



Verified Carbon Standard

GENNEIA WIND PROJECTS IN ARGENTINA

FIFTH MONITORING REPORT

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PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The project consists of the implementation of six wind farms located in different regions in Argentina (Table 1). The implementation of these project instances (hereafter collectively called the ‘project’ or ‘project activity’) ensures energy security, diversification of the grid generation mix, and sustainable growth of the electricity sector.

Before the implementation of the project activity, no power plants were installed at the project site. The energy that is generated by the project was dispatched by other power plants that are connected to the respective grid, including fossil fuel power plants. Hence, the baseline scenario and the scenario prior to project implementation are the same and the project helps to reduce thermal power generation in the Argentine Interconnected System (SADI) by increasing the share of renewable energy in the grid.

The project consists of the installation of 59 wind turbines provided by Vestas and Nordex (Table 1), with a total installed capacity of 223.38 MW and generation of around 873,806.52 MWh for the corresponding monitoring period (01 January 2024 to 31 December 2024), which was delivered to the SADI – avoiding part of the electricity generated by the grid-connected power plants. Thus, it contributes to sustainability by increasing the share of renewable energy and reducing greenhouse gas (GHG) emissions.

As a result of the implementation of the project activity, GHG emission reductions of 391,812 tCO₂ for the current monitoring period were achieved. A summary of individual project instances of the project is shown in Table 1.

Table 1: Summary of individual wind project instances

Project Instance	Location	Op. start	Capacity (MW)	Generation (MWh) 2024	Wind turbines	Turbine Type	ERs 2024 (tCO ₂)
Chubut Norte I	Chubut province	12/11/2018	28.80	126,056.46	8	Vestas	56,523
Chubut Norte II	Chubut province	12/02/2021	26.28	89,353.70	6	Nordex	40,066
Pomona I	Rio Negro Province	01/06/2019	101.4	377,244.04	26	Nordex	169,156
Pomona II	Rio Negro Province	26/07/2019	11.7	45,577.25	3	Nordex	20,436
Villalonga I	Buenos Aires province	16/11/2018	51.75	221,286.23	15	Vestas	99,224

Villalonga II	Buenos Aires province	01/01/2019	3.45	14,288.83	1	Vestas	6,407
Total			223.38	873,806.52	59		391,812

1.2 Audit History

Audit type	Period	Program	Validation/verification body name	Number of years
Validation	12-November-2018 to 11-November-2028	VCS	Ruby Canyon Environmental	10 years
1st Verification	12-November-2018 to 31-December-2020	VCS	Ruby Canyon Environmental	Two years and 50 days
2nd Verification	01-January-2021 to 31-December-2021	VCS	KBS Certification Services Ltd.	One Year
3rd Verification	01-January-2022 to 31-December-2022	VCS	KBS Certification Services Ltd.	One Year
4th Verification	01-January-2023 to 31-December-2023	VCS	KBS Certification Services Ltd.	One Year
5th Verification	01-January-2024 to 31-December-2024	VCS	Verifit SAS.	One Year

1.3 Sectoral Scope and Project Type

Sectoral scope¹	01 – Energy industries (renewable/non-renewable sources)
Project activity type	Non AFOLU - Single

1.4 Project Proponent

Organization name	Genneia S.A.
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¹ Projects, activities, or methodologies may be developed under any of the 16 VCS sectoral scopes: <https://verra.org/programs/verified-carbon-standard/vcs-program-details/#sectoral-scopes>

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1.5 Other Entities Involved in the Project

Organization name	South Pole AG.
Role in the project	Project Partner
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1.6 Project Start Date

Project start date	12-November-2018
Justification	The first instance of the project under consideration started operations on 12 November 2018. This project instance is Chubut Norte I wind farm. Hence, the project start date is 12 November 2018.

1.7 Project Crediting Period

Crediting period	☐ Seven years, twice renewable ☐ Ten years, fixed ☒ Other (Project crediting period for the project activity was validated as 10 years from the start date. Accordingly, with regards to the start date of the project activity, the first crediting period began on 12 November 2018 and will finish on 11 November 2028.
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	Type of crediting period: renewable – it was proposed that the crediting period will be renewed twice, adding up to 30 years in total).)
Start and end date of first or fixed crediting period	12-November-2018 to 11-November-2028

1.8 Project Location

All the project activity instances in the proposed project activity are located within geographical boundaries of Argentina. Thus, the geographical area of the project is Argentina.

Table 2 presents the geographic coordinates summary of each wind power plant.

Table 2: Project activity instances coordinates

Power plant name	X	Y
Chubut Norte I	324,200	5,284,728
Chubut Norte II	320,172	5,280,304
Pomona I	262,600	5,616,937
Pomona II	261,325	5,613,239
Villalonga I	528,981	5,566,731
Villalonga II	529,190	5,567,732

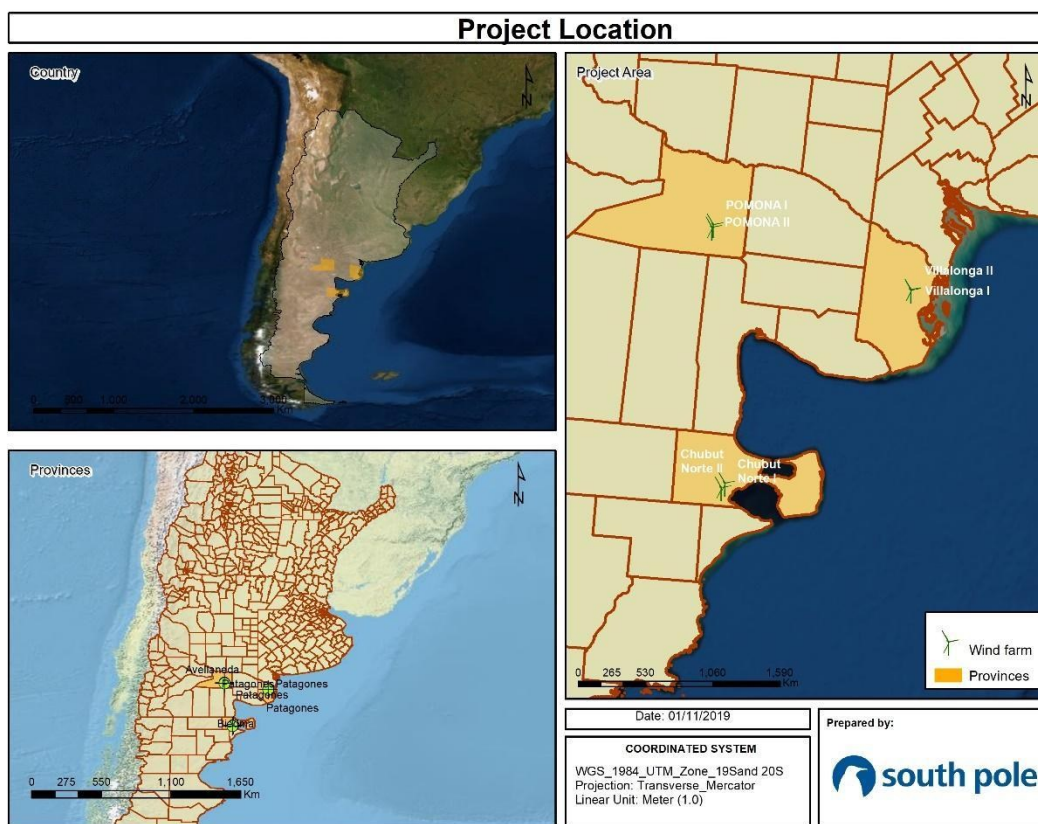


Figure 1: Project location.

