology reference	ACM0002 – Grid-connected electricity generation from renewablesources – Version 21.0
Data unit	Fraction
Description	Weighting of operating margin emissions factor
Measured/calculated /default	Calculated
Data source	“Tool to calculate the emission factor for an electricity system”, version07.0
Value(s) of monitored parameter	25%
Measurement/ Monitoring equipment (if applicable)	Not applicable
Measuring/reading/ recording frequency (if applicable)	Not applicable
Calculation method (if applicable)	Not applicable
QA/QC procedures	Not applicable
Purpose of data	Emission factor calculation
Additional comments	Not applicable

### B.6.3. Ex-ante calculation of emission reductions

>> Emission reductions were ex-ante estimated as follows:

$$(6) \text{ BE}_y = \text{EG}_{\text{PJ},y} \times \text{EF}_{\text{grid,CM},y}$$

Where:

$\text{BE}_y$  = Baseline emissions in year y (tCO<sub>2</sub>/yr)

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

$\text{EF}_{\text{grid,CM},y}$  = Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO<sub>2</sub>/MWh)

As per ACM0002 version 21.0 for this project activity, project emissions are zero (PE<sub>y</sub>=0) and leakage emissions are not considered.

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$$(7) ER_y = BE_y - PE_y$$

Where:

$ER_y$  = Emissions reductions of the project activity during the year y (tCO<sub>2</sub>e)  $BE_y$  = Baseline emissions during the year y (tCO<sub>2</sub>e)

$PE_y$  = Project emissions during the year y (tCO<sub>2</sub>e)

See detailed ex-ante calculation in the annex spreadsheet "CDV PSF Calculation Estimates\_v01. The parameters use for ex-ante calculations are compiled in Table 07 below:

**Table 12 - Parameters use for ex-ante calculations**

Parameter	Unit	Value	Description	Comment
$ER_y$	tCO <sub>2</sub> /yr	919.438	Emissions reductions in the year y	Calculated
$BE_y$	tCO <sub>2</sub> /yr	919.438	Baseline emissions in year y	Calculated
$PE_y$	tCO <sub>2</sub> /yr	0	Project emissions in the year y	For this project activity (wind-based electricity generation project), emissions are null, as per ACM0002/Version 21.0
$EGPJ_y$	MWh/yr	2.519.700	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the GCC project activity in year y	Estimated as the average total yearly net electricity generation by the project activity, as per Camargo Schubert Reports, Ref. C&S-CPE-2862/18 Complexo Eólico Rio do Vento II.
$EGfacility_y$	MWh/yr	2.519.700	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y	Estimated as the average total yearly net electricity generation by the project activity, as per Camargo Schubert Reports, Ref. C&S-CPE-2862/18 Complexo Eólico Rio do Vento II.
$EF_{grid,CM,y}$	t CO <sub>2</sub> /MWh	0.3649	Combined margin CO <sub>2</sub> emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system"	Calculated
$EF_{grid,OM,y}$	t CO <sub>2</sub> /MWh	0.4539	Operating margin CO <sub>2</sub> emission factor in year y	Calculated as the average hourly emission factor,

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				weighted by the hourly net electricity generation
EFgrid, BM, y	t CO <sub>2</sub> /MWh	0.0979	Build margin CO <sub>2</sub> emission factor in year y	Build margin emission factor of the National Interconnected System, as published by the Brazilian DNA
WOM	Fraction	0.75	Weighting of operating margin emissions factor	Default value for wind-based electricity generation projects, as per "Tool to calculate the emission factor for an electricity system", Version 07.0
WBM	Fraction	0.25	Weighting of build margin emissions factor	Default value for wind-based electricity generation projects, as per "Tool to calculate the emission factor for an electricity system", Version 07.0

#### B.6.4. Summary of ex ante estimates of emission reductions

>> It is presented below the ex-ante estimates of the project's emission reductions.

Year	Baseline emissions (t CO <sub>2</sub> e)	Project emissions (t CO <sub>2</sub> e)	Leakage (t CO <sub>2</sub> e)	Emission reductions (t CO <sub>2</sub> e)
<b>From May 2021</b>	383.099	0	0	383.099
<b>2022</b>	919.438	0	0	919.438
<b>2023</b>	919.438	0	0	919.438
<b>2024</b>	919.438	0	0	919.438
<b>2025</b>	919.438	0	0	919.438
<b>2026</b>	919.438	0	0	919.438
<b>2027</b>	919.438	0	0	919.438
<b>2028</b>	919.438	0	0	919.438
<b>2029</b>	919.438	0	0	919.438
<b>2030</b>	919.438	0	0	919.438
<b>Till April 2031</b>	536.338	0	0	536.338
<b>Total</b>	9.194.379	0	0	9.194.379
<b>Total number of crediting years</b>	10			
<b>Annual average over the crediting period</b>	919.438	0	0	919.438

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**B.7. Monitoring plan**

&gt;&gt;

**B.7.1. Data and parameters to be monitored ex-post**

&gt;&gt;

**Parameter Table 2.**

<b>Data / Parameter:</b>	<b>EG<sub>facility,y</sub></b>
Methodology reference	ACM0002 – Grid-connected electricity generation from renewable sources – Version 21.0
Data unit	MWh
Description	Quantity of net electricity generation supplied by the project plant to the grid in year y
Measured/calculated /default	Measured
Data source	Measurements at project activity site
Value(s) of monitored parameter	2.519.700
Measurement/ Monitoring equipment	This parameter will be continuously analyzed and monitored values will be averaged monthly and yearly for each unit of the unit of the project activity. The total quantity of net electricity generation corresponds to the sum of the electricity generation by the eight unit of the project facilities. The data will be collected from the National Electric Energy Commercialization Chamber
Measuring/reading/ recording frequency	Monthly
Calculation method (if applicable)	-
QA/QC procedures	Measurement results will be cross-checked with record for sold electricity
Purpose of data	Calculation of baseline emissions
Additional comments	-

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<b>Data / Parameter:</b>	<b>EG<sub>grid,CM,y</sub></b>
Methodology reference	ACM0002 – Grid-connected electricity generation from renewable sources – Version 21.0
Data unit	tCO <sub>2</sub> /MWh
Description	Combined margin CO <sub>2</sub> emission factor for the project electricity system in year y
Measured/calculated/default	Calculated
Data source	Designated National Authority (DNA) - MCTIC
Value(s) of monitored parameter	0.3649
Measurement/Monitoring equipment	Provided by DNA - MCTIC
Measuring/reading/recording frequency	Annually
Calculation method (if applicable)	As per the most recently version of the “Tool to calculate the emission factor for an electricity system”.
QA/QC procedures	Official source of data
Purpose of data	Calculation of baseline emissions
Additional comments	The Combined Margin is calculated through a weighted-average formula, considering the $EF_{grid,OM-DD,y}$ and the weights $W_{OM}=0.75$ and $W_{BM}=0.25$ as defined in the latest version of “Tool to calculate the emission factor for an electricity system”.

