CASA La Calera solar project in San Luis

Document prepared by Sustainable and Carbon Finance LLC

Project Document Format (DoP) (Version 2.0)	
Name of the project	CASA La Calera solar project in San Luis
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Project participants	Industrias Juan F. Secco S.A. Sustainable and Carbon Finance LLC
Version	4

Project Document Format (DoP) (Version 2.0)	
Date	16/05/2023
Project type	Non-Conventional and Renewable Energy Sources (NCRES)
Grouped project	No
Applied Methodology	Methodology: ACM0002 - Grid-connected electricity generation from renewable sources - Version 20.0
Project location (City, Country)	La Calera Province of San Luis Argentina
Starting date	01/07/2023
Quantification Period of GHG emissions reductions	7 years 01/07/2023 a 30/06/2030
Estimated total and average annual GHG emission reduction amount	158,463 tCO_2 22,638 tCO_2 /y_2
Sustainable Development Goals	SDG 5: Gender equality SDG 7: Affordable and clean energy SDG 8: Decent Work and Economic Growth SDG 10: Reduced Inequalities SDG 13: Climate Action SDG 17: Partnerships for the goals

Project Document Format (DoP) (Version 2.0)	
Special category, related to co-benefits	N/A

Content

1 Project eligibility

1.1 Scope

The project is eligible under the scope of the BCR Standard by meeting one or more of the following conditions (Mark with an X).

The scope of the BCR Standard is limited to:

The following greenhouse gases, included in the Kyoto Protocol: Carbon Dioxide (CO2), Methane (CH4) and Nitrous Oxide (N2O).	X
GHG projects using a methodology developed or approved by BioCarbon Registry, applicable to GHG removal activities and REDD+ activities (AFOLU Sector).	
Quantifiable GHG emission reductions and/or removals generated by the implementation of GHG removal activities and/or REDD+ activities (AFOLU Sector).	
GHG projects using a methodology developed or approved by BioCarbon Registry, applicable to activities in the energy, transportation and waste sectors.	X
Quantifiable GHG emission reductions generated by the implementation of activities in the energy, transportation and waste sectors.	X

Within the scope of the BCR Standard, the project falls under Activities in the energy sector, specifically as Non-Conventional and Renewable Energy Sources (NCRES). The project will reduce the emission of carbon dioxide (gas included in the Kyoto Protocol), will use the methodology approved by BioCarbon Registry applied to the energy sector and finally, the reduction of quantifiable GHG emissions is entirely related to the implementation of the project in the energy sector as mentioned above.

1.2 Project type

Activities in the AFOLU sector, other than REDD+	
REDD+ Activities	
Activities in the energy sector	X
Activities in the transportation sector	
Activities related to Handling and disposing of waste	

1.3 Project scale

According to the definitions of the Clean Development Mechanism, this project falls into the Large Scale category, with an installed nominal capacity of 20 MW.

2 General description of the project

CASA La Calera Photovoltaic Solar Plant Project is an avant-garde project for the energy development of the province of San Luis and will contribute to the electricity

supply of the industrial plant Cementos Avellaneda S.A. (CASA), through the generation of energy from photovoltaic panels.

The project's average power generation for the next 7 years is estimated at 55 GWh per year, resulting in emission reductions of 22,638 tCO_2e per year and 158,463 tCO_2e of emission reductions over the 7-year crediting period.

Context

The Province of San Luis delves into energy and climate change matters through Law No. IX-0921/14 Renewable Energies - Promotion and Development Law and the Strategic Energy Plan 2012-2025. The first of them has the following purposes:

a) Diversify the provincial energy matrix;

b) Promoting economic growth, employment, technological progress and territorial integration through the installation of new renewable energy enterprises;

c) Encourage the establishment of industries for the production of equipment and components for the use of renewable energy sources, including the construction and assembly of the necessary facilities for such purpose;

d) Planning and promoting the provincial electro-energetic development of renewable energy sources;

e) Support the sustainable development of the Province;

f) To promote training, research and development in renewable energies;

g) Contribute to public and/or private sector investments in energy generation projects based on the use of renewable sources.

One of the goals of the 2012-2025 Strategic Plan is to diversify the provincial matrix with the generation of efficient renewable energies.

It is clear that the implementation of this project is in line with the province's legal framework and facilitates and/or makes it feasible to achieve the objectives set forth.

Baseline

ACM0002 (Version 20.0) methodology is applied since the purpose is the installation of a new renewable energy plant connected to the grid (Greenfield), otherwise the electricity would have been generated by the operation of existing power plants based on fossil fuels.

Sustainable Development

a) SDG 5: Gender equality

Opportunities for permanent positions will be equal in terms of gender and financial remuneration.

b) SDG 7: Affordable and clean energy

Up to 55GWh/year incorporated into the country's energy matrix

c) SDG 8: Decent Work and Economic Growth

Generation of temporary jobs during construction and assembly and permanent jobs during operation and maintenance.

d) SDG 10: Reduced Inequalities

Annual exchange meeting with the community and its representatives. Training and motivation of young people through training visits to the generation plant.

e) SDG 13: Climate Action

Up to 22,638 tCO_2/y will be reduced.

f) SDG 17: Partnerships for the goals

Generation of alliances and exchange with La Calera's volunteer firefighters, community referents and neighboring organizations.

2.1 GHG Project name

CASA La Calera Solar Project in San Luis, hereinafter referred to as CASA Project.

2.2 Objectives

To meet the country's growing energy demand by generating 55GW/year of electricity from solar energy.

Reduce emissions by around 22,638 tCO_2 /y, substituting the use of fossil fuels.

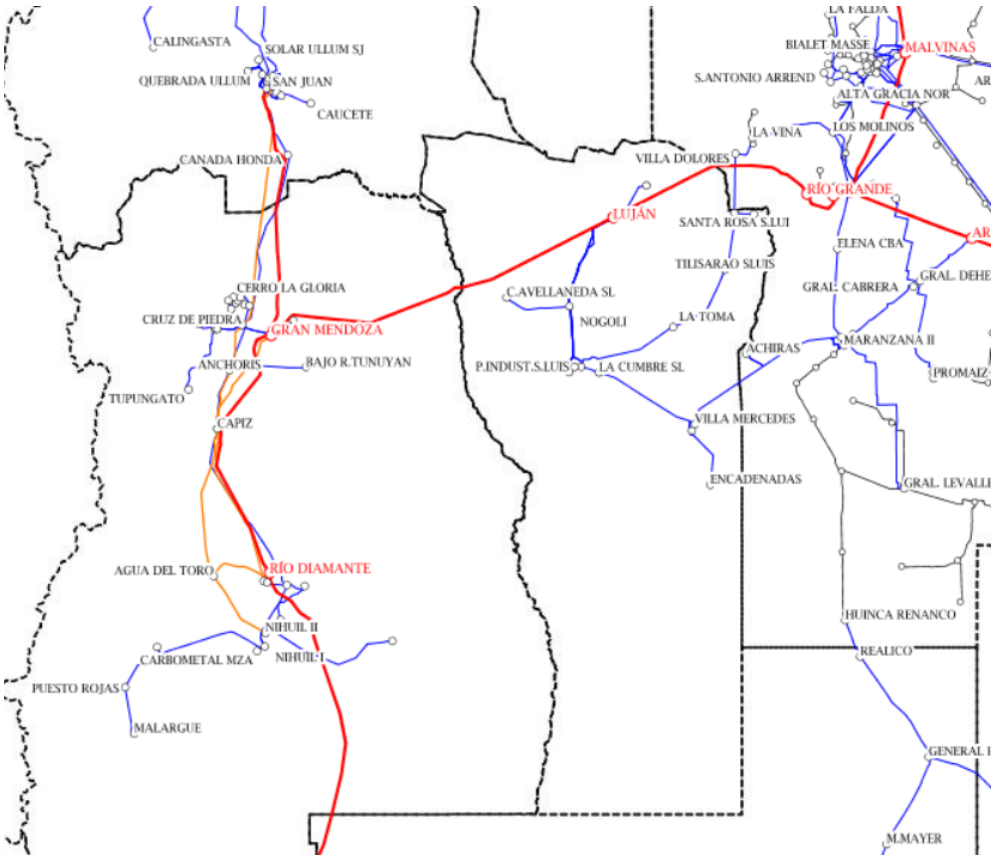
Contribute to the fulfillment of the objectives proposed by the Promotion and Development Law and the Strategic Energy Plan 2012-2025 of the Province of San Luis.

2.3 Project activities

The project is based on solar energy sources, through photovoltaic conversion technology to produce electricity, which will feed the C. Avellaneda SL Power Transformer Station, which is part of the Argentine Interconnection System (SADI). SADI stands for “Sistema Argentino De Interconexión” and is the electrical grid that collects and transports all the energy produced and interconnects the different regions of Argentina. The production plant of Cementos Avellaneda S.A. takes power from a connection to the same C. Avellaneda SL Transformer Station since it is the closest connection point.

The following figure shows part of the SADI network and the C. Avellaneda SL Transformer Station.

Illustration 1 SADI - Transformer Station C. Avellaneda SL (https://aplic.cammesa.com/geosadi/)



Prior to project implementation, the selected site was not used for agricultural, industrial, commercial, residential, or cultural purposes.

The facilities to secure the 23.8MWp will consist of:

37800 units of 545Wp

9000 units of 540Wp

110 Inverters Huawei Technologies brand, model SUN 2000-215 KTL-H3

5 transformers, transformation ratio 0.8/6.6kV

Trackers dual-row technology, model Agile 1P

Table 1 Electrical and mechanical characteristics BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE TSM-DEG19C.20

Peak Power (W)	545 / 540
Type of cells	Bifacial
Max power voltage (V)	31.6 / 31.4
Max power current (A)	17.24 / 17.21

Yield (%)	20.9 / 20.7
Dimensions (mm)	2384 × 1096 × 35
Degradation annual energy generation (%)	0.45

Table 2 General characteristics of solar panels

Características principales	
Modelo	TSM-DEG19C.20
Fabricante	Trina Solar
Tecnología	Si-mono
Tipo de módulo	Bifacial
Máxima tensión	1500 V
Standard test conditions (STC)	
Potencia máxima	545 Wp
Eficiencia	20,90%
Tensión MPP	31,60 V
Corriente MPP	17,24 A
Tensión a circuito abierto	37,9 V
Corriente de cortocircuito	18,35 A
Standard test conditions (STC)	
Potencia máxima	540 Wp
Eficiencia	20,70%
Tensión MPP	31,40 V
Corriente MPP	17,21 A
Tensión a circuito abierto	37,7 V
Corriente de cortocircuito	18,30 A

Based on an upper average annual solar radiation potential of 1929 kWh/m^2 per year for the project site and the specific yield P50 for the first year of 2219 kWh/kWp, the annual production is expected to be 55,489 MWh (P50) during the first year.