Chubut Norte I Wind Farm

The generation is carried out through a set of wind turbines distributed on a plot of around 880 hectares (ha) located in the northeast of the city of Puerto Madryn, Province of Chubut, on National Route N°3 KM 1,300, approximately 20 kilometers (km) north of the junction between National Route 3 and provincial Route 4. The site is located in a rural area; the terrain is open and relatively flat. In the area where the property is located, the elevations of the land are between 122 and 102 meters (m) above sea level.

Table 3: Wind turbines coordinates Chubut Norte I wind farm

Aero ID	X	Y
1	324,200	5,284,728
2	324,711	5,284,256
3	325,234	5,283,727
4	325,705	5,283,303

Aero ID	X	Y
5	326,279	5,285,109
6	326,753	5,284,582
7	327,333	5,283,990
8	328,015	5,283,434

Chubut Norte II Wind Farm

Chubut Norte II wind farm (PECN II) is in the same plot of land as Chubut Norte I.

Table 4: Wind turbines coordinates Chubut Norte II wind farm

Aero ID	X	Y
41	320,172	5,280,304
42	319,494	5,280,883
43	318,757	5,281,596
44	319,901	5,278,031
45	319,373	5,278,539
46	318,878	5,279,166

Pomona I Wind Farm

The PEPOM 1 project is located in the Department of Avellaneda, Province of Río Negro, 3 km from Provincial Route 4, approximately 2 km west of the Choele Choel 500kV Transformer Station.

The site is located in a rural area; the terrain is open and relatively flat. In the area where the property is located, the elevations of the land are between 140 m and 144 m above sea level.

Table 5: Wind turbines coordinates Pomona I wind farm

Aero ID	X	Y
1	262,600	5,616,937
2	262,952	5,617,605
3	263,386	5,618,134
4	262,072	5,614,269
5	263,855	5,618,642
6	264,357	5,619,120
7	264,849	5,619,640
8	265,271	5,620,139

Aero ID	X	Y
9	265,742	5,620,623
10	266,492	5,620,919
11	262,345	5,615,518
12	263,281	5,615,827
13	264,041	5,616,549
14	264,943	5,617,594
15	265,834	5,618,625
16	266,558	5,619,281
17	267,293	5,619,887
18	263,003	5,614,522
19	263,890	5,614,487
20	264,705	5,615,231
21	265,472	5,616,074
22	266,084	5,616,709
23	266,746	5,617,423
24	267,289	5,617,953
25	267,754	5,618,431
26	268,178	5,618,914

Pomona II Wind Farm

The generation is carried out by means of a set of three wind turbines distributed over an area of around 500 ha, located within a total of 4,500 ha in the vicinity of the major city of Choele Choel and 14.7 km west from the Pomona town, Province of Río Negro.

Table 6: Wind turbines coordinates Pomona II wind farm

Aero ID	X	Y
1	261,325	5,613,239
2	261,294	5,612,612
3	261,403	5,611,677

Villalonga I & II Wind Farms

Villalonga I & II wind farms are located in an area of about 727 ha on National Route 3, 15 km south of the town center of Villalonga, approximately 90 km north of the city of Carmen de Patagones, province of Buenos Aires.

The site is located in a rural area. The terrain is open and relatively flat. In the area where the property is located, the elevations of the land are between 12 m and 25 m above sea level.

Table 7: Wind turbines coordinates Villalonga I wind farm

Aero ID	X	Y
V1	528,981	5,566,731
V2	529,250	5,567,185
V3	529,674	5,567,621
V4	530,055	5,567,955
V5	529,785	5,568,743
V6	530,726	5,568,917
V7	528,970	5,569,992
V8	529,071	5,570,578
V9	528,982	5,568,308
V10	528,970	5,569,236
V11	529,906	5,569,742
V12	529,565	5,566,060
V13	529,956	5,566,502
V14	530,396	5,566,915
V15	530,717	5,567,345

Table 8: Wind turbine coordinates Villalonga II wind farm

Aero N°	X	Y
V16	529,190	5,567,732

1.9 Title and Reference of Methodology

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
Methodology	ACM0002	Grid-connected electricity generation from renewable sources	19.0
CDM Tool	01	Tool for the demonstration and assessment of additionality	7.0.0
CDM Tool	07	<i>Tool to calculate the emission factor for an electricity system</i>	7.0
CDM Tool	27	<i>Investment analysis</i>	9.0
CDM Tool	24	<i>Common practice</i>	3.1

1.10 Double Counting and Participation under Other GHG Programs

1.10.1 No Double Issuance

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program?

☐ Yes ☒ No

1.10.2 Registration in Other GHG Programs

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

☐ Yes ☒ No

1.11 Double Claiming, Other Forms of Credit, and Scope 3 Emissions

1.11.1 No Double Claiming with Emissions Trading Programs or Binding Emission Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit? See the *VCS Program Definitions* for definitions of emissions trading program and binding emission limit.

☐ Yes ☒ No

1.11.2 No Double Claiming with Other Forms of Environmental Credit

Has the project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system? See the *VCS Program Definitions* for definition of GHG-related environmental credit system.

☐ Yes☒ No

1.11.3 Supply Chain (Scope 3) Emissions

Do the project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

☐ Yes☒ No

1.12 Sustainable Development Contributions

In line with the Sustainable Development Goals and Argentina's 2030 Agenda for Sustainable Development, the project achieves several of the environmental, social, economic, and technological objectives. Examples:

- Increasing the percentage of renewable energy from the energy mix.
- Expanding infrastructure and improving technology to provide modern and sustainable energy service.
- Achieving levels of economic productivity through diversification and technological modernization.
- Reducing the dependence on fossil fuels and decreasing emissions of sulphur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide, particulate matter, and other pollutants.
- Providing employment opportunities during the construction and operations.

Table 1: Sustainable Development Contributions

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
1)	7.2	7.2.1 Renewable energy share in the total final energy consumption	Implemented activities to increase	The project was able to supply the Argentinian power grid with 873,806.52 MWh of renewable energy, taking advantage of the wind potential in the south of the country.	5,107,272.99 MWh of renewable energy supplied to the Argentinian national grid over the lifetime of the project.
2)	8.5	8.5.2 Unemployment rate, by sex, age and persons with disability	Implemented activities to decrease	The project has created 21 jobs since the beginning of operations. No new job positions were created by the project during the current monitoring period	Since the beginning of operation and maintenance stage, the project created 21 jobs.
3)	13.0	Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase emissions avoided	The project has reduced 391,812 tCO ₂ through the delivery of 873,806.52 MWh of renewable energy that in the absence of the project would have been generated by other grid-connected including fossil fuel-based power plants.	Over the lifetime, the project has reduced 2,290,087 tCO ₂ .

1.13 Commercially Sensitive Information

There is no commercially sensitive information excluded from the public version of the monitoring report.