<b>Data / Parameter:</b>	<b>EG<sub>grid,OM,y</sub></b>
Methodology reference	ACM0002 – Grid-connected electricity generation from renewable sources – Version 21.0
Data unit	tCO <sub>2</sub> /MWh
Description	Operating margin CO <sub>2</sub> emission factor for the project electricity system in year y
Measured/calculated/default	Calculated
Data source	Designated National Authority (DNA) - MCTIC
Value(s) of monitored parameter	0.4539
Measurement/Monitoring equipment	Provided by DNA - MCTIC

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Measuring/reading/recording frequency	Annually
Calculation method (if applicable)	As per the most recently version of the “Tool to calculate the emission factor for an electricity system”.
QA/QC procedures	Official source of data
Purpose of data	Calculation of baseline emissions
Additional comments	This data is available on the MCTIC website: <a href="https://antigo.mctic.gov.br/mctic/opencms/ciencia/SEPED/clima/textogeral/emissao_despacho.html">https://antigo.mctic.gov.br/mctic/opencms/ciencia/SEPED/clima/textogeral/emissao_despacho.html</a>

<b>Data / Parameter:</b>	<b>EG<sub>grid,BM,y</sub></b>
Methodology reference	ACM0002 – Grid-connected electricity generation from renewable sources – Version 21.0
Data unit	tCO <sub>2</sub> /MWh
Description	Building margin CO <sub>2</sub> emission factor for the project electricity system in year y
Measured/calculated/default	Calculated
Data source	Designated National Authority (DNA) - MCTIC
Value(s) of monitored parameter	0.0979
Measurement/Monitoring equipment	Provided by DNA - MCTIC
Measuring/reading/recording frequency	Annually
Calculation method (if applicable)	As per the most recently version of the “Tool to calculate the emission factor for an electricity system”.
QA/QC procedures	Official source of data
Purpose of data	Calculation of baseline emissions
Additional comments	This data is available on the MCTIC website: <a href="https://antigo.mctic.gov.br/mctic/opencms/ciencia/SEPED/clima/textogeral/emissao_despacho.html">https://antigo.mctic.gov.br/mctic/opencms/ciencia/SEPED/clima/textogeral/emissao_despacho.html</a>

**For Parameters to be monitored for E+/S+ assessments and SDG labels (positive impacts)**

<b>Data / Parameter:</b>	<b>CO<sub>2</sub> Emissions</b>
Purpose:	Reduction of CO <sub>2</sub> emissions due to implementation of project activity that would otherwise be emitted by thermal power plants



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Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	To assess the contribution SDG 13 Climate Action / 13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions development								
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG	<table border="1"> <tr> <td>Parameter to be monitored</td> <td>9.194.379 tCO<sub>2</sub>e</td> </tr> <tr> <td>Frequency of monitoring</td> <td>Yearly</td> </tr> <tr> <td>Legal /regulatory / corporate limits (if any)</td> <td></td> </tr> <tr> <td>QA/QC</td> <td>Reduction of Greenhouse gases results in clean environment.</td> </tr> </table>	Parameter to be monitored	9.194.379 tCO <sub>2</sub> e	Frequency of monitoring	Yearly	Legal /regulatory / corporate limits (if any)		QA/QC	Reduction of Greenhouse gases results in clean environment.
Parameter to be monitored	9.194.379 tCO <sub>2</sub> e								
Frequency of monitoring	Yearly								
Legal /regulatory / corporate limits (if any)									
QA/QC	Reduction of Greenhouse gases results in clean environment.								
Remarks	The emission reduction is the product of electrical energy (baseline) EGPJ, y expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.								

<b>Data / Parameter:</b>	<b>Replacing fossil fuels with renewable sources of energy</b>								
Purpose:	Reduction of CO <sub>2</sub> emissions due to implementation of project activity that would otherwise be emitted by thermal power plants								
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	To assess the contribution SDG 07, 09 and 13 contributions. Detailed in table Section F.								
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG	<table border="1"> <tr> <td>Parameter to be monitored</td> <td>919.438 tCO<sub>2</sub> average for year</td> </tr> <tr> <td>Frequency of monitoring</td> <td>Yearly</td> </tr> <tr> <td>Legal /regulatory / corporate limits (if any)</td> <td>N/A</td> </tr> <tr> <td>QA/QC</td> <td>Reduction of Greenhouse gases results in clean environment.</td> </tr> </table>	Parameter to be monitored	919.438 tCO <sub>2</sub> average for year	Frequency of monitoring	Yearly	Legal /regulatory / corporate limits (if any)	N/A	QA/QC	Reduction of Greenhouse gases results in clean environment.
Parameter to be monitored	919.438 tCO <sub>2</sub> average for year								
Frequency of monitoring	Yearly								
Legal /regulatory / corporate limits (if any)	N/A								
QA/QC	Reduction of Greenhouse gases results in clean environment.								
Remarks	The emission reduction is the product of electrical energy (baseline) EGPJ, y expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.								
Data / Parameter:	Noise Pollution								

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Purpose:	To mitigate/reduce an environmental/social impact identified as harmless in the risk assessment and to develop a Program of Risk Management Actions plan to address the risk of noise pollution.	
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	The project may cause noise pollution due to the operation of wind turbines.	
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG		
	Parameter to be monitored	Noise
	Frequency of monitoring	Annually
	Legal /regulatory / corporate limits (if any)	N/A
	QA/QC	Not applicable
Remarks	N/A	