Two-way digital meters (main and backup) will be installed at the substation of the solar power plant to measure the electricity supply directly and continuously to the Transformer Station C. Avellenada SL. The accuracy class of the planned electricity meters is 0.2S, which will be verified after commissioning.

The expected useful life of the project equipment is 25 years, according to conservative solar industry standards in this context.

2.4 Project location

The Project sector is in a rural area, within the municipal limits of La Calera in the province of San Luis, Argentina.

Country: Argentina

Province: San Luis

Municipality: La Calera

Illustration 2 CASA Project Coordinates

VERTICE	Y	X		LATITUD	LONGITUD
1	3419816.26	6366535.19		32°50'27.31"S	66°51'23.27"O
2	3420485.77	6366395.19		32°50'32.03"S	66°50'57.57"O
3	3420395.80	6365866.56		32°50'49.16"S	66°51'1.19"O
4	3420479.44	6365822.73		32°50'50.61"S	66°50'57.99"O
5	3420475.41	6365667.62		32°50'55.64"S	66°50'58.19"O
6	3420449.31	6365658.63		32°50'55.93"S	66°50'59.20"O
7	3420418.63	6365621.16		32°50'57.14"S	66°51'0.39"O
8	3420357.05	6365624.77		32°50'57.00"S	66°51'2.75"O
9	3420279.22	6365511.62		32°50'55.37"S	66°51'2.58"O
10	3420312.31	6365725.56		32°50'53.72"S	66°51'4.44"O
11	3420311.68	6365758.73		32°50'52.64"S	66°51'4.46"O
12	3419756.76	6365843.87		32°50'49.73"S	66°51'25.77"O
13	3419760.68	6365909.59		32°50'47.60"S	66°51'25.60"O
14	3419712.34	6365926.44		32°50'47.04"S	66°51'27.45"O
15	3419667.22	6365998.31		32°50'44.70"S	66°51'29.16"O
16	3419688.04	6366186		32°50'38.61"S	66°51'28.30"O
17	3419705.45	6366258.12		32°50'36.27"S	66°51'27.61"O
18	3419749.65	6366459.68		32°50'29.74"S	66°51'25.85"O
19	3419823.79	6366446.85		32°50'30.18"S	66°51'23.00"O

The project sector will occupy a total of 51 Ha where the photovoltaic solar plant will be built to generate a nominal power of 20MW (23.8 MWp).

Illustration 3 CASA Project coordinates and location

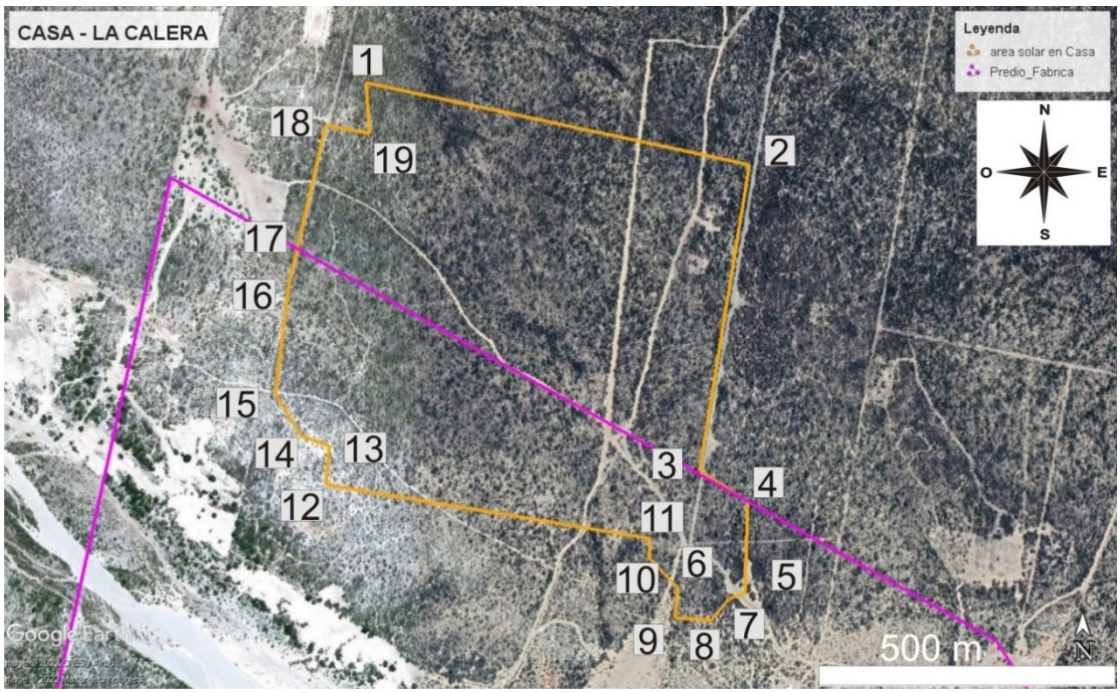
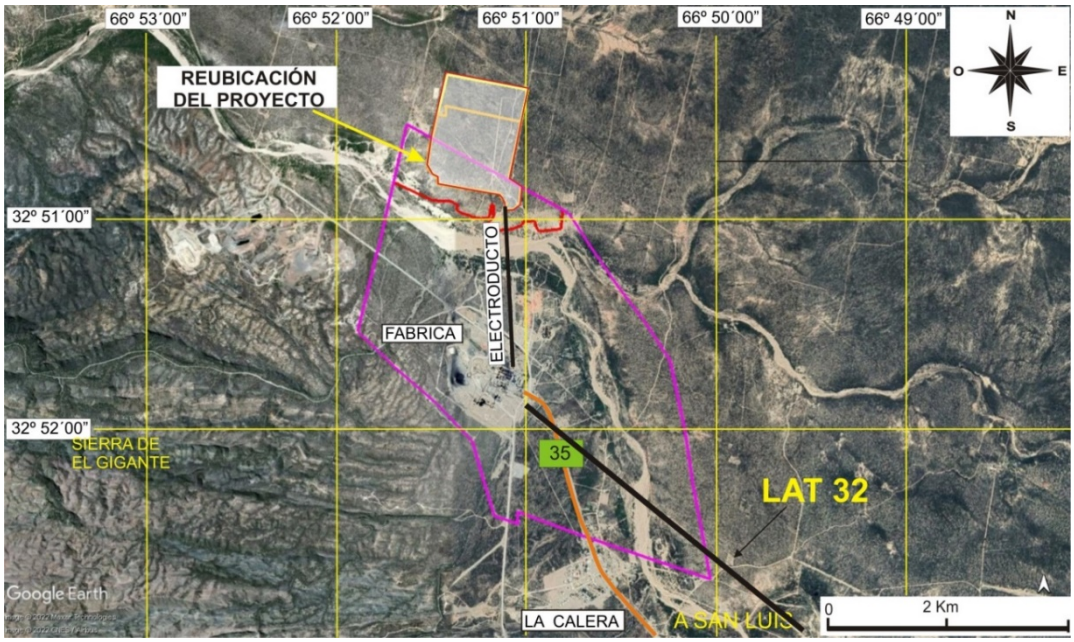


Illustration 4 General location of CASA Project



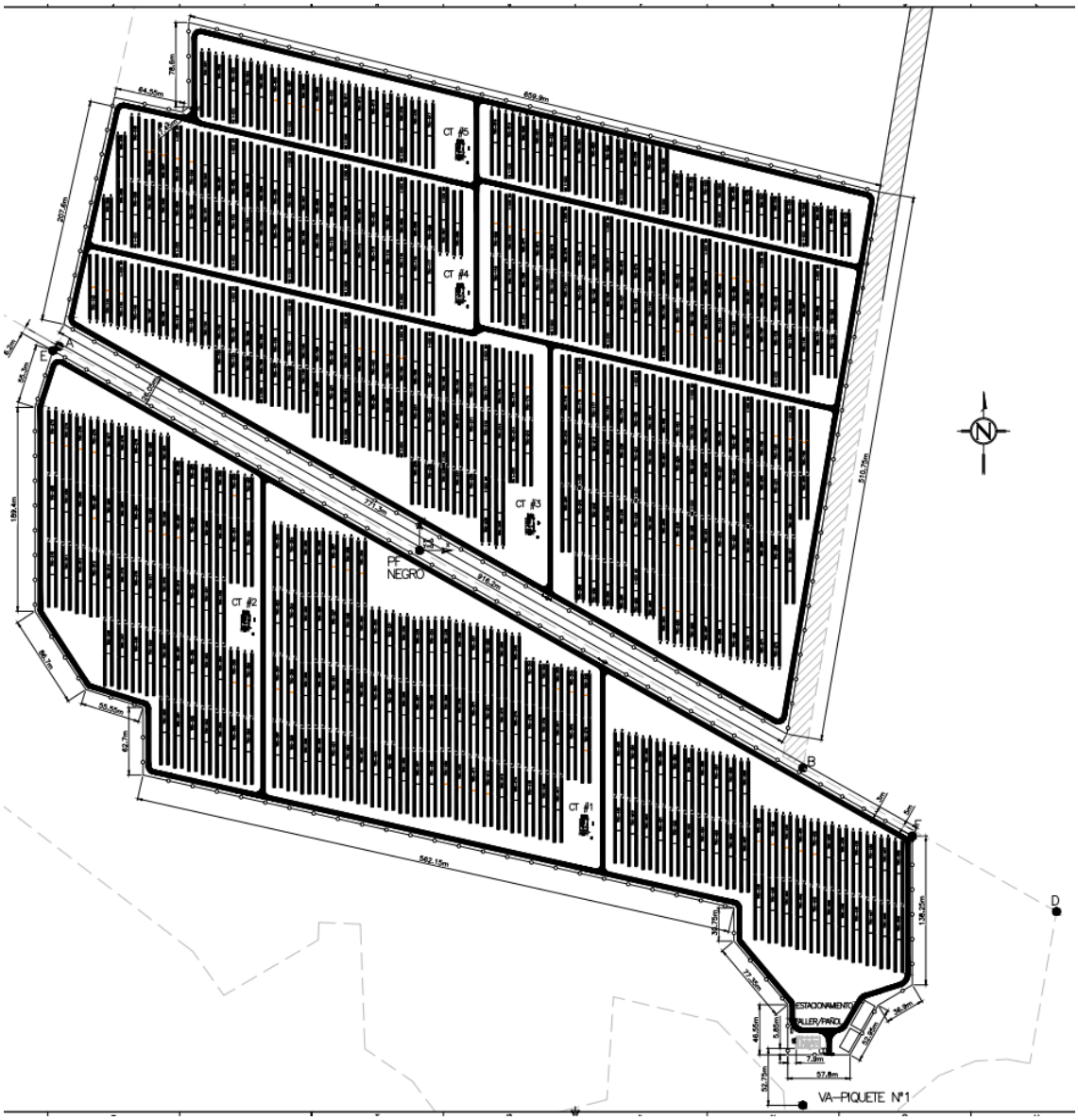
2.5 Additional information about the GHG project

The photovoltaic plant will operate automatically and independently with minimal intervention. In the event of problems with the external power grid or the inverters, they will automatically disconnect from the grid. In most cases, the inverters will automatically reconnect once the problems have been resolved.