2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

2.1 Stakeholder Engagement and Consultation

2.1.1 Stakeholder Identification

Stakeholders have not changed since validation. All information provided in the table below relates to the same stakeholders identified at the time of validation.

Stakeholder Identification	All the institutions and communities possibly impacted and interested in the project development within the Area of Influence of the Project were mapped and duly identified from the construction stage at the time of the Environment Impact Assessment.	
Legal or customary tenure/access rights	Genneia has legal ownership of the properties of several projects, the other properties are usufruct rights provided by the communities through lease agreements.	
	Wind farm	Type of ownership
	Chubut Norte I&II	Purchased or owned by Genneia.
	Pomona I&II	Usufruct.
	Villalonga I&II	Purchased or owned by Genneia.
Stakeholder diversity and changes over time	There are no ethnic or indigenous groups in the areas of the project. Due to the location of the project (rural-industrial area within the estimated zone of influence) the affected population is very small. There are practically no critical receptors in the vicinity of the wind farms included in this project.	

	The community is composed of people involved in livestock and agriculture in low proportion. No identified changes over time.
Expected changes in well-being	The negative impacts on the well-being of the population in the immediate vicinity of the wind farms are negligible. Genneia within its relationship and social investment policy has promoted the development of education by creating training courses for teachers and students focused on renewable energy, free education programs, as well as Collaboration in improving the facilities and services of the police station with the donation of an air conditioner to cope with the high temperatures in the summer season and supplying school facilities with the donation of tools.
Location of stakeholders	The stakeholders are in the municipalities of Puerto Madryn, South of the province of Buenos Aires municipality of Villalonga and near Pomona town in the Patagonian region of Argentina.
Location of resources	The community close to the project is composed of people involved in agriculture in less proportion and extensive for all the three sites within this project. The wind farms are located in flat territories composed of Patagonian steppes and access to the wind turbines sites is restricted.

2.1.2 Stakeholder Consultation and Ongoing Communication

Ongoing consultation	The project has implemented an open request system to communicate and serve the community. Genneia is also part of the camera of industry meetings. The evaluation of the stakeholders and the analysis of their perception about the project is fundamental for Genneia to understand the opinions and expectations that the project generates and if necessary, take measures to avoid or minimize possible conflicts that could complicate its development – thus a mechanism was defined for ongoing communication with local stakeholders including: 1) Brochures containing information on all the stages containing access to non-technical summary and contact channels; 2) Telephone numbers; 3) Email address; 4) Mailbox at the entrance of the site; 5) Complaints, queries and claims book; and
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	6) news bulletin sent periodically to interested parties. During this monitoring period, only one complaint was received and processed appropriately. The complaint consisted of a community member requesting maintenance on firewalls to prevent fires in nearby pastures. Once the complaint was filed, the departments responsible for the site were contacted to inquire about the frequency and maintenance of the firewalls. The neighbor was contacted to reassure him that the issue had been addressed. The firewall maintenance was completed in the first week of December. The Ministry of Health sent photographs.
Date(s) of stakeholder consultation	The dates below correspond to the requests and the complaint that have been processed through the grievance mechanism. 19-january-2024 16-february-2024 22-february-2024 04-april-2024 12-april-2024 18-april-2024 20-april-2024 07-may-2024 15-may-2024 24-may-2024 27-may-2024 03-june-2024 18-june-2024 02-july-2024 22-july-2024 02-august-2024 24-august-2024 09-september-2024 10-september-2024 30-september-2024 01-october-2024 17-october-2024 21-october-2024 23-october-2024

	04-november-2024 25-november-2024 26-november-2024
Communication of monitored results	The open request system is implemented and was appropriately executed during this monitoring period, when it applies to all stakeholders (verbal, written and visits) or specific actions to a stakeholder group and in the case of Community Investment Works they are made fully inform from start to close of all activities.
Consultation records	Through the communication plan, several recording methods are used, depending on the activity: Notes (signatures of receipt) Inquiry calls and emails (MQCYR form), Telephone records for counting calls received and/or made (or text messages). During this monitoring period, all communications were received through email, mail or by notes.
Stakeholder input	Local authorities, members of the communities, owners and collaborators of Genneia, all contractors and subcontractors are the actors that can submit applications through the communication system implemented. According to the type of request the necessary measures are taken to address and respond after receipt.

2.1.3 Free, Prior, and Informed Consent

Consent	The identification of actors/stakeholders and the mapping of actions in case of conflicts is carried out by Genneia's Head of Sustainability. A stakeholder matrix/ stakeholder map is constructed by degree of influence, interest, and impact; based on a social survey in the territory. The consent is established with the interested parties before starting the construction and operation of the parks as part of the work done in the EIA. No Ips, LCs and customary rights holders were affected by the project.
Outcome of FPIC	With the issuance of the Environmental Impact Statement, which approves the EIA, the project demonstrates that informed consent was obtained from the project's

	immediate stakeholders. Genneia provided to all stakeholders with information about the company, technical data on the wind parks, and specific contact channels generated by the company for dialogue with the community through a brochure. In addition, Genneia legally acquired land directly and through leases for the implementation of the wind farms.
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2.1.4 Grievance Redress Procedure

Grievances received	Resolution and outcome
Donation request	Request for 5 computers and 2 cell phones. Given that computers have already been donated to the provincial hospital in Puerto 11/03/2024. The donation was reviewed and will not proceed given the recent donation to the Provincial Hospital.
Request for donation of technological equipment and educational tools.	Request for donation of technological equipment and educational tools. 06/10 The purchase of 5 desktop computers will proceed.
Sponsorship request	It was reported that the order could be fulfilled at this time.
Request for donation of tech equipment for the press area of the hospital	The request was referred to IT. There are no computers available.
Appreciation note.	A gratitude note was received for the donation of air conditioners.
Complaint: Community member requests maintenance on firewalls to prevent fires in nearby pastures	Once the complaint was filed, the departments responsible for the site were contacted to inquire about the frequency and maintenance of the firewalls. The neighbor was contacted to reassure him that the issue had been addressed. The firewall maintenance was completed in the first week of December. The Ministry of Health sent photographs.
Request for air conditioning units	The community was informed that it was not possible to go forward with the request in 2024, but a request for budget can be sent for 2025
Request for donation of security cameras and installation services	The donation was not made, as a donation to the local fire department was prioritized.

Request for donation of tires	Tires were purchased and donated.
Request of donation of tires	The request was analyzed and denied given a recent donation of tires.
Request for donations	As the value of the equipment requested exceeded \$70,000 USD, the request was denied.
Request for electrical system installation training	The requested training was held.
Request for the repair of a previously donated piece of medical equipment	The donation of funds to cover the repair was offered, so long as the community asked for a second quote and was in charge of the transportation of the equipment to and from the service facility. The hospital did not move forward with the process and the equipment was not repaired.
Request for volleyballs	The community was informed that the donation will not take place as it is not aligned with Genneia's social investment strategy.
Request for aid in purchasing replacements for police cars	The request was analyzed and denied.
Request for materials to improve outdoor playground	The request was received
Request for permission to visit the wind farm	Visit took place
Request for permission for educational visit to the wind farm.	Availability was evaluated.
Donation request	The request was granted and the donation was made.
Donation request	The request was denied.
Request for guided visit to PEPOM.	Given reply times and the date requested by the school, the visit could not be coordinated.
Request for 100 students and teachers to visit PEPOM	PEPOM's visitation room only seats 20 people. Additionally, a wind turbine is under maintenance. The request is denied.
Request for color printer	The request was approved.
Request for a visit to PEVIL	Visitors' information was requested in turn. However, the site doesn't have any availability on the requested date.
Request for a visit to the wind farm	There was construction going on at the site, so the request was denied
Request for a visit to the wind farm	The visit took place on 07/03
Request for a visit to the wind farm	The community was informed that a date for the visit was being decided.