<b>Data / Parameter:</b>	<b>Long-term jobs (&gt; 10 year) created/ lost</b>	
Purpose:	The project creates long term job opportunities during operations	
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	To assess the contribution SDG target “8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular migrant women, and people in precarious jobs”	
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG		
	Parameter to be monitored	Number of records (CLT)
	Frequency of monitoring	Annually
	Legal /regulatory / corporate limits (if any)	N/A
	QA/QC	Increase in family income in the region
Remarks	During project operation, it will be necessary to hire workers for activity management, machinery operation	

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<b>Data / Parameter:</b>	<b>Improving / deteriorating wealth distribution/ generation of income and assets</b>	
Purpose:	The project creates job opportunities and income for the communities which improves the wealth distribution	
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	To assess the contribution SDG 08 and 09 contributions. Detailed in table Section F.	
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG		
	Parameter to be monitored	Number of records (CLT)
	Frequency of monitoring	Annually
	Legal /regulatory / corporate limits (if any)	N/A
	QA/QC	Increase in family income in the region
Remarks		

<b>Data / Parameter:</b>	<b>Increased or / deteriorating municipal revenues</b>	
Purpose:	The project provides revenue to the affected municipalities by tax payment.	
Describe the related environment /social/ SDG risk or SDG impact as a function of likelihood of occurrence and severity of impact.	To access the contribution target “8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors”	
Describe the parameters to be monitored to demonstrate compliance with requirements to demonstrate “harmless” condition or demonstrate Impact on SDG		
	Parameter to be monitored	Payment of taxes and wages
	Frequency of monitoring	Annually
	Legal /regulatory / corporate limits (if any)	N/A
	QA/QC	Payment records
Remarks		

## Project Submission Form

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### **B.7.2. Data and parameters to be monitored for E+/S+ assessments (negative impacts)**

>> There are no negative impacts regarding the project. All impacts generated by the project are positive or presented mitigated options.

### **B.7.3. Sampling plan**

>> Not applicable.

### **B.7.4. Other elements of the monitoring plan**

#### **>> General Considerations**

The objective of the monitoring plan is to ensure the complete, consistent, clear and accurate monitoring and calculation of the emission reductions achieved by the project activity during the whole crediting period. The project operator (Casa dos Ventos Comercializadora de Energia S/A) will be responsible for the implementation of the monitoring plan on which is based in monitoring the net electricity dispatched to the grid and the emission factor of the electricity grid.

## **Section C. Start date, crediting period type and duration**

### **C.1. Start date of the Project Activity**

>> Start date of project activity is 18/05/2021, when the National Electric Energy Agency (ANEEL, in Portuguese) issued the first dispatch for power generation to the national interconnected system.

### **C.2. Expected operational lifetime of the Project Activity**

>> The operational lifetime of the project is about 20 (twenty) years as per the average of operation of the wind farm<sup>32</sup>

### **C.3. Crediting period of the Project Activity**

>> The crediting period is fixed as 10 (ten) years according to Project Standard v3.1.

#### **C.3.1. Start and end date of the crediting period**

>> The crediting period is between from 18/05/2021 to 17/05/2031.

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<sup>32</sup> According to Camargo & Schubert – C&S-CDV-2871/17-rev01

### C3.2. Duration of crediting period

>> Start date of the crediting period is 18/05/2021, when the National Electric Energy Agency (ANEEL, in Portuguese) issued the first dispatch for power generation to the national interconnected system the same date of the project activity. The end date is 17/05/2031 with a crediting period fixed as 10 (ten) years.

## Section D. Environmental impacts

### D.1. Analysis of environmental impacts

>> The main objective of Environmental Licensing in Brazil is to standardize environmental impacts assessments and establish control plans for polluting enterprises. The state level environmental agencies are the authority in charge to issue Environmental Permits. In Rio Grande do Norte, the Institute of Sustainable Development and Environment of Rio Grande do Norte (Instituto de Desenvolvimento Sustentável e Meio Ambiente do Rio Grande do Norte – IDEMA) is responsible for environmental licensing.

According to the Federal Resolution CONAMA 001/86, activities that utilize natural resources and that are considered as entrepreneurship with high degradation or pollution potential must have their environmental impact assessment and environmental impact report elaborated to obtain the environmental licenses. Electricity generation, independently of the energy source, with potential higher than 10 MW, is amongst these activities.

Therefore, the project activity described a Detailed Report of Environmental Programs (Relatório de Detalhamento dos Programas Ambientais (RDPA) that describes environmental impacts caused by the project implementation and operation, and the solution through environmental programs. This report was submitted to IDEMA, in order to obtain its Operation License (LO, in Portuguese). IDEMA emitted the Operation License for the eight electricity generation facilities, identified as:

- Ventos de Santa Martina 01 – Operating License Nº2021-166951/TEC/LO-0236, issued in 18/10/2021 and valid until 07/10/2027
- Ventos de Santa Martina 09 – Operating License Nº2021-161560/TEC/LO-0148, issued in 11/06/2021 and valid until 11/06/2027
- Ventos de Santa Martina 10 – Operating License Nº2021-161562/TEC/LO-0149, issued in 19/07/2021 and valid until 09/07/2027
- Ventos de Santa Martina 11 – Operating License Nº2021-161563/TEC/LO-0150, issued in 09/08/2021 and valid until 29/07/2027
- Ventos de Santa Martina 12 – Operating License Nº2021-166950/TEC/LO-0235, issued in 13/09/2027 and valid until 03/09/2027
- Ventos de Santa Martina 13 – Operating License Nº2021-164771/TEC/LO-0190, issued in 02/08/2021 and valid until 23/07/2027
- Ventos de Santa Martina 14 – Operating License Nº2021-170722/TEC/LO-0312, issued in 26/11/2021 and valid until 16/11/2027

## D.2. Environmental impact assessment and management action plans

>> An environmental impact assessment was prepared to assess the environmental impacts of the project activity. The report has been prepared in accordance with the Brazilian's national standards and requirements and It was approved by the institute for Sustainable Development and Environment of Rio Grande do Norte (IDEMA-RN), competent environmental agency for the assessment of the projects and issue the environmental licenses for its implementation. All this process is based on the Federal Resolution 237/297 issued by the National Environment Council - CONAMA, (Conselho Nacional do Meio Ambiente) and the Complementary State Law LCE – nº 272 of March 2004.