The installations have been designed under the parameters required by international standards for solar photovoltaic installations and national standards for power generation and transmission.

The solar panels will be connected in series forming strings of 37 units. Each string will be mounted on a support structure called a solar tracker in a row. Each solar tracker will be driven by an independent mechanism. This type of modular installation allows each structure to be placed independently to cause the least possible impact. Solar trackers are structures that allow the solar panel to face the direction in which the sun's rays penetrate the earth's atmosphere. In this way, the energy captured by the panels is greater, and energy production is increased for the same number of panels and surface area occupied. Thus, each row of trackers will have one (1.5) strings composed of 37 solar panels connected in series.

Illustration 5 Layout of CASA Project



3 Quantification of GHG emissions reduction

3.1 Quantification methodology

As stated in the approved methodology ACM0002 "Grid-connected electricity generation from renewable sources" (version 20.0): If the project activity is the installation of a new grid-connected renewable energy plant/unit, the reference scenario is as follows:

"Electricity delivered to the grid by the project activity would otherwise 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 described in "TOOL07 to calculate the emission factor for an electricity system." version 7.0"3.1.1

3.1.1 Applicability conditions of the methodology

The following table explains and justifies compliance with the applicability conditions of the methodology used.

Table 3 Compliance of the project activity with respect to the applicability conditions of ACM0002

ACM0002 version 20.0 conditions of applicability	Applicability of the project activity
This methodology is applicable to grid-connected renewable energy generation project activities that: (a) Install a new power plant; (b) Involves a capacity addition to (an) existing plant(s); (c) Involve retrofitting of (one) operating plant/unit; (d) Involves rehabilitation of an existing plant(s)/unit(s); or (e) Involves the replacement of an existing plant(s)/unit(s).	The project activity complies with point a) being a new photovoltaic generation plant. The methodology is applicable
The project activity may include a renewable energy plant/unit of one of the following types: hydroelectric plant/unit with or without reservoir, wind power plant/unit, geothermal plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	The project activity is a solar power plant/unit. The methodology is applicable.
In the case of capacity expansions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity expansion projects), the existing plant/unit began commercial operation prior to the start of a minimum five-year historical reference period, used for the calculation of baseline emissions and defined in the baseline emissions section, and no capacity expansion, retrofit or rehabilitation of the plant/unit has taken place between the start of this minimum historical baseline period and the implementation of the project activity.	Not applicable

In the case of hydroelectric power plants, one of the following conditions shall apply: The project activity is carried out in single or multiple existing reservoirs, without changing the volume of any of the reservoirs; or The project activity is carried out on existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (3), is greater than 4 W/m2; or The project activity results in new single or multiple impoundments and the power density, calculated using equation (3), is greater than 4 W/m2; or The project activity is an integrated hydroelectric project involving multiple reservoirs, where the power density for any one of the reservoirs, calculated using equation (3), is less than or equal to 4 W/m2, all of the following conditions shall apply: The power density calculated with the total installed capacity of the integrated project, according to equation (4), is higher than 4 W/m2; The water flow between the reservoirs is not used by any other hydroelectric unit that is not part of the project activity; The installed capacity of the power plant(s) with power density less than or equal to 4 W/m2 shall be a. Less than or equal to 15 MW; and b. Less than 10% of the total installed capacity of the integrated hydroelectric project.	Not applicable
In the case of integrated hydroelectric projects, the project proponent shall: (a) Demonstrate that the water flow from the upstream power plants/units discharges directly to the downstream reservoir and together constitute the generating capacity of the integrated hydroelectric project; or (b) Provide a water balance analysis covering the water fed to the power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of the water balance is to demonstrate the requirement for a specific combination of reservoirs constructed under the CDM project activity for the optimization of power production. This demonstration should be performed in the specific scenario of water availability in different seasons to optimize the water flow at the inflow of the power units. Therefore, this water balance will take into account the seasonal flows of the river, tributaries (if any) and rainfall for a minimum of five years prior to the implementation of the CDM project activity.	Not applicable
The methodology is not applicable to: (a) Project activities that involve switching from fossil fuels to renewable energy sources at the project activity site, as in this case the baseline may be the continued use of fossil fuels at the site;	The project does not correspond to options (a) or (b). The methodology is applicable

(b) Biomass-fired power plants/units.	
In the case of modernizations, rehabilitations, replacements or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of the baseline scenario, is "continuation of the current situation, i.e., using the power generation equipment that was already in use prior to the implementation of the project activity and performing the usual maintenance".	Not applicable

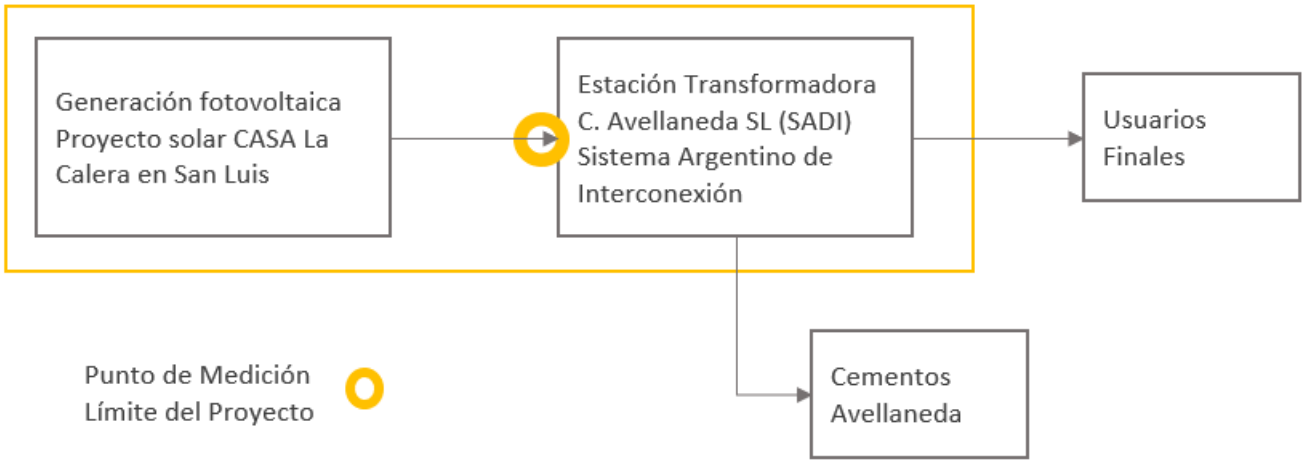
3.2 Project boundaries

3.2.1 Spatial limits of the project

According to the guidance specified in ACM0002 Methodology (version 20.0), "the spatial extent of the project boundary includes the project power plant/unit and all power plants/units physically connected to the electricity system that the CDM project power plant is connected to".

Therefore, the project boundary will include the photovoltaic generation and the Transformer Station where the metering equipment is located, as shown in the following diagram.

Illustration 6 Project Boundary



3.2.2 Carbon reservoirs and GHG sources

The CASA Project's photovoltaic power generation comprises a single source or reservoir.

Source or reservoir		GEI	Including (Yes/No/Optional)	Justification
Baseline	CO_2 emissions from electricity generation in	CO_2	Yes	Main source of emission

	fossil fuel fired power plants that are displaced due to the project activity	CH_4	No	Emission source Minor
		NO_2	No	Emission source Minor
Project Activity	For dry or flash steam geothermal power plants, emissions of CH_4 and CO_2 from non-condensable gases contained in geothermal steam	CO_2	No	Not applicable
		CH_4	No	Not applicable
		NO_2	No	Not applicable
	For binary geothermal power plants, fugitive emissions of CH_4 and CO_2 from non-condensable gases contained in geothermal steam	CO_2	No	Not applicable
		CH_4	No	Not applicable
		NO_2	No	Not applicable
	For binary geothermal power plants, fugitive emissions of hydrocarbons such as n-butane and isopentane (working fluid) contained in the heat exchangers	CO_2	No	Not applicable
		CH_4	No	Not applicable
		NO_2	No	Not applicable
	CO_2 emissions from combustion of fossil fuels for electricity generation in solar thermal power plants and geothermal power plants	CO_2	No	Not applicable
		CH_4	No	Not applicable
		NO_2	No	Not applicable
	For hydro power plants, emissions of CH_4 from the reservoir	CO_2	No	Not applicable
		CH_4	No	Not applicable
		NO_2	No	Not applicable

3.2.3 Time limits and analysis periods

In accordance with BCR Standard section 10.5, the project timeframe corresponds to 7-year periods for the quantification of GHG emission reductions.

Project start date

The construction start date is April 04, 2022 and the start-up date or actual action of the CASA Project is July 01, 2023, according to the schedule revision 11/05/2023.

Quantification period of GHG emission reductions

The CASA Project is framed within the activities in the energy, transport and waste sectors, the quantification periods are those established by the Clean Development Mechanism, therefore, it will be of 7 years.

Monitoring periods

The monitoring periods will be annual with a closing date of December 31 of the calendar year.

3.3 Identification and description of the baseline scenario

Based on ACM0002 Methodology (version 20.0) and "TOOL07 to calculate the emission factor for an electricity system." version 7.0. The baseline scenario is identified as a new power plant: "If the project activity is the installation of a Greenfield power plant, the baseline scenario is electricity delivered to the grid by the project activity would otherwise 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 described in "TOOL07: Tool to calculate the emission factor for an electricity system".

3.4 Additionality

The Methodology ACM0002 (version 20.0) proposes two alternatives for assessing additionality:

3.4.1 Simplified procedure to demonstrate additionality

According to point 5.3.1 of the Methodology, "*Simplified procedure to demonstrate additionality*" the additionality of the project is demonstrated and evaluated by applying the simplified procedure established in "TOOL32: Positive lists of technologies".

The simplified procedure for demonstrating additionality is applicable to the following grid-connected electricity generation technologies (positive list):

a) Solar photovoltaic technologies;

b) Solar thermal electricity generation, including concentrating solar power (CSP);

c) Offshore wind technologies;

d) Sea wave technologies;

e) Sea tide technologies;

f) Ocean thermal technologies.

A technology listed above, in this case solar photovoltaic technology, is automatically defined as additional if any of the following conditions are met at the time of submission:

- The percentage share of total installed capacity in the host country is equal to or less than 2%; or
- The total installed capacity of the technology in the host country is less than or equal to 50 MW. The following table shows the annual installed capacity in the country according to official data provided by CAMMESA[1] (Compañía Administradora del Mercado Mayorista Eléctrico S.A.).