Request for guided visit to PEVIL	The request was granted and the visit took place on 10/24/2024.
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2.1.5 Public Comments

Summary of comments received	Actions taken
No comments were received during or outside of the public comment period.	Not applicable.

2.2 Risks to Stakeholders and the Environment

2.2.1 Management Experience

The technical project implementation, community relations and environmental impact assessment have been performed by highly qualified personnel with experience in the execution of projects in the energy sector, with South Pole providing advisory on carbon asset development. In this way ensuring the continued environmental licensing approved by the environmental authority and thus contributing sustainably to the development of Argentina.

2.2.2 Risk assessment

	Risk identified	Mitigation or preventative measure(s) taken
Natural and human-induced risks to stakeholders' wellbeing	No risk identified	Genneia has ongoing communication with stakeholders and has not identified any associated risks and has not received any comments.
Risks to stakeholder participation	No risk identified	Genneia has continuous communication with stakeholders and open channels for their participation.
Working conditions	No risk identified	Genneia is regulated under the law of Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions and providing all the necessary

		safety elements for the different operations, as well as a healthy working environment. This is supported by the company's codes of conduct.
Safety of women and girls	No risk identified	Genneia is regulated under the law of El Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions and providing all the necessary safety elements for the different operations, as well as a healthy working environment. This is supported by the company's codes of conduct.
Safety of minority and marginalized groups, including children	No risk identified	Genneia is regulated under the law of El Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions and providing all the necessary safety elements for the different operations, as well as a healthy working environment. This is supported by the company's codes of conduct.
Pollutants (air, noise, discharges to water, generation of waste, and release of hazardous materials and chemical pesticides and fertilizers)	- Noise generation	Increase in noise levels on the wind farm property, in the vicinity of the wind turbines. No significant increase outside the site.

2.3 Respect for Human Rights and Equity

2.3.1 Labor and Work

Risks identified ²		Mitigation or preventative measure(s) taken
Discrimination	No risk identified	Genneia is regulated under the law of Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions. This is supported by the company's codes of conduct.
Sexual harassment	No risk identified	Genneia is regulated under the law of Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions. This is supported by the company's codes of conduct.
Gender equity in labor and work	No risk identified	Genneia is regulated under the law of Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions. This is supported by the company's codes of conduct.
Forced labor	No risk identified	Genneia is regulated under the law of Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions. This is supported by the company's codes of conduct.
Child labor	No risk identified	Genneia is regulated under the law of Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions.

² The identified risks and commensurate mitigation or preventative measure(s) for forced labor, child labor, and human trafficking, must be inclusive of staff and contracted workers employed by third parties.

		This is supported by the company's codes of conduct.
Human trafficking	No risk identified	Genneia is regulated under the law of Argentina and complies with all the requirements demanded by it, guaranteeing work under dignified conditions. This is supported by the company's codes of conduct.

2.3.2 Human Rights

Risks identified	Mitigation or preventative measure(s) taken
No risk identified	Genneia protects and respects human rights in line with international standards.

2.3.3 Indigenous Peoples and Cultural Heritage

Risks identified	Mitigation(s) or preventative measure taken
No risk identified	No Peoples or cultural heritage identified within the project's influence.

2.3.4 Property Rights

Risks identified	Mitigation or preventative measure(s) taken
No risk identified	Ownership and usufruct rights are clearly defined and known by the communities.

2.3.5 Benefit Sharing

The project does not impact property rights. The rights to the use of the entire property were acquired by Genneia through consensual agreements.

Summary of the benefit sharing plan	N/A
Benefit sharing during the monitoring period	N/A

2.4 Ecosystem Health

Risk identified		Mitigation or preventative measure(s) taken during the monitoring period
Impacts on biodiversity and ecosystems	Potential interference of wind turbines with migratory bird routes.	During the operational period of the parks, periodic monitoring is conducted to determine the mortality rate of the fauna. As the rate is marginal, no mitigation measures have been implemented so far.
Soil degradation and soil erosion	No risk identified	No impacts were identified during the EIA and the project operation.
Water consumption and stress	No risk identified	No impacts were identified during the EIA and the project operation.

2.4.1 Rare, Threatened, and Endangered species

Species or habitat	No impacts were identified during the EIA and the project operation.
Areas needed for habitat connectivity	No impacts were identified during the EIA and the project operation.

	Risks identified	Mitigation or preventative measure(s) taken
Habitats for rare, threatened, and endangered species	No risk identified	No impacts were identified during the EIA and the project operation.
Areas for habitat connectivity	No risk identified	No impacts were identified during the EIA and the project operation.

2.4.2 Introduction of species

Not applicable.

2.4.3 Ecosystem conversion

Not applicable.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The renewable energy generation technologies employed under the project activity instances correspond to wind projects.

The activity of the proposed project consists of the installation of six wind grid-connected power plants located in different regions of the country of Argentina. The total installed capacity of the six wind power plants is 223.38 MW. The power plants are implemented at a site where no renewable power plant was operating prior to the implementation of the project activity (green-field plant). During this monitoring period of the year 2024, no relevant impacts occurred that would affect generation from any of the project activity instances, stoppages that occurred are contemplated within the normal operation of the wind farms, including maintenance and shutdowns requested by the national grid coordinator due to demand. As part of an internal reorganization of the South Pole Group, Swiss Carbon Value Ltd. merged with South Pole AG on June 30, 2025, as a result South Pole AG will be from now on the project partner as part of the other entities involved in the project.

The electricity generated by the project is exported to SADI. Therefore, the project displaces an equivalent amount of electricity that would otherwise have been generated based on fossil fuels. In the baseline scenario, all the electricity supplied to the grid by the project activity would otherwise have been generated by the operation of grid-connected power plants.

The project activity applies the approved CDM methodology ACM0002 (Version 19.0), as the methodology is also applicable for small-scale projects.

In the following paragraphs, further details of the individual instances included in the project activity are provided.

Chubut Norte I Wind Farm

Chubut Norte I wind farm (PECN I) is a project generating electricity through wind energy. The contracted power is 28.35 MW and the plant has a total installed nominal capacity of 28.8 MW. The generation is carried out through a set of eight wind turbines distributed on a plot of around 880 ha located northwest of the city of Puerto Madryn, Province of Chubut. The connection to the SADI has been made by means of a 16.5 km long and 132 kV high voltage line to the TRANSPA's 132/330 kV Transformer Station Puerto Madryn.