It is important to note that all wind facilities (SPEs) have their own environmental licenses.

## Section E. Environmental and social safeguards

>> The project went through a very rigorous environmental and social assessment process. At first it was submitted to an environmental impact analysis, which is a complete diagnosis so that all possible and potential socio-environmental impacts were identified before proceeding with its construction. This study is named Environmental Impact Study (EIA) submitted for approval by the competent environmental agency which, if it deems the project viable from a socio-environmental point of view, issues an environmental license called Previous License.

Each of the impacts identified in the environmental study phase must be addressed. In this way, the Detailed Report of Environmental Programs (Relatório de Detalhamento dos Programas Ambientais (RDPA) is prepared, which lists and describes all the Environmental Programs of the enterprise. The Programs details the mitigation actions identified in the previous phase.

All the programs and reports has been prepared in accordance with Brazil's national standards. Once the project was approved, it received the government authorization for its installation, with the issuance of the Installation License and after meeting all the requirements of the Environmental Programs, the Plant was authorized to operate, with the issuance of the Operational License.

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E.1. Environmental safeguards

>>

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards							Project Owner's Conclusion		GCC Project Verifier's Conclusion  (To be included in Project Verification Report only)	
		Description of Impact (positive or negative)	Legal/voluntary corporate requirement / regulatory/voluntary corporate threshold Limits	Do-No-Harm Risk Assessment (choose which ever is applicable)			Risk Mitigation Action Plans for aspects marked as Harmful		Performance indicator for monitoring of impact	Ex-ante scoring of environmental impact	Explanation of the Conclusion	3 <sup>rd</sup> Party Audit
				Not Applicable	Harmless	Harmful	Operational Controls	Program of Risk Management Actions				
<p><b>Environmental Aspects on the identified categories</b><sup>33</sup> <b>indicated below.</b></p>	<p>Indicators for environmental impacts</p>	<p>Describe and identify anticipated and actual significant environmental impacts, both positive and negative from all sources (stationary and mobile) during normal and abnormal/emergency conditions, that may result from the construction and operations of the Project Activity, within and outside the project boundary, over which the Project Owner(s) has/have control.</p>	<p>Describe the applicable national regulatory requirements /legal limits / voluntary corporate limits related to the identified risks of environmental impacts.</p>	<p>If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as <b>Not Applicable</b></p>	<p>If environmental impacts exist but are expected to be in compliance with applicable national regulatory /stricter voluntary corporate requirements and will be within legal/voluntary corporate limits by way of plant</p>	<p>If negative environmental impacts exist that will not be in compliance with the applicable national legal/ regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause</p>	<p>Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as 'Harmful' at least to a level that is in compliance with applicable legal/regulatory requirements or industry best practice or stricter voluntary</p>	<p>Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce or eliminate the risk of impacts that have been identified as <b>Harmful</b>.</p>	<p>Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless or harmful. The frequency of monitoring to be specified as well including the data source.</p>	<p>-1 0 +1</p>	<p>Confirm the score of environmental impact of the project with respect to the aspect and its monitored value in relation to legal /regulatory limits (if any) including basis of conclusion.</p>	<p>Describe how the GCC Verifier has assessed that the impact of the Project Activity against the particular aspect and in case of "harmful impacts" how has the project adopted Risk Mitigation Action Plans to mitigate the risks of negative environmental impacts to levels that are unlikely to cause any harm as well as the net positive impacts of the project with respect to the most likely baseline alternative.</p>

<sup>33</sup> sourced from the CDM SD Tool and the sample reports are available (<https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx>)

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					design and operating principles, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as <b>Harmless</b> /If the project has a positive impact on the environment mark it as "harmless" as well.	harm (may be un-safe) and shall be indicated as <b>Harmful</b>	corporate requirements					
<b>Reference to paragraphs of Environmental and Social Safeguards Standard</b>		Paragraph 12 (a)	Paragraph 13 (c)	Paragraph 13 (d) (i)	Paragraph 13 (d) (ii)	Paragraph 13 (d) (iii)	Paragraph 13 (e) (i)	Paragraph 13 (e) (ii)	Paragraph 12 (c) and Paragraph 13 (f)	Paragraph 22		Paragraph 24 and Paragraph 26 (a) (i)
<b>Environment - Air</b>	SO <sub>x</sub> emissions (EA01)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	NO <sub>x</sub> emissions (EA02)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	CO <sub>2</sub> emissions (EA03)	The project reduces CO <sub>2</sub> emissions the amount of electricity that would be generated from fossil fuel.	N/A	N/A	Harmless	N/A	N/A	N/A	Monitoring the amount of energy provided to the grid annually	+1	The emission reductions are expected to be reduced through the renewable energy project which will be regularly monitored and verified ex -post and therefore is eligible to be scored.	
	CO emissions (EA04)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