Table 4 Annual installed power in Argentina

POTENCIA ANUAL INSTALADA

TIPO	Año 2022	Participación %
Hidráulica	10.834	25,3%
Ciclos Combinados	13.500	31,5%
Turbina a gas	5.828	13,6%
Turbovapor	4.251	9,9%
Nuclear	1.755	4,1%
Motor Diesel	1.696	4,0%
Eólica	3.291	7,7%
Biogas	73	0,2%
Biomasa	70	0,2%
Solar	1.076	2,5%
Hidráulica Renovable	524	1,2%
POTENCIA INSTALADA TOTAL[MW]	42.899	100%

As can be seen in the public information available on the website of the wholesale electricity market management company (CAMMESA), the percentage of installed capacity of photovoltaic solar energy corresponds to a value of 2.5% of the total

[1] https://cammesaweb.cammesa.com/informe-anual/

installed capacity in Argentina. Therefore, additionality cannot be demonstrated through the simplified procedure and the second alternative proposed by the ACM0002 Methodology (version 20.0) in point 5.3.2 should be used.

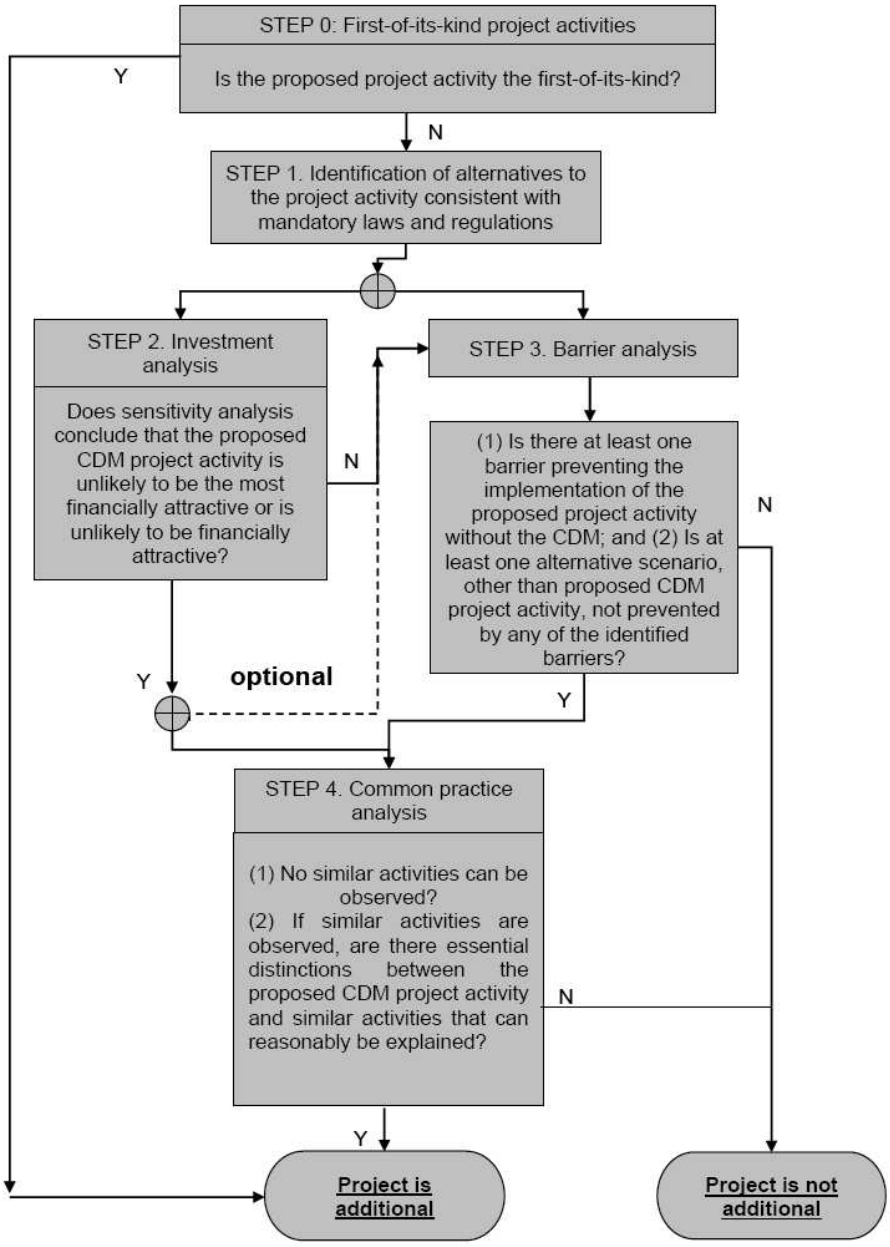
3.4.2 Procedure for demonstrating additionality in accordance with TOOL01.Version 07.0.0

In point 5.3.2 of the ACM0002 Methodology (version 20.0), it is indicated to apply the "Procedure to demonstrate additionality based on the "TOOL01: Tool for the demonstration and assessment of additionality" whose latest version is "Version 07.0.0".

The step-by-step approach proposed by TOOL01: Version 07.0.0 has been followed to establish the additionality of the project. It is detailed below:

TOOL01
Methodological tool: Tool for the demonstration and assessment of additionality
Version 07.0.0

Figure 1 Flowchart of the step-wise approach



Step 0: Demonstration of whether the proposed project activity is the first of its kind.

The proposed project activity is a solar photovoltaic project; therefore, it is not the first of its kind.

Step 1: Identification of alternatives to the project activity consistent with mandatory laws and regulations.

According to the applied methodology ACM0002 version 20, Para. 22, "If the project activity is the installation of a Greenfield power plant, the baseline scenario is electricity delivered to the grid by the project activity would otherwise have been generated by the operation of grid connected power plant and by the addition of new generation sources".

Given that the baseline scenario consists of the installation of a new photovoltaic plant that displaces electricity supplied by the grid and is expressly indicated by the methodology applied, no other analyses have been carried out to search for alternatives.

Step 2: Investment Analysis

According to paragraph 29 of TOOL01: v.07.0.0 "Tool for the demonstration and assessment of additionality" it is determined that the proposed project activity is not an economically or financially viable option. To carry out the investment analysis, the methodological tool "TOOL 27.v.11.0_ Investment Analysis" has been taken as a reference, which is valid 29Oct.21-01Nov.22, and whose period includes the date of decision to carry out the project, 17Dec.21.

Sub-step 2a: Determine the appropriate analysis method

According to paragraph 32 of TOOL01*: v.07.0.0 "Tool for the demonstration and assessment of additionality", the* following three options are available for project analysis:

Option I: Simple Cost Analysis

Option II: Investment Comparison Analysis

Option III: Benchmark analysis

The project will generate revenue from the sale of electricity, so Option I is not applicable.

Option II is also not applicable since there is no comparable investment alternative available to the project participant.

Therefore, the most appropriate financial analysis method is Option III: benchmark analysis, where the returns on investment in the project activity are compared to a benchmark value available to any investor in the country.

Sub-step 2b: Option III. Apply Benchmark Analysis

The project proponents have considered the after-tax IRR for the investment analysis at the time of decision making. As project proponents, they are interested in the returns that the project generates on the investment costs that they finance in the form of 100 percent equity.

For the selection and validation of the appropriate benchmark for the calculated IRR, paragraph 15 of TOOL 27.v.11.0 "Investment Analysis", states that *"Local*

commercial lending rates or WACC are appropriate benchmarks for a project IRR. Required/expected returns on equity are appropriate benchmarks for an equity IRR.

Benchmarks supplied by relevant national authorities are also appropriate. Of these options, the proponents consider that the required/expected returns on equity are appropriate benchmarks for an equity IRR.

Comparative Base Value

According to paragraph 18 of TOOL 27.v.11.0, "If there is only one possible project developer, either internal company benchmarks/expected returns may be applied, or the benchmark based on standard conditions in the market may be used."

Considering that the project activity has a single proponent that finances 100 percent of the project (100 percent equity), for transparency and simplicity, the proponents consider the benchmark based on standard market conditions to be a reasonable indicator to evaluate the IRR of equity.

According to point 19 of TOOL 27.v.11.0, "If the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in the Appendix; or by (b) calculating the cost of equity using CAPM".

For the sake of transparency and simplicity, the project developers consider it reasonable to use as benchmark for the IRR of capital the value of the Appendix of Tool 27 v.11.0 "*Default values for the cost of equity (expected return on equity)"* corresponding to *Argentina Group 1*, which is 18.77% in real terms. It is noted that at the date of preparation of this PDD, Tool 27 v.12.0_Investment analysis_EB 116_02Nov22-Onwards is in force, which shows a value of 23.48% in real terms for Argentina Group 1 projects. Following a conservative approach, the minimum default value of 18.77% in real terms has been taken.

Finally, it should be noted that the cash flow presented in this process was prepared in real terms since it does not include inflation adjustment in any of its variables. For this reason, we consider that it is not necessary to adjust the benchmark rate for inflation, as proposed in point 16 of Tool 27 v.11.0 "*In situations where an investment analysis is carried out in nominal terms and the* available *IRR benchmarks are in real terms, project participants shall convert the real term values of benchmarks to nominal values by adding the inflation rate*".

Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III).

Input values used in investment analysis

Project details		Source
Province where the project will be located	St. Louis	
Total AC capacity (MW)	20	General Project Development, (GDP)

Estimated commissioning date	16/3/2023	GDP
Plant life (years)	25	According to panel manufacturer's specifications
Generation and sale of energy		
Production @ P50(%)	See "Production" sheet	Supplier information. In accordance with Report EB 48-ANEX 11_ Third party
Annual Generation (MWh)	See "Production" sheet	Supplier information. In accordance with Report EB 48-ANEX 11_ Third party
Generation rate contract value (USD/MWh)	67,95	GPD
Operating, maintenance and overhead expenses		
O & M Expenses	See "O&M" sheet	s/ Enertis report + HUAWEI recommendation and HR estimates for staff forecast
Overhead	11,54%	Financial statements 12/31/2021
Financial parameters		
Total investment	22.140.000,00	S/project budget
Demobilization expenses	-	According to the contract with Cementos Avellaneda S.A. (CASA), the plant is transferred at the end of the 20th year of operation.
Terminal value	-	According to the contract with Cementos Avellaneda S.A. (CASA), the plant is transferred at the end of the 20th year of operation.

Equity Financing	100,0%	Industrias Juan F. Secco S.A.
Working capital		
Days of accounts receivable	30,00	According to contract payment conditions
Accounts payable days (O&M)	-	
Accounting and tax depreciation		
Depreciable value	See depreciation calculation in Excel sheet "Investment".	Amortization values provided by technology supplier
Accounting / tax useful life		
Taxes		
Gross income (%)	2,80%	Tax in the province of San Luis
Tax law 25,413 on credits	0,40%	National Tax
Tax law 25,413 on debits	0,40%	National Tax
Income Tax	35,00%	National Tax

Considering the input values, the IRR is calculated as follows.