Table 9: Chubut Norte I wind farm

Wind Turbine Manufacturer	Vestas
Wind Turbine Types	V126
Wind Turbine Capacity	3.60 MW

No. of Turbines	8
Total Capacity	28.8 MW
Generation Monitoring Period	126,056.46 MWh

Chubut Norte II Wind Farm

With an installed capacity of 26.28 MW, Chubut Norte II wind farm (PECN II) is in the same plot of land as Chubut Norte I. It comprises six Nordex wind turbines. The connection to the SADI has been made through a double terna LAT 132 kV, of which one terna has been connected at TRANSENER's ET 132/330 kV Puerto Madryn and the other terna has been connected at TRANSENER's ET 132/500 kV Puerto Madryn.

Table 10: Chubut Norte II wind farm

Wind Turbine Manufacturer	Nordex
Wind Turbine Types	N149-4.5
Wind Turbine Capacity	4.38 MW
No. of Turbines	6
Total Capacity	26.28 MW
Generation Monitoring Period	89,353.70 MWh

Pomona I Wind Farm

Pomona I wind farm (PEPOM I) constitutes an electricity generation project using wind energy. The development of the project comprises 26 wind turbines of 3.9 MW, totaling 101.4 MW of wind power. The generation is carried out through a set of wind turbines distributed on a property of about 2,440 ha, located in the vicinity of the town of Pomona, Province of Río Negro.

The connection to the SADI has been made through a new 33/132 kV Transformer Station and a sectioning of the 132 kV LAT linking the Choele Choel and Luis Beltran Transformer Stations.

Table 11: Pomona I wind farm

Wind Turbine Manufacturer	Nordex
Wind Turbine Types	N131

Wind Turbine Capacity	3.90 MW
No. of Turbines	26
Total Capacity	101.4 MW
Generation Monitoring Period	377,244.04 MWh

Pomona II Wind Farm

Pomona II wind farm (PEPOM II) is a project that generates electricity through wind energy. In the development of PEPOM II, 11.7 MW of wind power was installed. The generation is carried out by means of a set of three wind turbines distributed over an area of around 500 ha, located within a total of 4,500 ha in the vicinity of the city of Choele Choel, Province of Río Negro. The PEPOM II is adjacent to the Pomona I wind farm, awarded in the RenovAr program – Round 1.5.

The connection to the SADI will be made through the 33/132 kV Transformer Station of the Pomona I wind farm, awarded in the RenovAr program – Round 1.5.

Table 12: Pomona II wind farm

Wind Turbine Manufacturer	Nordex
Wind Turbine Types	N131
Wind Turbine Capacity	3.90 MW
No. of Turbines	3
Total Capacity	11.7 MW
Generation Monitoring Period	45,577.25 MWh

Villalonga I Wind Farm

The Villalonga I wind farm consists of the construction and operation of a wind farm with 15 wind turbines and an installed capacity of 51.75 MW. The wind turbines are interconnected with each other by a medium voltage (33 kV) underground electrical grid, from which the energy is conducted to the internal transformer stations (ET PEVI) . At the substation, the voltage is increased to 132 kV and from there, connecting the project to the SADI between ET Pedro Luro and ET Carmen de Patagones.

Table 13: Villalonga I wind farm

Wind Turbine Manufacturer	Vestas
Wind Turbine Types	V126
Wind Turbine Capacity	3.45 MW
No. of Turbines	15
Total Capacity	51.75 MW
Generation Monitoring Period	221,286.23 MWh

Villalonga II Wind Farm

The Villalonga II wind farm's generation is carried out by means of a wind turbine distributed over an area of around 60 ha located within a 727 ha site in the vicinity of the city of Villalonga, Province of Buenos Aires. The project is located next to the Villalonga I wind farm. The connection to the SADI is made through the Transformer Station 33/132 kV of the Villalonga I wind farm.

Table 14: Villalonga II wind farm

Wind Turbine Manufacturer	Vestas
Wind Turbine Types	V126
Wind Turbine Capacity	3.45 MW
No. of Turbines	1
Total Capacity	3.45 MW
Generation Monitoring Period	14,288.83 MWh

Below are the technical specifications of each type of technology according to manufacturer:

Table 15: Technical specifications 'Vestas-V126-3.60 MW' turbine

Vestas-V126-3.60 MW	
Rotor	
Diameter	126 m
Swept area	12,469 m ²
Air brake	Full rotation of the blades
Blades	
Type	Infused structural airfoil shell
Length	61.65 m

Material	Carbon fibre pultrusions, glass fibre fabrics, balsa and PET foam core
Hub	
Type	Cast ball shell hub
Material	Cast iron
Hub high	117 m
Main Shaft	
Type	Cast hollow shaft
Material	EN GJS-500-14 cast iron
Generator	
Type	Asynchronous with cage rotor
Rated Power [PN]	3,650 kW
Voltage	3x750 V
Rated speed	1450 rpm
Protection system	IP 54
Transformer	
Type	Dry-type transformer (ECO)
Nominal Voltage (HV)	33 kV
Frequency	50 Hz

Table 16: Technical specifications 'Nordex-N149-4.35 MW' turbine

Nordex-N149-4.0-4.5 MW	
Rotor	
Diameter	141.1 m
Swept Area	17,460 m ²
Blades	
Length	72.40 m
Material	Glass-fiber and carbon-fiber reinforced plastic
Hub	
Type	Stiff cast structure
Material	Cast iron
Hub high	120 m
Main Shaft	
Type	Forged hollow shaft
Material	42CrMo4 or 34CrNiMo6
Generator	
Type	doubly-fed induction

Rated Power [PN]	4,380 kW
Voltage	660 V
Protection system	IP 54
Transformer	
Type	Ester transformer
Primary / Secondary voltage	33 kV
Frequency	50/60 Hz

Table 17: Technical specifications 'Nordex - N131-3.90' turbine

Nordex - N131-3.90	
Rotor	
Diameter	131 m
Swept Area	13,478 m ²
Blades	
Type	Prepreg or Infused structural airfoil shell
Length	64.4 m
Material	Glass-fiber and carbon-fiber reinforced plastics
Hub	
Hub high	120 m
Main Shaft	
Type	Forged part
Material	42CrMo4 or 34CrNiMo6
Generator	
Type	Doubly fed induction asynchronous
Rated Power [PN]	3,900 kW
Voltage, Stator [U _{NS}]	660 V
Rated speed	730–1325 rpm
Protection system	IP 54
Transformer	
Type	Dry-type
Frequency	50 Hz

Table 18: Technical specifications 'Vestas-V126-3.45 MW' turbine

Vestas – V126-3.45 MW	
Operating data	
Rated power	3.450 kW

Cut-in wind speed	3 m/s
Cut-out wind speed	22.5 m/s
Re cut-in wind speed	20 m/s
Wind class	IEC IIB/IEC IIIA
Rotor	
Diameter	126 m
Swept Area	12,469 m ²
Air brake	Full blade feathering with three pitch cylinders
Electrical	
Frequency	50/60 Hz
Converter	Full scale
Blades	
Type	Prepreg or Infused structural airfoil shell
Length	61.7 m
Material	Fibreglass reinforced epoxy, carbon fibres and Solid Metal Tip (SMT)
Hub	
Type	Cast ball shell hub
Material	Cast iron
Hub high	87 m
Main Shaft	
Type	Hollow shaft
Material	Cast iron or forged steel
Generator	
Type	Asynchronous with cage rotor
Rated Power [PN]	3,300 kW
Power factor	0.98 Cap – 0.96 Ind (default: 1.00)
Voltage, Stator [U _{NS}]	Stator: 690 V, Rotor: 480 V
Rated rpm	1,680–2,016
Protection system	IP 54
Transformer	
Type	Dry-type cast resin transformer
Primary / Secondary voltage	0.69/33 kV
Frequency	50 Hz

3.2 Deviations

3.2.1 Methodology Deviations

No methodology deviations were made.