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	<i>Suspended particulate matter (SPM) emissions (EA05)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Fly ash generation (EA06)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	<i>Non-Methane Volatile Organic Compounds (NMVOCs) (EA07)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Odor (EA08)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Noise Pollution (EA09)</i>	The turbines may cause noise pollutions depending on the technology used and the closest settlement to the project area. A very positive factor regarding this impact is that there are no rural communities or even residences in the vicinity of the proposed area for the wind complex.	N/A	N/A	Harmless	N/A	N/A	N/A	Identify the level of noise emitted by equipment in the project	0	The noises emitted by wind turbines are not harmful, from a physiological point of view to humans or animals, not harming the auditory system, and will be regularly monitored and verified ex -post and therefore is eligible to be scored.	
	<i>Others (EA10)</i>											
<b>Environment - Land</b>	<i>Solid waste Pollution from Plastics (EL-01)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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	<i>Solid waste Pollution from Hazardous wastes (EL02)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Solid waste Pollution from Bio-medical wastes (EL03)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Solid waste Pollution from E-wastes (EL04)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Solid waste Pollution from Batteries (EL05)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Solid waste Pollution from end-of-life products/ equipment (EL06)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury) (EL07)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>land use change (change</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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	<i>from cropland /forest land to project land) (EL08)</i>											
	<i>Others (EL09)</i>											
<b>Environment - Water</b>	<i>Reliability/ accessibility of water supply (EW01)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Water Consumption from ground and other sources (EW02)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Generation of wastewater (EW03)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Wastewater discharge without/with insufficient treatment (EW04)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Pollution of Surface, Ground and/or Bodies of water (EW05)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Discharge of harmful chemicals like marine pollutants / toxic waste (EW06)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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	Others (EW07)											
<b>Environment – Natural Resources</b>	Conserving mineral resources (ENR01)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Protecting/enhancing plant life (ENR02)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Protecting/enhancing species diversity (ENR03)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Protecting/enhancing forests (ENR04)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Protecting/enhancing other depletable natural resources (ENR05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Conserving energy (ENR06)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Replacing fossil fuels with renewable sources of energy (ENR07)	Positive: The project avoids the use of fossil fuels with renewable sources of energy	N/A	N/A	Harmless	N/A	N/A	N/A	The CO <sub>2</sub> emission reductions are going to be monitored through Monitoring Reports under GCC Standard (parameter ERY), annually.	+1	The emission reductions are expected to be reduced through the renewable energy project which will be regularly monitored and verified ex -post and therefore is eligible to be scored.	
	Replacing ODS with non-ODS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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	<i>refrigerants (ENR08)</i>											
	<i>Others (ENR09)</i>											
<b>Net Score:</b>			<b>+2</b>									
<b>Project Owner's Conclusion in PSF:</b>			The Project Owner confirms that the Project Activity will not cause any net harm to Environment.									
<b>GCC Project Verifier's Opinion:</b>			The GCC Verifier certifies that the Project Activity [is not likely to cause any] or [is likely to cause] net harm to the environment.									

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E.2. Social Safeguards

>>

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards							Project Owner's Conclusion		GCC project Verifier's Conclusion  (To be included in Project Verification Report only)
		Description of Impact (positive or negative)	Legal requirement /Limit, Corporate policies / Industry best practice	Do-No-Harm Risk Assessment (Choose which ever is applicable)			Risk Mitigation Action Plans (for aspects marked as Harmful)	Performance indicator for monitoring of impact.	Ex-ante scoring of environmental impact	Explanation of the Conclusion	3 <sup>rd</sup> Party Audit
				Not Applicable	Harmless	Harmful	Operational / Management Controls	Monitoring parameter and frequency of monitoring (as per scoring matrix Appendix-02)	Ex- Ante scoring of social impact of the project	Ex- Ante description and justification/explanation of the scoring of social impact of the project	Verification Process  Will the Project Activity cause any harm?
<b>Social Aspects on the identified categories<sup>34</sup> indicated below.</b>	Indicators for social impacts	Describe and identify actual and anticipated impacts on society and stakeholders, both positive or negative, from all sources during normal and abnormal/emergency conditions that may result from constructing and operating of the Project Activity within or outside the project boundary, over which the project Owner(s) has/have control	Describe the applicable national regulatory requirements / legal limits or organizational policies or industry best practices related to the identified risks of social impacts	If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as <b>Not Applicable</b>	If social impacts exist but are expected to be in compliance with applicable national regulatory requirements/ stricter voluntary corporate limits by way of plant design and operating principles then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as <b>Harmless</b> ,	If negative social impacts exist that will not be in compliance with the applicable national legal/regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm and shall be indicated as <b>Harmful</b>	Describe the operational or management controls that can be implemented as well as best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as <b>Harmful</b> .	Describe the monitoring approach and the parameters (KPI) to be monitored for each impact irrespective of whether it is harmless or harmful. The frequency of monitoring to be specified as well. Monitoring parameters can be quantitative or qualitative in nature along with the data source	-1 0 +1	Confirm the score of the social impacts of the project with respect to the aspect and its monitored value in relation to legal/regulatory limits (if any) including basis of conclusion	Describe how the GCC Verifier has assessed that the impact of Project Activity on social aspects (based on monitored parameters, quantitative or qualitative) and in case of "harmful" aspects how has the project owner adopted Risk Mitigation Action / management actions plans and policies to mitigate the risks of negative social impacts to levels that

<sup>34</sup> sourced from the CDM SD Tool and the sample reports are available ( <https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx> )

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					project having positive impact on society. To the BAU / baseline scenario must also mark their aspect as "harmless"						are unlikely to cause any harm.  Also describe the positive impacts of the project on the society as compared to the baseline alternative or BAU scenario.
<b>Reference to paragraphs of Environmental and Social Safeguards Standard</b>		Paragraph 12 (a)	Paragraph 13 (c)	Paragraph 13 (d) (i)	Paragraph 13 (d) (ii)	Paragraph 13 (d) (iii)	Paragraph 13 (e) (i)	Paragraph 12 (c) and Paragraph 13 (f)	Paragraph 23		Paragraph 24 and Paragraph 26 (a) (ii)
<b>Social - Jobs</b>	Long-term jobs (> 10 year) created/ lost (SJ01)	The project creates long term job opportunities during operations	All employment is done according to the national regulations	-	Harmless	-	-	No. of permanent job opportunities created to be monitored on annual basis by way of appointment letters.	+1	The project activity will need Production management, mechanical maintenance, general activities.	
	New short-term jobs (< 1 year) created/ lost (SJ02)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Sources of income generation increased / reduced (SJ03)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Avoiding discrimination when hiring people from different race, gender,	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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	<i>ethnics, religion, marginalized groups, people with disabilities (SJ04)</i>  <i>(Human rights)</i>										
<b>Social - Health &amp; Safety</b>	<i>Disease prevention (SHS01)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Occupational health hazards (SHS02)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Reducing / increasing accidents/Incidents/fatality (SHS03)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Reducing / increasing crime (SHS04)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Reducing / increasing food wastage (SHS05)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Reducing / increasing indoor air pollution (SHS06)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Efficiency of health services (SHS07)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Sanitation and waste management (SHS08)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