Project Developer	IRR without CDM	ROE Benchmark
INDUSTRIAS JUAN F SECCO S. A.	8.48%	18,77%

The project activity cannot be considered financially attractive given that the project's IRR is lower than the benchmark ROE.

Sub-step 2d: Sensitivity analysis

In addressing Guide 27 and 28 of EB105, Annex 06, the following factors have been subject to sensitivity analysis:

1. Plant Load Factor

2. Operation and Maintenance Cost

3. Project Cost

4. Rate

The rationale for sensitivity is: "The ultimate objective of sensitivity analysis is to determine the probability of occurrence of a scenario different from the scenario presented, in order to provide a cross-check of the reasonableness of the assumptions used in the development of the investment analysis."

	Equity IRR without Carbon Credits	Benchmark (ROE)
Base case	8,48%	18,77%

Sensitivity Analysis	Equity IRR

Variation	-10%	Normal	10%	Variation with respect to benchmark
Energy Production	7,27%	8,48%	9,65%	194,5%
O&M	8,51%	8,48%	8,45%	220,5%
Project Costs	9,75%	8,48%	7,41%	192,5%
Energy Price	7,27%	8,48%	9,65%	194,5%

The results of the sensitivity analysis show that even with a variation of +10% and -10% in project cost, operation and maintenance cost, energy production and energy price, the IRR of the equity is significantly lower than the reference rate. It is also evident from the results given above that the project remains additional even under the most favorable conditions.

Reference index	Probability of default
Power Production (PLF)	The PLF has been considered for financial analysis according to the "Guidelines for Reporting and Validation of Plant Load Factors" set forth in EB48 Annex 11. It is highly unlikely that a variation in the PLF of more than 10% will occur since the energy production and its reduction over the years was provided in the report of the equipment supplier (third party not involved in the project),

O&M	The sensitivity analysis reveals that O&M costs are irrelevant to the outcome of the IRR value. Furthermore, it is known that these costs are subject to upward escalation due to breakage and inflationary pressure. In short, their reduction over time is highly unlikely.
Project cost	The estimated project cost for the financial analysis is considered from the GPD available at the time of decision making. However, even if we consider actual project costs that differ very little from the estimates, the benchmark is not exceeded. In any case, the Sensitivity is analyzed for a variation of +/-10%.
Value of the fee	For the investment analysis, the tariff considered is 67.95 USD /kWh and is determined by the energy supply contract to Cementos Avellaneda S.A., which is fixed for the entire 20-year contract period.

Result of Step 2:

The above shows that the investment is not financially attractive, (the IRR for the project activity is lower than the benchmark ROE), so it can be easily concluded that the project activity is additional and is not a business as usual (BAU) scenario.

Step 3: Barrier analysis

Barrier analysis has not been used.

Step 4: Common practice analysis

The step-by-step approach for the common practice analysis was carried out according to the methodological tool "*am-tool-24_Common Practice v.03.1 EB84-Annex 7",*

Step (1): calculation of the applicable capacity range or production range as +/-50 % of the total design capacity or production of the proposed project activity.

Range	Capacity	Unit
+50% in AC	30	MW
Capacity of the proposed project activity	20	MW

-50% in AC	10	MW

(Step 2): identify similar projects (both CDM and non-CDM) that meet all the following conditions:

a) The projects are located in 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;

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".

The identification of similar projects (CDM and non-CDM) from (Step 2) is carried out as follows:

a) Although the project is in the Province of San Luis; according to paragraph 9 of the "am-tool-24_Common Practice v.03.1 EB84-Annex 7", the applicable area for the common practice assessment extends to the entire territory of the Argentine Republic.

b) The project activity is a greenfield solar energy project and corresponds to the category, (measure), (b) of paragraph 10 of the "am-tool-24_Common Practice v.03.1 EB84-Annex 7 *"Switch of technology with or without change of energy source including energy efficiency improvement as well as use of renewable energies*". Therefore, all projects that apply the same measure (b) as the proposed project activity are candidates for consideration as similar projects.

c) The energy source used by the project activity is solar. Therefore, only solar energy projects have been considered for the analysis.

d) The project activity produces electricity; therefore, all power plants that produce electricity are candidates for consideration as similar projects.

e) The capacity range of the projects is within the applicable capacity range of 10 MW to 30MW.

f) The project activity start date is foreseen for March 16, 2023. As the Kyoto Protocol was ratified by Argentina on July 13, 2001, therefore, projects that started commercial operation between July 13, 2001 and the date of submission of this PDD have been considered.

Number of similar projects identified according to data published by: CAMMESA in its annual report[2] that comply with the requirements mentioned above.

N_{solar} = 8

(Step 3): within the projects identified in **(Step 2)**, identify those that are not registered CDM projects, projects submitted for registration, or project activities in the process of validation. Note their N_{all} number.

CDM project activities, which have been registered or are in the process of validation, have been excluded in this step. The list of identified power plants is provided to DOE. After excluding registered and validating projects, the total number of projects is:

N_{all} = 8

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

According to "*am-tool-24_Common Practice v.03.1 EB84-Annex 7"*, paragraph 12; project activities have been separated based on different technologies; item (d) Investment climate at the date of the investment decision, (iv) Legal regulations.

Of the projects identified above, those projects employing "different technologies" have been excluded and the number of such projects has been identified as N_{diff}.

Therefore, photovoltaic projects between 10 MW and 30 MW existing in the Republic of Argentina that have signed a Power Sales Contract that do not have the same contractual conditions of sale of energy as the CASA-La Calera Solar Plant, are assumed to be governed by different investment climates. Therefore, such projects that come under a different investment climate have been considered as Ndiff.

Of the projects identified in step 3, seven (7) of them have Power Purchase Agreements (PPAs) with Compañía Administradora del Mercado Mayorista Eléctrico Sociedad Anónima (CAMMESA), therefore, they are differentiated by the "investment climate" and can be considered as projects that employ "different technologies".

Therefore:

N_{diff} = 7

It is noted that the remaining project also does not have a contract with Cementos Avellaneda S.A. Although it is not known what type of energy sales contract this

[2] https://cammesaweb.cammesa.com/informe-anual/

operator may have, for reasons of transparency and a conservative approach it has not been included in Ndiff.

(Step 5): calculate the factor F=1-Ndiff/Nall representing the proportion of similar projects, (penetration rate of the measure/technology), using a measure/technology similar to the measure/technology used in the proposed project activity and delivering the same result as the proposed project activity.

Calculate F = 1-Ndif/Nall = 1-(7/8) = 0.125

Nall - Ndiff = 8 - 7 = 1

Result of Step 5:

As,

i. F = 0.125; it is less than 0.2 y

ii. Nall-Ndiff = 1; it is less than 3, therefore:

As the project activity does not satisfy conditions (i) and (ii), the proposed project activity **is not a "common practice"** within a sector in the applicable geographic area.

All the above shows that the proposed project activity is not a common practice and is not financially attractive. Therefore**, the project activity is additional**.

3.5 Management of uncertainty

The data used for the quantification of the baseline are based on the methodologies mentioned in point 3.7.3 and on the information provided by official agencies that have traceable and confidential data provided by each generator in Argentina.

3.6 Leakage and non-permanence

Does not apply to CASA Project

3.7 Mitigation results

In the year 2022, Secco certified the ISO 14001:2005 Standard, whose certificate is valid from 2022-07-25 to 2025-06-19, issued by TÜV NORD. The scope of this certification reaches the generation of electric energy with diesel, gas, fuel oil and biogas plants; although photovoltaic generation was not incorporated in this instance, it is known that the processes incorporated during these processes are transformed into good operating practices in a transversal manner throughout the company. The mitigation results obtained because of the implementation of the CASA Project are verifiable within the framework of the ISO 14064-3:2019 Standard.

3.7.1 Eligible areas in the GHG project boundary (AFOLU sector projects)

Not applicable

3.7.2 Stratification (if applicable)

Not applicable

3.7.3 GHG emission reductions in the baseline scenario

Step 1: Identify the relevant electricity systems.

To determine the electricity emission factors, the project's electricity system is defined by the spatial extent of power plants that are physically connected (including imports) through transmission lines that can be sent without significant transmission constraints. In this case, to the SADI.

Step 2: Choose whether to include off-grid power plants in the project electricity system (optional)
Project participants may choose between the following two options to calculate the operating margin and build margin emission factor:

Option I:

Only grid power plants are included in the calculation.

Option II:

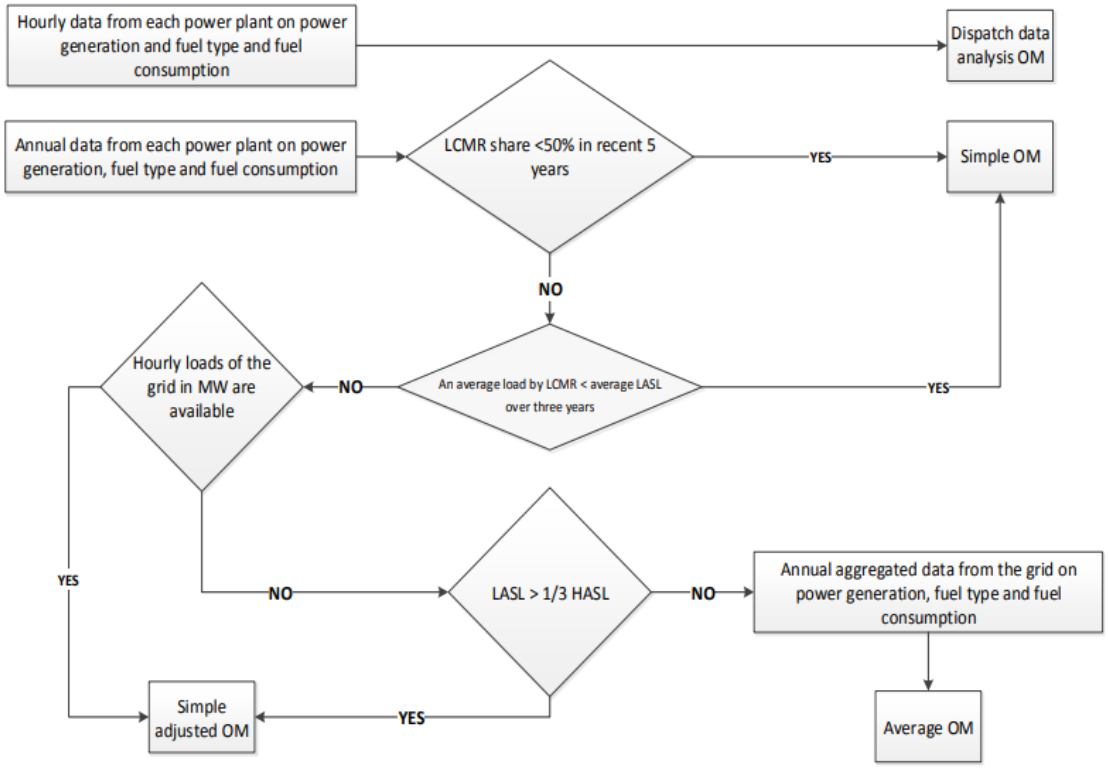
Both grid power plants and off-grid power plants are included in the calculation.