3.2.2 Project Description Deviations

There are two project description deviations that took place in monitoring periods and have been already informed in the previous approved monitoring reports and remain valid throughout the current monitoring period as well. The first is associated with the change in the project start date and credit period, and the second is linked to the calibration frequency and number of meters. For this monitoring period, no additional project description deviations have been made.

1) Project start date: As can be seen in the public records of the Argentinean electricity system operator (CAMMESA), Chubut Norte I wind farm began operating and dispatching energy to the grid on 12 November 2018 (registered PD: 12 December 2018), from that date the project began to generate GHG emissions reductions as defined by the VCS Standard, therefore, a deviation in the project start date reported in the PD validated is included. The credit period was adjusted accordingly to 12/11/2018 - 11/11/2028.

Impact on baseline/additionality/eligibility: According to the VCS Standard document, interpretation of whether the deviation impacts any of these shall be determined consistent with the “CDM Guidelines on assessment of different types of changes from the project activity as described in the registered PDD”. Changes to the project start date of the registered PD have no material impact on the applicability of the applied methodologies or the other applied methodological regulatory documents, or the applied standardized baselines which remains valid, the project activity is the installation of a Greenfield power plant, 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...”. Furthermore, the project remains additional, the days difference in the start date does not represent a material change.

2) Calibration frequency and number of meters: In the validated PDD it was established that meter calibration would be performed as established by the national authorities or every 3 years. Since the energy market in Argentina is well regulated, the project proponent does not have free access to intervene the meters and perform the calibration. Instead, the national grid coordinator identifies and decides when to make such adjustments. Therefore, the frequency of calibration will now be as established by the national authorities. On the other hand, in the validated PDD it was established that 2 meters would be installed for each power plant; however, at the Chubut Norte I, Chubut Norte II and Pomona I sites, 4 meters were installed for each power plant, 2 main and 2 backup meters since the beginning of commercial operation.

According to the VCS Standard document, interpretation of whether the deviation impacts any of these shall be determined consistent with the “CDM Guidelines on assessment of different types of changes from the project activity as described in the registered PDD”.

The following tables demonstrate why these changes do not affect the additionality, baseline and applicability of the methodology.

Table 19: Changes which may impact the additionality of the project activity

Criteria	Assessment
Changes in the effective output capacity due to increased installed capacity or increased number of units, or installation of units with lower capacity or units with a technology which is less advanced than that described in the PDD	These changes do not involve an increase in the number of units or total project capacity.
Addition of component or extension of technology	This change does not involve an addition of component or extension of technology.
Removal or addition of one (or more) site of a project activity registered with multiple sites	No sites were included or removed from the original design.
Different values of those actual operational parameters relevant to determination of emission reduction which are within the control of project participant, and which result in the IRR passing the benchmark as described in the registered PDD.	The change does not affect the parameters used to demonstrate financial additionality.

Table 20: Changes which impact the applicability/application of baseline methodology

Criteria	Assessment
The original methodology would no longer be applicable.	This change does not affect the applicability of the methodology.
Another methodology would have been applicable.	The methodology used would still be applicable for this project.
Another baseline scenario would be more appropriate	Standardized baseline remains valid

Therefore, the deviations do not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in conformance with the applied methodology.

3.3 Grouped Projects

This is not a grouped project activity. Thus, this section is not applicable for this project.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes

☒ No

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	EF _{grid,CM,y}
Data unit	tCO ₂ /MWh
Description	Combined margin CO2 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'.
Source of data	Calculated based on information provided by the electricity wholesale market management company (Compañía Administradora del Mercado Mayorista Eléctrico (CAMMESA)).
Value applied	0.4484
Justification of choice of data or description of measurement methods and procedures applied	'Tool to calculate the emission factor for an electricity system' (Version 7.0)
Purpose of data	Calculation of baseline emissions.
Comments	Since the operating margin (OM) and build margin (BM) emission factor was set ex-ante, as a result the combined margin (CM) emission factor is also set ex-ante for the first crediting period.

4.2 Data and Parameters Monitored

Data / Parameter	EG _{facility,y}				
Data unit	MWh/yr				
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y.				
Source of data	Measurement in the power plant.				
Description of measurement methods and procedures to be applied	The meters installed are bi-directional, taking into account both the quantity of electricity supplied by the project plant to the grid and the quantity of electricity delivered to the project plant from the grid. In this case, the individual values are not required.				
Frequency of monitoring/recording	Continuous measurement and at least monthly recording. Typically, the measured data is read once every 24 hours using tele-metering technology (remotely).				
Value monitored	<table> <tr> <td></td><td>2024 (MWh)</td></tr> <tr> <td>Chubut Norte I</td><td>126,056.46</td></tr> </table>		2024 (MWh)	Chubut Norte I	126,056.46
	2024 (MWh)				
Chubut Norte I	126,056.46				

	Chubut Norte II	89,353.70
	Pomona I	377,244.04
	Pomona II	45,577.25
	Villalonga I	221,286.23
	Villalonga II	14,288.83
Monitoring equipment	See details in section 4.3	
QA/QC procedures to be applied	The verification of the meters has been done as established by the national authorities. In addition, the generation values have been crosschecked with the information available on the website of the electricity wholesale market management company.	
		Calibration date
	Chubut Norte I	24/10/2018
	Chubut Norte II	11/09/2020
		30/07/2021
	Pomona I	13/03/2023
	Pomona II	24/05/2019
	Villalonga I	23/11/2018
	Villalonga II	21/01/2019
	Purpose of the data	Calculation of baseline emissions and contributions to the SDGs.
Calculation method	Measured directly.	
Comments	All data collected as part of the monitoring process is archived electronically and kept for at least two years after the end of the last crediting period.	

Data / Parameter	Jobs _y
Data unit	#
Description	Number of jobs created by the project activity in year y
Source of data	Genneia payroll system
Description of measurement methods and procedures to be applied	New hires are created in the system when they enter the company. Former employees are removed from the system when they leave the company.

Frequency of monitoring/recording	The information can be accessed as needed. For the purposes of filling out the monitoring report, the data is accessed annually.	
Value monitored	Instance of the project	2024 (#)
	Chubut Norte I	0
	Chubut Norte II	0
	Pomona I	0
	Pomona II	0
	Villalonga I	0
	Villalonga II	0
	It is worth noting that the project has created a total of 21 jobs since operations began, and all 21 of these jobs were kept during the current monitoring period. No additional jobs were created during the current monitoring period.	
Monitoring equipment	None.	
QA/QC procedures to be applied	The payroll database is maintained monthly to ensure all employees are included and any former employees have been removed.	
Purpose of the data	SDG contributions (goal 8)	
Calculation method	Number of jobs in year y – Number of jobs in the year y-1	
Comments		

4.3 Monitoring Plan

The monitoring plan, which is implemented by the Project Proponent, describes the monitoring organization, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving, etc., according to the approved methodology, ACM0002 *Version 19.0*. The continuous monitoring of electricity generation ensures that the net electricity delivered to the grid is completely monitored along the whole crediting period, given the fact that the total generation measured will affect the amount of emission reductions obtained.