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	<i>Other health and safety issues (SHS09)</i>										
<b>Social - Education</b>	<i>specialized training / education to local personnel (SE01)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Educational services improved or not (SE02)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Project-related knowledge dissemination effective or not (SE03)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Other educational issues (SE03)</i>										
<b>Social - Welfare</b>	<i>Improving/deteriorating working conditions (SW01)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Community and rural welfare (indigenous people and communities) (SW02)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Poverty alleviation (more people above poverty)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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	<i>level)</i> (SW03)										
	<i>Improving / deteriorating wealth distribution/generation of income and assets</i> (SW04)	The project creates job opportunities and income for the communities which improves the wealth distribution	-	-	Harmless	-	-	Verify through proof of payment of taxes/ wages annually	+1	The project activity will require labor during construction/operation	
	<i>Increased or / deteriorating municipal revenues</i> (SW05)	The project provides revenue to the affected municipalities by tax payment.	-	-	Harmless	-	-	Verify through proof of payment of taxes/ wages annually	+1	The payment of taxes generates an improvement in the distribution of municipal revenue	
	<i>Women's empowerment</i> (SW06) (Human rights)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Reduced / increased traffic congestion</i> (SW07)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Exploitation of Child labour</i> (Human rights) (SW08)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Minimum wage protection</i> (Human rights) (SW09)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Abuse at workplace.</i> (With	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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<i>specific reference to women and people with special disabilities / challenges) (Human rights) (SW10)</i>											
<i>Other social welfare issues (SW11)</i>											
<i>Avoidance of human trafficking and forced labour (Human rights) (SW12)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>Avoidance of forced eviction and/or partial physical or economic displacement of IPLCs (Human rights) (CW13)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<i>Provisions of resettlement and human settlement displacement (Human rights) (CW14)</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Project Submission Form

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	<i>Add more rows if required</i>										
<b>Net Score:</b>		+3									
<b>Project Owner's Conclusion in PSF:</b>		The Project Owner confirms that the Project Activity will not cause any net harm to society.									
<b>GCC Project Verifier's Opinion:</b>		The GCC Verifier certifies that the Project Activity [is not likely to cause any] or [is likely to cause] net harm to society.									

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**Section F. United Nations Sustainable Development Goals (SDG)**

>>

UN-level SDGs	UN-level Target	Declared Country-level SDG	Defining Project-level SDGs				GCC Project Verifier's Conclusion  (To be included in Project Verification Report only)	
			Project-level SDGs	Project-level Targets/Actions	Contribution of Project-level Actions to SDG Targets	Monitoring	Verification Process	Are Goal/Targets Likely to be Achieved?
<p><b>Describe UN SDG targets and indicators</b></p> <p>See: <a href="https://unstats.un.org/sdgs/indicators/indicators-list/">https://unstats.un.org/sdgs/indicators/indicators-list/</a></p>	<p>Describe the UN-level target(s) and corresponding indicator no(s)</p>	<p>Has the host country declared the SDG to be a national priority? Indicate Yes or No</p>	<p>Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope or creating a new indicator(s). Refer to previous column for guidance.</p>	<p>Define project-level targets/actions in line with nee project level indicators chosen. Define the target date by which the project Activity is expected to achieve the project-level SDG target(s).</p>	<p>Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets</p>	<p>Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG indicator and its corresponding target, frequency of monitoring and data source</p>	<p>Describe how the GCC Verifier has verified the claims that the project is likely to achieve the identified Project level SDGs target(s).</p>	<p>Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or no)</p>

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<p><b>Goal 1: End poverty in all its forms everywhere</b></p>	<p>1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.</p>	<p>Yes</p>	<p>The project requires a high number of workers either during construction or operation.</p>	<p>Indicator 1.1.1 Proportion of the population living below the international poverty line by sex, age, employment status and geographical location (urban/rural).</p>		<p>The project created job opportunity for both construction and operation period. Also created long term employment for people who are directly working at all facilities</p>	<p>Confirmation of the number of people hired annually.</p>		
<p><b>Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b></p>									
<p><b>Goal 3. Ensure healthy lives and promote well-being for all at all ages</b></p>									
<p><b>Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</b></p>									
<p><b>Goal 5. Achieve gender equality and empower all women and girls</b></p>									
<p><b>Goal 6. Ensure availability and sustainable management of water and sanitation for all</b></p>									

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<b>Goal 7. Ensure access to affordable, reliable, sustainable, and modern energy for all</b>	SDG Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix” by the utilization of biomass as a renewable energy source.  Indicator 7.2.1	Yes	The project contributes to this SDG in its operation, providing clean energy to the grid.	Indicator 7.2.1: Renewable energy share in the total final energy consumption.	The project contributes to this SDG in its operation, providing clean energy to the grid.	Monitoring the amount of energy provided to the grid annually.		
<b>Goal 8. Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all</b>	SDG Target 8.8: Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular migrant women, and people in precarious jobs.  Indicator 8.8.2	Yes	The company has a policy of hiring using CLT modality.	Indicator 8.8.2: Level of national compliance with labor rights (freedom of association and collective bargaining) based on International Labor Organization (ILO) textual sources and national legislation, by sex and migrant status.	The project yields work opportunities in a safe and secure working environment, following all the Labor Rights all the work requirements of the CLT modality.  The CLT (Consolidation of labor laws) is composed of eight chapters that cover and specify the rights of most Brazilian labor groups. In its 922 articles, information such as: professional identification, duration (day) of work, minimum wage, annual vacations, occupational safety and medicine, protection of the work of women and children, social security and regulations of working-class unions are found.	Confirmation of the number of people hired by CLT annually		
<b>Goal 9. Build resilient infrastructure, promote inclusive</b>	SDG Target 9.4: By 2030, upgrade infrastructure and retrofit industries to	Yes	The project contributes to this SDG in its operation, providing clean energy to the grid.	Indicator 9.4.1: CO <sub>2</sub> emission per GNP.	The project helps adaptation and adoption of clean energy technologies by	Monitoring the amount of energy provided to the grid annually.		