Option I is defined.

Step 3: Select a method to determine the operating margin (OM)

According to the data provided by CAMMESA[3] and the "TOOL07: Tool to calculate the emission factor for an electricity system" the participation of Low-cost/must-run (LCMR) resources is less than 50%, therefore following the Flow chart below, Simple OM should be considered.

[3]https://cammesaweb.cammesa.com/informe-anual/



In this opportunity the ex ante option is selected for Project CASA, therefore:

For the simple OM, the simple adjusted OM and the average OM, the emissions factor can be calculated using either of the two following data vintages:

(a) Ex ante option: if the ex ante option is chosen, the emission factor is determined once at the validation stage, thus no monitoring and recalculation of the emissions factor during the crediting period is required. For grid power plants, use a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation.
For off-grid power plants, use a single calendar year within the five most recent calendar years prior to the time of submission of the CDM-PDD for validation.

Step 4: Calculate the operating margin emission factor according to the selected method.

The simple OM may be calculated by one of the following two options:

(a) Option A: Based on the net electricity generation and a CO_2 emission factor of each power unit; or

(b) Option B: Based on the total net electricity generation of all power plants serving the system and the fuel types and total fuel consumption of the project electricity system. Option B can only be used if:

(i) The necessary data for Option A is not available; and

(ii) Only nuclear and renewable power generation are considered as low-cost/must-run power sources and the quantity of electricity supplied to the grid by these sources is known; and

(iii) Off-grid power plants are not included in the calculation (i.e. if Option I has been chosen in Step 2).

As data for option A is available (Secretaría de Energía el Factor de Emisión de Argentina de acuerdo con la "Tool to calculate the emission factor for an electricity system" Version 7), this option will be used for the calculation. Under this option, the simple OM emission factor is calculated based on the net electricity generation and an emission factor for each power unit, as follows:

$$EF_{grid,OMsimple,y} = \frac{\sum_m EG_{m,y} \times EF_{EL,m,y}}{\sum_m EG_{m,y}}$$

The following table shows the Emission Factor Estimates made in the country; data provided by the Secretariat of Energy - Strategic Planning of the Nation[4] .

Table 5 Estimation of Argentina's Operating Margin Emission Factor

Operating Margin				
		2019	2020	2021
EFGrid Simple OM	tCO_2/MWh	**0,4282**	**0,4432**	**0,4589**
EG m,y without LCMR	GWh	83.438	83.475	90.893
Emissions	tCO_2	35.726.070	36.998.774	41.712.283
Checksum	tCO_2/MWh	0,428176502	0,443231804	0,458914643
Weighted average EF	**tCO_2/MWh**	0,4439		

Step 5: Calculate the build margin (BM) emission factor

In terms of vintage data, project participants can choose between one of the following two options:

[4] https://datos.gob.ar/dataset/energia-calculo-factor-emision-co2-red-argentina-energia-electrica/archivo/energia_b77a21bf-a363-46e6-be5d-d7e8021940a5

(a) Option 1 - for the first crediting period, calculate the build margin emission factor ex ante based on the most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation.

For the second crediting period, the build margin emission factor should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used. This option does not require monitoring the emission factor during the crediting period;

(b) Option 2 - For the first crediting period, the build margin emission factor shall 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. For the second crediting period, the build margin emissions factor shall be calculated ex ante, as described in Option 1 above. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used.

Option 1 is selected for the CASA Project.

Table 6 Estimation of Argentina's Construction Margin Emission Factor

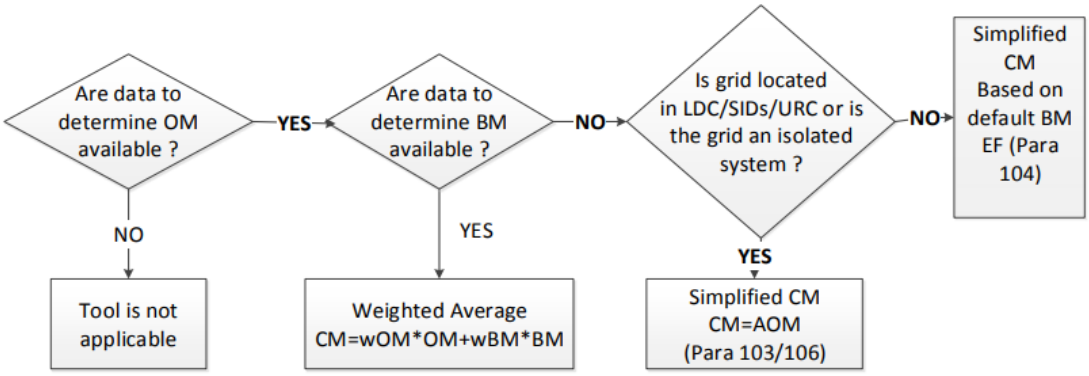
Build Margin		
		2021
BM	tCO2/MWh	**0,3277**
EG $_{m,y}$	MWh	28.786.729
Emissions	tCO2	9.434.591
Checksum	tCO2/MWh	0,32774099
BM	**tCO_2/MWh**	**0,3277**

Step 6: Calculate the combined margin (CM) emissions factor

The calculation of the combined margin (CM) emission factor (EFgrid,CM,y) is based on one of the following methods:

(a) Weighted average CM; or

(b) Simplified CM



Therefore, option (a) Weighted average CM applies to the CASA Project, where

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$ Equation (16)

Where:

$EF_{grid,BM,y}$	=	Build margin CO_2 emission factor in year *y* (t CO_2/MWh)
$EF_{grid,OM,y}$	=	Operating margin CO_2 emission factor in year *y* (t CO_2/MWh)
w_{OM}	=	Weighting of operating margin emissions factor (per cent)
w_{BM}	=	Weighting of build margin emissions factor (per cent)

According to the tool,

The following default values should be used for W_{OM} and W_{BM} :

1 Wind and solar power generation project activities: W_{OM} = 0.75 and W_{BM} = 0.25 (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods

Therefore, EF grid,CM,y = 0.4149 tCO_2/MWh

Baseline emissions include only CO_2 emissions from electricity generation in the power plants that make up the country's current energy matrix. Baseline emissions will be calculated as follows:

BEy=EGPJ,y x EF grid,CM,y

Where:

BEy = baseline emissions in year y (tCO_2 /year)

EGPJ,y = Amount of net electricity generation produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/year).

EFgrid,CM,y = Combined CO emission factor$_2$ for grid-connected electricity generation in the year and calculated using the latest version of the "TOOL07: Tool to calculate the emission factor for an electricity system" (t CO_2 /MWh).

Calculation of EGPJ,y

The implementation of the project activity, verifies the case of a Greenfield renewable energy plant of the ACM0002 Version 20.0 methodology whereby:

EGPJ,y = EGfacility

EGfacility,y = Amount of net electricity generation supplied by the plant/unit of the project to the grid in year y (MWh/year)

3.7.4 GHG emissions reduction in the project- scenario

According to the methodology ACM0002 (Version 20.0), the emission reduction is calculated as: ERy = BEy - PEy

Where:

ERy = Emission reductions in year y (tCO_2e/year)

BEy = Baseline emissions in year y (tCO_2/year)

PEy = Emission of the project in year y (tCO_2e/year)

Project emissions

Project emissions will be accounted for using the following equation:

$PE_y = PE_{FF,y} + PE + PE_{GP,yHP,y}$ (2)

Where:

PE_y = Project emissions in year y (tCO_2e/year)

$PE_{FF,y}$ = Project emissions from fossil fuel consumption in year y (tCO_2/year)

$PE_{GP,y}$ = Project emissions from the operation of binary, instantaneous steam or dry geothermal power plants in year y (t CO_2e/yr)

$PE_{HP,y}$ = Emission from hydroelectric power plant water reservoirs project in year y (tCO_2e/year)

Project emissions due to fossil fuel consumption $(PE)_{FF,y}$

No emissions are expected from the project as the project activity only involves the generation of renewable electricity from the solar power plant without fossil fuel consumption, and according to paragraph 36 of ACM0002 "for all renewable energy power generation activities, emissions due to the use of fossil fuels for the backup generator can be neglected, hence $PE_{FF,y} = 0$."

Project emissions from the operation of dry geothermal, flash steam or binary geothermal power plants $(PE)_{GP,y}$

The project is a solar power plant, therefore, this term does not apply and $PE_{GP,y} = 0$.

Emissions from hydroelectric power plant water reservoirs $(PE)_{HP,y}$

The project is a solar power plant, therefore, this term does not apply and $PE_{HP,y} = 0$.

Table 7 Estimated Net GHG Reduction

Year	GHG emission reductions in the baseline scenario (tCO_2 e)	GHG emission reductions in the project scenario (tCO_2 e)	GHG emissions attributable to leakages (tCO_2 e)	Estimated Net GHG Reduction (tCO_2 e)
2023 (as of 07/01/2023)	11.509	0	0	11.509
2024	22.931	0	0	22.931
2025	22.834	0	0	22.834
2026	22.726	0	0	22.726
2027	22.607	0	0	22.607
2028	22.469	0	0	22.469
2029	22.312	0	0	22.312
2030 (until 06/30/2030)	11.075	0	0	11.075
Total	**158.463**	0	0	**158.463**
Total number of crediting years	7 years			
Annual average over the crediting period	**22.638**	0	0	22.638

The expected project generation is summarized in the following table:

Table 8 Estimated project P50 generation

YEAR	$EG_{PJ,y}$ (MWh)
2023 (as of 07/01/2023)	27.745
2024	55.277
2025	55.042
2026	54.782
2027	54.496
2028	54.162
2029	53.784
2030 (until 06/30/2030)	26.697

TOTAL	381.984
Average 7 years	54.569

4 Compliance with applicable legislation

SECCO has traceability of all the information mentioned in this document and has a legal and administrative area that guarantees access to and knowledge of the relevant legislation and regulations and updates of these when they occur.

SECCO is a private legal entity committed to due compliance with the laws and regulations applicable to its business, as well as to the care and satisfaction of its customers.

Considering that each sector and project has its own specificity, characteristics and technicality, SECCO carries out a decentralized regulatory control, i.e., each area involved identifies, monitors, analyzes and communicates internally the regulations relevant to its function. The details of how each area carries out the above and its traceability are detailed in the internal procedure "REGULATIVE MANAGEMENT SYSTEM".