Electricity Generation of the Project Activity

Due to the project participant's choice of an ex-ante emission factor, the most important variable to monitor is the project's electricity generation. It is measured according to the national standards and regulations for the wholesale market participants (rules from the CAMMESA). Between 2 and 4 0.2s precision meters are installed for each wind farm, for each main meter there is a backup unit. All units are connected at the interconnection point where they inject energy to the transmission system. This is the main information for calculating contributions to SDGs 7 and 13.

New job positions created

Measures the number of new direct jobs created by the project, differentiating by type of employment and by gender, where possible. This parameter reflects the project's contribution to local economic development and the promotion of decent work, in line with SDG 8.

The main and back-up meters for each wind farm are illustrated below:

Wind Farm Chubut Norte I

Main meter 1



Main meter 2

Back-up meter 1



Back-up meter 2



Table 21: Main and back-up meters' details Chubut Norte I

	Serial	Model	Brand	Calibration date	Accuracy
Main 1	351608675	402-MT5A-26D	Circutor	24/10/2018	0.2%
Back-up 1	351608684	402-MT5A-26D	Circutor	24/10/2018	0.2%
Main 2	351608687	402-MT5A-26D	Circutor	24/10/2018	0.2%
Back-up 2	351608663	402-MT5A-26D	Circutor	24/10/2018	0.2%

Wind Farm Chubut Norte II

Main meter 1

Back-up meter 1



Main meter 2



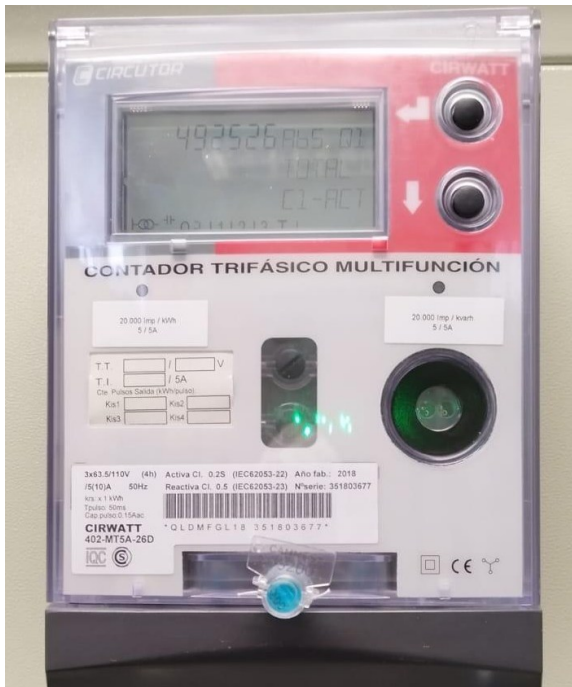
Back-up meter 2



Table 22: Main and back-up meters' details Chubut Norte II

	Serial	Model	Brand	Calibration date	Accuracy
Main 1	351806297	402-MT5A-26D	Circutor	11/09/2020	0.2%
Back-up 1	351806295	402-MT5A-26D	Circutor	11/09/2020	0.2%
Main 2	351806294	402-MT5A-26D	Circutor	11/09/2020 30/07/2021	0.2%
Back-up 2	351806296	402-MT5A-26D	Circutor	11/09/2020 30/07/2021	0.2%

Main meter 1



Back-up meter 1



Main meter 2



Back-up meter 2



Table 23: Main and back-up meters details Pomona I

Serial	Model	Brand	Calibration date	Accuracy
--------	-------	-------	------------------	----------

Main 1	351803677	402-MT5A-26D	Circutor	13/03/2023	0.2%
Back up 1	351803678	402-MT5A-26D	Circutor	13/03/2023	0.2%
Main 2	351803679	402-MT5A-26D	Circutor	13/03/2023	0.2%
Back up 2	351803680	402-MT5A-26D	Circutor	13/03/2023	0.2%

Wind Farm Pomona II

Main meter



Back-up meter



Table 24: Main and back-up meters' details Pomona II

	Serial	Model	Brand	Calibration date	Accuracy
Main	351803681	402-MT5A-26D	Circutor	24/05/2019	0.2%
Back-up ³	351803682	402-MT5A-26D	Circutor	-Calibrated by the manufacturer	0.2%

³ As a generator with a power of less than 20 MW, the SMEC node need not have a control meter according to the Resolución 472 / 1998. Therefore, it is not subjected to verification and calibration controls by CAMMESA, However, all the meters are calibrated by the manufacturer.

Wind Farm Villalonga I
Main meter



Back-up meter



Table 25: Main and back-up meters' details Villalonga I

	Serial	Model	Brand	Calibration date	Accuracy
Main	MW-1706B236-02	ION8650	SCHNEIDER ELECTRIC	23/11/2018	0.2%
Back-up	MW-1706B242-02	ION8650	SCHNEIDER ELECTRIC	23/11/2018	0.2%

Wind Farm Villalonga II
Main meter

Back-up meter



Table 26: Main and back-up meters' details Villalonga II

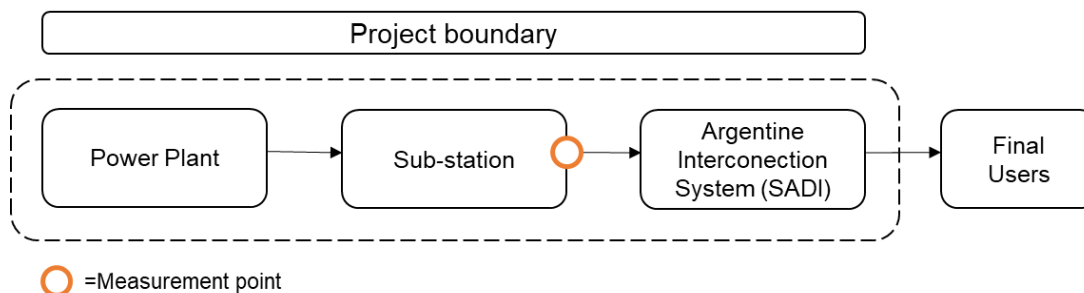
	Serial	Model	Brand	Calibration date	Accuracy
Main	MW-1706B261-02	ION8650	SCHNEIDER ELECTRIC	21/01/2019	0.2%
Back/u p ⁴	MW-1706B601-02	ION8650	SCHNEIDER ELECTRIC	Calibrated by the manufacturer	0.2%

All the meters are provided with built-in registers, and generation data is ready to download both remotely and/or locally by CAMMESA and the project developer. The information is acquired on programmable intervals, ranging from a minimum of one minute to a maximum of an hour.

⁴ As a generator with a power of less than 20 MW, the SMEC node need not have a control meter according to the Resolución 472 / 1998. Therefore, it is not subjected to verification and calibration controls by CAMMESA, However, all the meters are calibrated by the manufacturer.

The operational team frequently backs up the information. The data is included in an Excel spreadsheet for emission reductions calculations on a monthly basis. All data collected as part of the monitoring process are archived electronically and kept for at least for two years after the end of the last crediting period.