## Project Submission Form

<p><b>and sustainable industrialization and foster innovation</b></p>	<p>make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.</p> <p>Indicator 9.4.1</p>				<p>implementing a wind power plant.</p>			
<p><b>Goal 10. Reduce inequality within and among countries</b></p>	<p>SDG Target 10.4:</p> <p>Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality.</p> <p>Indicator 10.4.2</p>	<p>Yes</p>	<p>The project collaborates to the achievement of the SDG, once it includes in the working condition of its employees the contribution to the INSS.</p>	<p>Indicator 10.4.2:</p> <p>Redistributive impact of fiscal policy.</p>	<p>The National Institute of Social Security (INSS) is an autarchy of the Government of Brazil linked to the Ministry of Labor and Provisional Welfare that receives contributions for the maintenance of the General Social Security System, responsible for the payment of retirement, maternity salary, pension for death, sickness allowance, accident/reclusion allowance, and other benefits, belonging to the nucleus of Exclusive State Activities, for those who acquire the right to these benefits according to the law.</p>	<p>Confirmation of the number of people hired during by CLT annually.</p>		
<p><b>Goal 11. Make cities and human settlements inclusive, safe,</b></p>	<p>SDG Target 11.6:</p> <p>By 2030, reduce the adverse per capita environmental</p>	<p>Yes</p>	<p>The project contributes to this SDG in its operation, providing clean energy to the grid</p>	<p>Indicator 11.6.2:</p> <p>Annual mean levels of fine particulate matter (e.g., PM2.5 and PM10) in</p>	<p>As known, fossil fuel emissions are secondary sources of particulate matter in the cities. Since</p>	<p>Monitoring the amount of energy provided to the grid annually.</p>		



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<p><b>resilient, and sustainable</b></p>	<p>impacts of cities, including by paying special attention to air quality and municipal and other waste management.</p>			<p>cities (population weighted)</p>		<p>the project reduces the use of fossil fuels, the project helps to improve air quality in cities.</p>			
<p><b>Goal 12. Ensure sustainable consumption and production patterns</b></p>									
<p><b>Goal 13. Take urgent action to combat climate change and its impacts</b></p>	<p>SDG Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.</p>	<p>Yes</p>	<p>The project contributes to this SDG in its operation, providing clean energy to the grid.</p>	<p>Indicator 13.2.2: Total greenhouse gas emissions per year.</p>		<p>The project contributes to this SDG in its operation, providing clean energy to the grid.</p>	<p>Monitoring the amount of energy provided to the grid annually.</p>		
<p><b>Goal 14. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development</b></p>									
<p><b>Goal 15. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</b></p>									

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<p><b>Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels</b></p>									
<p><b>Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development</b></p>									
<b>SUMMARY</b>						<b>Targeted</b>		<b>Likely to be Achieved</b>	
Total Number of SDGs						7		7	
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF						Diamond		Diamond	

## Section G. Local stakeholder consultation

### G.1. MODALITIES FOR LOCAL STAKEHOLDER CONSULTATION

>> Casa do Ventos provided a stakeholder list regarding the main entities and local communities which will be directly and indirectly related to the Rio do Vento Complex project. This stakeholder mapping was carried out due to complex construction and this consultation occurred previously but not related to the Rio do Vento Complex project.

In addition, the stakeholders' comments were invited in 07/04/2022 by e-mail due to COVID-19 restrictions. The e-mail will be showed during the audit process.

The following stakeholders received an e-mail communicating the Rio do Vento Complex project and all information regarding carbon credits, carbon markets, project information and next steps.

The stakeholders invited are listed below:

- Major from project activity Municipality
- Local Environmental NGOs
- State and local environmental agencies
- Brazilian Forum of NGOs and Social Movements for the Environment and Development (FBOMS)
- Nations NGOs which objectives are related to the project activity

The Stakeholder Consultation was carried out on 14/04/2022 via videoconference. During the public consultation, the concepts of the carbon market and climate change were explained. In addition, information was also given about the Casa dos Ventos carbon project, as well as the benefits that the project brings to the community and the environment in the fight against climate change.

### G.2. SUMMARY OF COMMENTS RECEIVED

>> The local stakeholder's consultation is not doubtful about the project. They all reflected their positive opinions about the projects and stated that they are well-informed. In addition, the project owners sent an e-mail with complete presentation and provide an additional time to comments. However, no additional comments were received.

### G.3. CONSIDERATION OF COMMENTS RECEIVED

>> During the local stakeholder consultation, the participants have been informed about the feedback round. They were also given the contact information of the project owners.

## Section H. Approval and authorization

>>

Project Submission Form

## APPENDIX 1. CONTACT INFORMATION OF PROJECT OWNERS

<b>Organization name</b>	Casa dos Ventos Comercializadora de Energia S/A
<b>Country</b>	Brazil
<b>Address</b>	Av. Brigadeiro Faria Lima, 3477 – Itaim Bibi, São Paulo – SP
<b>Telephone</b>	+55 11 4084-4200
<b>Fax</b>	-
<b>E-mail</b>	<a href="mailto:portfolio@casadosventos.com.br">portfolio@casadosventos.com.br</a>
<b>Website</b>	<a href="http://www.casadosventos.com.br">www.casadosventos.com.br</a>
<b>Contact person</b>	Augusto Reis

<b>Organization name</b>	CDV Holding S.A.
<b>Country</b>	Brazil
<b>Address</b>	Av. Brigadeiro Faria Lima, 3477 – Itaim Bibi, São Paulo – SP
<b>Telephone</b>	+55 11 4084-4200
<b>Fax</b>	-
<b>E-mail</b>	<a href="mailto:portfolio@casadosventos.com.br">portfolio@casadosventos.com.br</a>
<b>Website</b>	<a href="http://www.casadosventos.com.br">www.casadosventos.com.br</a>
<b>Contact person</b>	Augusto Reis

### APPENDIX 2. AFFIRMATION REGARDING PUBLIC FUNDING

>> Not applicable. No funding was granted to the project activity.

### APPENDIX 3. APPLICABILITY OF METHODOLOGY(IES)

>> Not applicable.

### APPENDIX 4. FURTHER BACKGROUND INFORMATION ON EX ANTE CALCULATION OF EMISSION REDUCTIONS

>> Not applicable.

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**APPENDIX 5. FURTHER BACKGROUND INFORMATION ON MONITORING PLAN**

>> Not applicable.

**APPENDIX 6. SUMMARY REPORT OF COMMENTS RECEIVED FROM LOCAL STAKEHOLDERS**

>> No comments were received.