5 Carbon ownership and rights

5.1 Project holder

Individual or organization	**INDUSTRIAS JUAN F SECCO S. A.**
Contact person	Hernan Juri
Job position	Administration & Finance Manager
Address	Rosario, Argentina. Juan Pablo II 5665 (Circunvalación Ave. and Uriburu Ave. collector)
Phone number	+54 (0341) 409-4000
Email	hjuri@secco.com.ar

5.2 Other project participants

Individual or organization	**Sustainable Carbon Finance LLC**
Contact person	Alejandra Camara
Job position	Proposer
Address	CABA, Argentina La Pampa 1940
Phone number	Landline: +541147865007 Cellular phone: +5491135202929
Email	alejacamara@gmail.com

Sustainable Carbon Finance LLC has no agreements on the credits generated during the implementation of the CASA Project.

5.3 Agreements related to carbon rights

Regarding carbon rights, Industrias Juan F. Secco and Cementos Avellaneda S.A. signed an agreement on the production and supply of renewable energy that specifically addresses this issue. The following is the key information required and excerpts from the agreement that verify what is stated in this document.

(a) parties signing the agreement(s);
INDUSTRIAS JUAN F. SECCO S.A. (in its capacity as Seller) and CEMENTOS AVELLANEDA S.A. (in its capacity as Purchaser)
(b) purpose of the agreement
Production and supply of renewable electric energy.
(c) date of the agreement;
December 17, 2021
(d) name of the GHG project;
San Luis Solar Project
(e) period of quantification of GHG emission removals/reductions;
20 years from the Commercial Qualification of the Photovoltaic Plant.
(f) responsibilities, obligations, and rights of each of the signatory parties.
Sections 7.2.3 (b) and 14.3 of the Agreement with CASA establish that the Seller (SECCO) may process in its name and be the exclusive beneficiary in all matters related to Green Certificates, Renewable Energy Certificates, Carbon Certificates and/or similar.

> 7.2.3. El Comprador tendrá el rol de Autogenerador en relación con el suministro de la energía generada por la Planta Fotovoltaica, asumiendo -ante CAMMESA como propia y para sí

la capacidad de generación de la Planta Fotovoltaica en carácter de Autogenerador del MEM y a todos los demás fines que correspondan en el MEM, sin perjuicio de que: a) la propiedad de la Planta Fotovoltaica, y su operación y mantenimiento estará a cargo del Vendedor hasta el momento que ocurra la efectiva transferencia de activos al Comprador y; b) el Vendedor, como titular de la inversión y suministrador de la energía podrá tramitar a su nombre y en consecuencia podrá ser beneficiario exclusivo de todo papel o instrumento referente a los Certificados Verdes, de Energías Renovables, de Carbono y/o similar, que existan a la fecha de la presente o se creen en el futuro hasta la finalización del Contrato o el ejercicio de la Opción. Las Partes acuerdan que dichas tramitaciones se podrán realizar, en la medida que no afecten el cumplimiento de las obligaciones a cargo del Vendedor y/o de las obligaciones del Comprador como agente MEM. Si por cualquier cuestión el Vendedor no resultara elegible para ser beneficiario de Certificados Verdes, de Energía Renovables, de Carbono y/o similar, el Vendedor no podrá reclamar por ello al Comprador, ni por cualquier otra causa vinculada con los referidos Certificados.

14.3 El Vendedor, como titular de la inversión y suministrador de energía tramitará a su nombre y en consecuencia será beneficiario de todo título, papel o instrumento referente a los Certificados Verdes, de Energía Renovables, de Carbono y/o similar, que existan a la fecha de la presente o se creen en el futuro hasta la finalización del Contrato o el ejercicio de la Opción, en los términos del artículo 7.2.3.

5.4 Land tenure (Projects in the AFOLU sector)

Not applicable

6 Climate change adaptation

SECCO is a leading company in the country and the region, with more than 80 years of experience. In its beginnings, SECCO consolidated its position in the metal-mechanic activity by repairing the drive engines of the generator sets owned by its customers and its own, being the owner of an industrial plant in constant growth and updating with the latest technology located in the city of Rosario, Province of Santa Fe. Gradually and from the change in the business conception that took place in the country, SECCO was strengthened in the field of the provision of services developing great experience, particularly in the generation of electric power and gas compression.

The great growth of the company took place at the beginning of 2001 when, due to the economic situation of the country, SECCO began to grow exponentially with the generation of electric energy through engines generated with fossil fuels.

As early as 2005, the company's executive board made clear in a board minute the importance of combating climate change. In 2008 it submitted a project to CDM that dealt with the capture of waste gases at the wellhead to generate electricity. This project was not registered for various reasons, but it was a pioneer in the development of the methodology used:

(https://cdm.unfccc.int/Projects/Validation/DB/HIU1MR6WZ19GKZ73Y9UHXLBSQI0J2O/view.html)

Being a provider of integral solutions in power generation for the most demanding clients in the public and private sector, thanks to its technological advances and experience in the industry and hand in hand with internationally renowned brands, SECCO assembles, installs, commissions, enables, operates and maintains solar, hybrid, mono-fuel and multi-fuel power generation plants and units of high complexity capable of generating energy according to the specific requirements of each client. SECCO reaches every corner of the country, responding to diverse demands and ensuring the achievement of the expected results.

SECCO has more than 10 years of experience in Process Management for the design, construction, qualification and operation of Power Generation Plants from renewable sources, performing from the design and engineering of the plants to the administrative management, environmental studies, commissioning and start-up of these, and in all cases developing a customized solution for each client and environmental needs.

The company has the know-how, personnel and capacity for the design, development of engineering and suppliers, construction, commissioning, operation and maintenance of photovoltaic and hybrid generation plants that meet the needs of each client.

As a background in photovoltaic, SECCO carried out the conversion project of the Piedra Negra Thermal Power Plant, which is located at 3,600 meters above sea level, incorporating a solar plant with more than 5 thousand panels and banks with lithium ion batteries for energy accumulation, in order to guarantee the reliability of the System, transforming it into the first Hybrid Power Plant (photovoltaic/storage/thermal) at altitude for an isolated system in Latin America, ensuring one of the highest percentages of availability in the market.

SECCO has more than 1,500 MW installed in more than 130 Generation Plants that generate in isolated systems or connected to the National Interconnected System (SADI) providing solutions tailored to the needs of each client with state-of-the-art and highly complex equipment. It currently has installed more than 50 MW in MSW Biogas Projects, more than 30 MW in substrate Biogas Projects and a hybrid plant composed of solar and thermal energy with energy accumulation to guarantee the reliability of the system. To date SECCO is working on the completion and installation of solar energy projects for 70 MW (of which 20MW correspond to the CASA Project and 50MW distributed in 8 solar plants in the province of Jujuy); totaling 178MW installed in renewable energy.

Table 9 Experience in Renewable Energy Generation

CT NAME	OBJECT	SOURCE	CLIENT	MW INSTALLED	YEAR PEM
CT LA CALERA	OWN CT WITH O&M	SOLAR	CEMENTOS AVELLANEDA S.A.	20	2023
CT JEMSE	OWN CT WITH O&M	SOLAR	EJESA	48	2023
CT SAN MARTIN NORTH III DI	OWN CT WITH O&M	BIOGAS MSW	CAMMESA	4,2	2023
CT SAN MARTIN NORTH III AGC	OWN CT WITH O&M	BIOGAS MSW	CAMMESA	7,5	2023
CT VARIOUS	RENTAL WITH O&M	BIOGAS SUST. with Heat Recovery	VARIOUS	23	2021/2022
CT BLACK STONE	OWN CT WITH O&M	HYBRID (SOLAR + STORAGE + THERMAL)	EJESA	12,4	2021
CT SAN MARTIN NORTE III D	OWN CT WITH O&M	BIOGAS MSW	CAMMESA	7,5	2021
CT SAN MIGUIEL	RENTAL WITH O&M	BIOGAS MSW	TECSAN	5,2	2021
CT ENSENADA	OWN CT WITH O&M	BIOGAS MSW	CAMMESA	7,5	2019
CT BIOGAS AVELLANEDA	OWN CT WITH O&M	BIOGAS SUST. with Heat Recovery	CAMMESA	7,5	2019
CT KDM	O&M	BIOGAS MSW	KDM S.A.	24	2012
CT EDAM	O&M	BIOGAS SUBSTRATES	EDAM S.A.	12,7	2012

In line with the above, in 2019 the Code of Ethics and Conduct was implemented, which expressly regulates SECCO's commitment to the implementation of best environmental practices in the different sectors in which it operates, as well as the continuous improvement of environmental protection, safety and hygiene systems to obtain results of lower environmental impact as an integral part of the company's

operations strategy. The Code of Ethics is part of the Company's Integrity Program, which is in force and enforceable for all employees and internal officers, suppliers, distributors, service providers, consultants, among others. It is publicly available and can be accessed from the web page[5] .

The above actions of the company contribute to achieving the objectives set out in the Second Adaptation Communication of the Argentine Republic[6] and are in line with the same, where "35 priority adaptation measures are identified in seven sectors of the country to address the different territorial, socioeconomic and environmental vulnerabilities to climate change." Within the Sectoral Adaptation Measures, in energy, SECCO collaborates with two of the three proposed actions, they are:

Develop measures to secure energy supply and access through the adoption of resilient and sustainable infrastructure (e.g., energy transport and distribution, fuel production and power generation, with particular emphasis on water resources assessment and hydropower generation).

Develop measures to ensure supply through technological and territorial diversification and increased access to energy, particularly through sustainable energy sources.

7 Risk management

The Environmental Impact Assessment (EIA) was carried out by independent personnel and made it possible to analyze the type, magnitude, and complexity of the project and its relationship with the characteristics of the social, physical, and biological environment that could potentially be affected. The methodological analysis used complies with national, provincial, and municipal regulations.

The Leopold Matrix was used to identify and assess impacts for the stages of land preparation, construction, and operation of the photovoltaic plant.

In April 2022 a readjustment of the original study was presented due to a change in the location with the objective of minimizing the impacts in the area, this presentation was approved by the public organisms through Resolution N°261 by the Environmental Control and Monitoring Program of the Secretary of the Environment of the Province of San Luis.