The following scheme shows the power plants, the substation and the metering points:



The following table shows which substation each project delivers the electricity generated to:

Wind power plant	Substation
Chubut Norte I	ET PE Chubut Norte
Chubut Norte II	ET PE Chubut Norte
Pomona I	ET Pomona
Pomona II	ET Pomona
Villalonga I	ET Villalonga
Villalonga II	ET Villalonga

QA/QC Measures

As indicated, there is a main and a back-up electricity meter for each wind farm, which assures correct measurement in case of failures of the main electricity meters. Moreover, in case of failure of any of the meters, the project developer will proceed according to the 'Sistema de Medición Comercial' (SMEC) and CAMMESA regulations⁵. In addition, the generation values are crosschecked with the information available on the website of the electricity wholesale market management company.

If any other emergency does not allow the power generation of the plants to be measured, or if data would be missing as a result of a failure in the monitoring process, no emission reductions shall be claimed during that period until correct function of the meters is again guaranteed, in addition to reliable data.

Personnel Responsible for Monitoring

Figure 3 shows the organizational chart of the monitoring.

⁵ Technical regulations available at <https://smec.cammesa.com/normativa/>

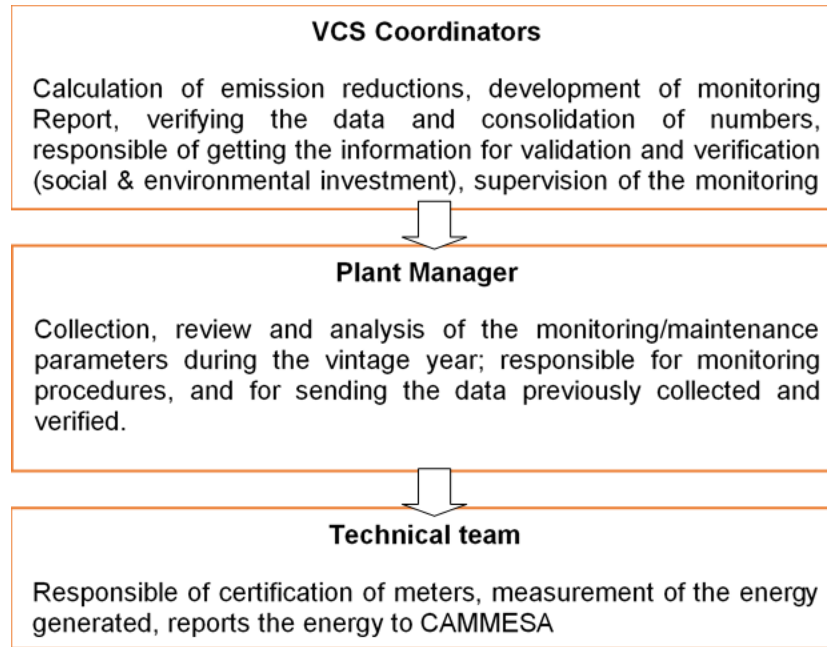


Figure 2: Operational structure of the monitoring plan

Responsible Personnel:

- The **VCS Coordinators** supervise the monitoring process and are in charge of compiling the monitoring data in an Excel spreadsheet and calculating the emission reductions of the monitoring period. They also develop the monitoring report in accordance with the VCS rules.
- The **Plant Manager** is responsible for verification of energy measurement. The Plant Manager is responsible for checking and verifying the meter readings.
- The **Instrumentation and Control Engineers** are responsible for electricity generation reading and for processing the energy produced by the project from the meters installed at the substation. Records of the meter are downloaded in a spreadsheet for measurement control and the data discharged from the meter is stored electronically and sent to CAMMESA.

Personnel who carry out monitoring tasks are familiar with the basic monitoring requirements and structures. New personnel must participate in basic training in order to get acquainted with the monitoring procedures. Since the main monitoring tasks, i.e. the measurement of energy production and the reporting of energy generation, are carried out independently from the VCS as part of the daily operation, no specific training is required. The VCS Coordinators are supported by an external consultant, if necessary, to assure correct application of the monitoring procedures. They also carry out corrective actions if any inconsistency is identified and train the Plant Manager and the Technical Team, if necessary.

All data collected as part of monitoring is archived electronically and kept for at least two years after the end of the last crediting period.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

The baseline scenario and the emission rate calculation are based on the electricity that would otherwise have been generated by the plants connected to the grid and by addition of future plants. According to the methodology, no leakage emissions are considered.

Baseline emissions are calculated by multiplying the combined margin emission factor ($EF_{grid,y}$, in tCO₂e/MWh) by the electricity generated by the proposed project activity during the year y (EG_y , in MWh).

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

The detailed calculations and data of the baseline emissions are presented in the emission factor Excel spreadsheet. The relevant methodological approaches and equations are presented below:

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

Equation 1 (Equation 11 of the ACM0002 v. 19.0)

Where:

BE_y	=	Baseline emissions in year y (tCO ₂ /yr)
$EG_{PJ,y}$	=	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)
$EF_{grid,CM,y}$	=	Combined margin CO ₂ emission factor for grid-connected power generation in year y , calculated using the latest version of the 'Tool to calculate the emission factor for an electricity system' (tCO ₂ /MWh) ⁶

Since it is a green-field project, according to Equation (12) of ACM0002 (version 19.0):

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

The expression $EG_{PJ,y}$ is used in the Project Document Design (PDD). The combined margin CO₂ emission factor for grid connected power generation in year y ($EF_{grid,CM,y}$) was calculated ex ante as stated in the registered PDD. That value is 0.4484 t CO₂/MWh.

⁶ Calculated by Equation 6 of this document

Considering that the total electricity generation of the project for the respective monitoring period was 873,806.52, the total baseline emissions calculated with Equation 1 are as follows:

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

$$BE_y = 873,806.52 \text{ MWh} \times 0.4484 \text{ tCO}_2/\text{MWh}$$

$$BE_y = 391,812 \text{ tCO}_2$$

Project Instance	Generation (MWh)	Emission reduction (tCO ₂)
	2024	2024
Chubut Norte I	126,056.46	56,523
Chubut Norte II	89,353.70	40,066
Pomona I	377,244.04	169,156
Pomona II	45,577.25	20,436
Villalonga I	221,286.23	99,224
Villalonga II	14,288.83	6,407
Total	873,806.23	391,812

5.2 Project Emissions

Since the project activity is the installation of six wind farms, the project emissions are zero.

$$PE_y = 0$$

5.3 Leakage Emissions

No leakage emissions are considered as provided in the methodology:

$$LE_y = 0$$

5.4 GHG Emission Reductions and Carbon Dioxide Removals

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCUs (tCO ₂ e)	Removal VCUs (tCO ₂ e)	Total VCUs (tCO ₂ e)
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01-Jan-2024 to 31-Dec-2024	391,812	0	0	391,812	0	391,812
Total	391,812	0	0	391,812	0	391,812

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
01-Jan-2024 to 31-Dec-2024	444,180	391,812	-11.79%	Fluctuations in wind potential are common and are due to numerous factors, including wind availability and stoppages due to low demand and maintenance. A difference in emission reductions between predicted and actual is a normal variation
Total	444,180	391,812	-11.79%	

APPENDIX 1: COMMERCIALY SENSITIVE INFORMATION

No commercially sensitive information was included in this monitoring report.