## Project Submission Form

## APPENDIX 7. SUMMARY OF DE-REGISTERED CDM PROJECT OR PROJECTS FROM OTHER GHG / NON-GHG PROGRAMS (TYPE B)

&gt;&gt;

<i>Complete this form in accordance with the instructions attached at the end of this form.</i>	
<b>Program Name</b>	
<b>Project registration number</b>	
<b>Date of registration in the program</b>	
<b>Title of the Project Activity</b>	
<b>Project de-registration reference number</b>	
<b>Date of de-registration of the Project</b>	
<b>Project Participants</b> (Authorized by the host / annex 1 country letter of approval)	
<b>Country where the project is located</b>	
<b>Applied methodology(ies)</b> (Provide reference and version number(s))	

## Project Submission Form

<b>Pre-registration changes to the Project Activity</b> (Tick as applicable)	<b>Pre-registration Changes</b>	<b>Reference number</b>	<b>Approved</b>	<b>Provide a summary of pre-registration changes</b>
	Deviations from approved baseline and monitoring methodology		<input type="checkbox"/>	
	Deviations from applied Tool & Guidance		<input type="checkbox"/>	
	Deviations from the rules		<input type="checkbox"/>	
	Other.....		<input type="checkbox"/>	
<b>Post-registration changes to the Project Activity</b> (Tick as applicable)	<b>Post registration Changes</b>	<b>Reference number</b>	<b>Approved</b>	<b>Provide a summary of post-registration changes</b>
	Change in project design		<input type="checkbox"/>	
	Request for revision of monitoring plan		<input type="checkbox"/>	
	Request for change in start date of crediting period		<input type="checkbox"/>	
	Renewal of crediting period		<input type="checkbox"/>	
	Temporary deviations		<input type="checkbox"/>	
	Other.....		<input type="checkbox"/>	

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<b>Crediting Period(s)</b>	<b>Crediting period(s)</b>		<b>Period</b> (start & end dates)	<b>ERs as per registered PDD/MR/Project documents</b>	<b>Credits issued</b>	
	Crediting Period (Shall start on or after 1 Jan 2016)	Fixed 10 year				
		Renewable (7 years, with 2 approved renewals)	1 <sup>st</sup>			
			2 <sup>nd</sup>			
		3 <sup>rd</sup>				
	Period for which Credits have been issued					
	Period for which Credits have been requested but not issued					-
	Period for which Credits have never been requested for issuance (No monitoring reports submitted)					-
Period for which Credits have never been requested for issuance prior to CDM de-registration					-	
Remaining Crediting period, after de-registration, for which Credits have not been issued by the program , subject to a ceiling of 10 years as allowed under the GCC Program					-	

<b>Details of Previous Issuance Requests</b>	<b>Issuance Request</b>	<b>Period</b> (start & end dates)	<b>ERs as per registered PDD</b>	<b>Quantity of Credits requested to be issued</b>	<b>Quantity of Credits issued</b>
	1 <sup>st</sup>				
	2 <sup>nd</sup>				
	3 <sup>rd</sup>				
	4 <sup>th</sup>				
	5 <sup>th</sup>				
	Add rows .....				
	<b>Total</b>				



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<p><b>List any open issues in the Validation and last Verification Report (e.g., FARs, if any) and how they have been addressed</b></p>	
<p><b>Any other relevant information that has not been reported in the registered documents and that may have adverse impacts on the environmental integrity of the Project Activity</b></p>	
<p><b>Provide the list of all the registered documents related to this project, as available on the program’s website and the corresponding URLs.</b></p>	

**Appendix 8. FURTHER INFORMATION ON DETERMINATION OF BUNDLE IN PROJECT ACTIVITY.**

>>

**Appendix 9. PUBLIC DECLARATION FOR A2 (Sub Type 2 and 3), B1 & B2 PROJECTS ON NON CONTINUATION FROM CDM/GHG/NON-GHG PROGRAMS.**

>>

## Project Submission Form

<b>DOCUMENT HISTORY</b>		
<b>Version</b>	<b>Date</b>	<b>Comment</b>
V 4.0	27/09/2022	<ul style="list-style-type: none"> <li>▪ Revised version released on approval by Steering Committee as per GCC Program Process.</li> <li>▪ Revised version contains following changes:               <ul style="list-style-type: none"> <li>○ Introduced A3 type projects A2 project sub-types.</li> <li>○ Included revised Declaration by the 'Authorized Project Owner and focal point' on GCC requirements.</li> <li>○ Included modified format for E+/S+/ SDG assessment.</li> <li>○ Revised instructions for filling in the PSF.</li> <li>○ Editorial changes to the document.</li> </ul> </li> </ul>
V 3.2	31/12/2020	<ul style="list-style-type: none"> <li>▪ The name of GCC Program's emission units has been changed from "Approved Carbon Reductions" or ACRs to "Approved Carbon Credits" or ACCs.</li> </ul>
V 3.1	17/08/2020	<ul style="list-style-type: none"> <li>▪ Editorial revisions made               <ul style="list-style-type: none"> <li>○ Revised Table in section B.7.2 on Monitoring-program of risk management actions</li> <li>○ Revised Table in section E.1 on Environmental Safeguards</li> <li>○ Revised Table in section E.1 on Social Safeguards</li> <li>○ Revised Table in section F on United Nations Sustainable Development Goals (SDG)</li> </ul> </li> </ul>
V 3.0	05/07/2020	<ul style="list-style-type: none"> <li>▪ Revised version released on approval by Steering Committee as per GCC Program Process.</li> <li>▪ Revised version contains following changes:               <ul style="list-style-type: none"> <li>○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC).</li> <li>○ Considered and addressed comments raised by Steering Committee:                   <ul style="list-style-type: none"> <li>➤ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and</li> <li>➤ electronic consultations EC01-Round 01 (15.09.2019 – 25.09.2019), EC01-Round 02 (27.03.2020 – 27.06.2020).</li> </ul> </li> <li>○ Feedback from Technical Advisory Board (TAB) of ICAO on GCC submission for approval under CORSIA<sup>35</sup>;</li> </ul> </li> </ul>

<sup>35</sup>See ICAO recommendation for conditional approval of GCC at [https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/Excerpt\\_TAB\\_Report\\_Jan\\_2020\\_final.pdf](https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/Excerpt_TAB_Report_Jan_2020_final.pdf)

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V 2.0	25/06/2019	<ul style="list-style-type: none"><li>▪ Revised version released for approval by the GCC Steering Committee.</li><li>▪ Revised version includes additional details and instructions on the information to be provided, consequent to the latest developments world-wide (e.g., CORSIA EUC).</li></ul>
V 1.0	01/11/2016	Initial version released under the GCC Program Version 1

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