The following is a summary of the main conclusions on impacts and risks detected in the different areas that form part of a project:

[5] https://www.secco.com.ar/?gclid=CjwKCAiA5sieBhBnEiwAR9oh2gBW2GokgnZJGAxE14BhMTayzV8mfaJW8A9JxDNNHu_hkh01vvckaRoCs0gQAvD_BwE#!/company#values

[6] https://www.argentina.gob.ar/ambiente/cambio-climatico/contribucion-nacional

- The construction tasks and activities will generate important changes in the environment, affecting mainly the flora, soil, change in land use and landscape perception.
- The impact on the physical environment during the construction stage is mainly related to soil disturbance, cleaning, compacting and leveling tasks, which is a permanent impact over time, in an area used only for extensive cattle raising.
- The air component will be affected by the emission of particles into the atmosphere and localized noise pollution from machinery activities, without major consequences for the population, since it is located in a rural area. It is also considered that the predominant wind direction is from north to south and vice versa, and particulate matter pollution is expected to dissipate mainly in rural areas. These environmental impacts will be totally limited, temporary and reversible.
- The impact on the biological environment will be of medium to high intensity, both from the flora and fauna component, in an area already partly impacted by the change in land use.
- Regarding the economic environment components, there will be a negative impact on the change of land use, by delimiting an important area of land for the installation of photovoltaic panels, but it will have a positive impact within the region, mainly related to the generation of labor and regional energy development.
- The project will generate a total of 200 temporary jobs during construction and 2 people will be employed during operation and maintenance. These actions will have a significant positive impact on this sector, mainly because a large part of the labor force will be local. It will also activate the local and regional supply and service chain. In addition, the project will provide electric power to the people living near the project, which would otherwise be impossible, and will generate a significant improvement in their quality of life.

Internally SECCO has implemented an Integrity Program, which can be viewed on the website https://www.secco.com.ar/ composed of:

- Code of Ethics and Conduct
- Management Support
- Prevention of illegal activities with the public sector
- Training policy
- Whistleblower protection
- Whistleblower channels and ethics hotline
- Due diligence to business partners
- Customer due diligence
- Compliance Officer
- Complimentary gift policy

7.1 Reversal risk

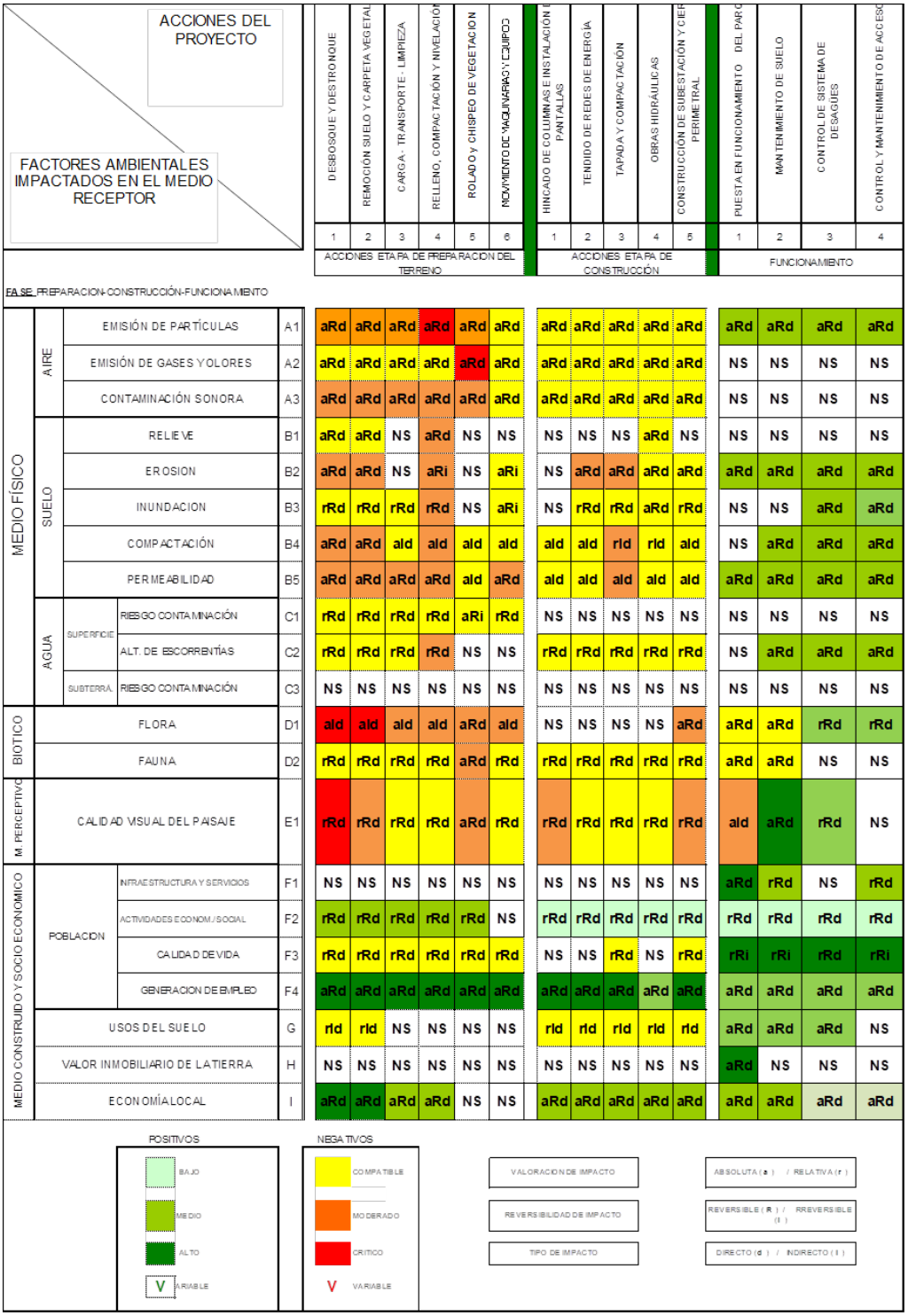
The contract referred to in section 5.3 of this document in article 13 establishes the payment mechanism as "Take or Pay: the Buyer undertakes to pay the Agreed Price for the totality of the Energy Generated, measured at the 6.6 kV system input, even in the event that the energy generated is higher than that required by the industrial plant in La Calera. The Buyer also undertakes to pay the Agreed Price for the energy made available that cannot be effectively generated due to partial or total restrictions to the power dispatch caused by the Buyer ("Non-Generated Energy")."

The term of the current contract is 20 years from the Commercial Qualification of the Photovoltaic Plant. The contract also provides for early exit clauses that consider the payment of compensation and the mechanism for calculating the Asset Price in the event of reversion or upon termination of the contract.

8 Environmental Aspects

The following figure shows in detail the results of the environmental assessment, analyzing the foreseeable effects within the project boundaries, both temporary and transitory, reversible and permanent.

Illustration 7 Matrix of environmental impacts



From the above detailed the EIA proposes the following Management Plan that will be incorporated once the operations of the CASA Project begin:

- It is proposed to study the possibilities of herbaceous growth and planting to avoid the existence of bare soil.
- Periodic introduction of sheep to the area is planned to control vegetation growth under the solar panels.

- Periodic monitoring is intended to maintain and adapt the morphological and environmental conditions closer to the original ones, as well as to determine a sustainable management of the site's natural resources.

In line with the above, a suggested Management and Reforestation Plan for La Calera with native species was submitted to the Secretary of the Environment of the Province of San Luis, and once approved by said organization, it will be implemented.

9 Socio-economic aspects

The activities for the adequacy and conditioning of the project normally generate a change in the customs and movements that are not usual in the area, whose impact will be of low significance because it is a rural area, although there are some homes in the vicinity that may feel the changes in the routine during the construction of the project.

The impact on the population of this project will be mainly positive and will be reflected in the generation of direct and indirect jobs, mainly during construction and later, to a lesser extent, during operation and maintenance, affecting the town of La Calera.

During operation this project will have very low activity, with reduced mobility for control and maintenance of the screens.

The generation of clean energy will contribute to the preservation of the environment by a significant saving in the emission of tons of carbon into the atmosphere. This benefit will be a pole of attraction for the teaching and demonstration of local operation, in addition to the possibility of obtaining the energy supply for a significant number of family homes.

On the other hand, personnel training will be carried out, which will result in the training and qualification of the workforce, which may be useful in other projects of similar characteristics.

10 Consultation with interested parties (stakeholders)

The project is in the Belgrano Department, located in the northwest of the Province of San Luis, which has deposits of limestone, gypsum and sand mainly, from which cement and different types of lime have been produced. The above is useful to understand the context of the population accustomed to the industrial activity and the movement of heavy transport.

In accordance with the provisions of the legislation in force, the public participation instance was guaranteed by calling for Public Consultation both in the Diario de la República and the Boletín Oficial, the last publications being made through Edicts in the Diario on August 2 and 3, 2022 and in the Boletín Oficial on August 3 and 5, 2022, without any presentation by interested parties on the days that the file was available for consultation or in the following days.

The file was made available for consultation by any interested party, as was the Environmental Impact Statement (EIS, the official document containing the result of the environmental impact assessment and its allegations).

10.1 Summary of comments received

To date, there have been no inquiries or concerns.

10.2 Consideration of comments received

To date, there have been no inquiries or concerns.

11 Sustainable Development Goals (SDG)

The Tool for Determining the Contributions of GHG Projects to Achieving the Sustainable Development Goals (SDGs) proposed by BioCarbon was used as a support and basis for the identification of the SDGs on which the project has an impact and its rationale. In turn, SDG 7 Affordable and Clean Energy and SDG 13 Climate Action were completed.

All the Sustainable Development Goals that are linked to the CASA Project, their description and objectives are specified below. It should be clarified that these were not incorporated in the Tool proposed by BioCarbon due to their specificity and their specific framework for action in the surrounding community.

1. SDG 5:Gender equality.

Searches for permanent personnel will not have any clarification on gender preference and the estimated salary for such functions is defined independently of who occupies the position.

During construction and assembly 15% of the personnel employed were women, a percentage that expresses the degree of commitment to gender equality, which is almost 400% higher than what was reported by UOCRA (Unión Obrera de la Construcción de la República Argentina) in January 2022 where it assured that "it is estimated that between 3 and 4% of the universe of workers involved in the industry are women who participate in activities that were not usual before."[7]

When the CASA Project was implemented, a woman was incorporated as part of SECCO's permanent staff at the site.

Objective: to maintain or increase the participation of women involved in the CASA Project.

2. SDG 7: Affordable and clean energy

[7] https://www.uocra.org/index.php?s=noticia-ampliada&num=1609&lang=1

The project generates up to 55GWh/year that are incorporated into the country's energy matrix.

Objective: to maintain photovoltaic generation following good operation and maintenance practices.

3. SDG 8: Decent Work and Economic Growth

The project generated more than 222 temporary jobs during construction and assembly, and during operation at least 2 people will be employed on a stable basis for operation and maintenance, prioritizing local hiring.

The food service for construction personnel was contracted to a local company in the community of La Calera, generating more income and growth for the region.

The company Cementos Avellaneda has an articulated plan with the local school (primary and secondary) for training trades and attracting young talents as its own personnel or by recommending outsourced companies.

Objectives:

Develop 1 annual meeting with the zonal school director and the company Cementos Avellaneda to join efforts and develop a common strategy according to the needs of the stakeholders.

Prioritize the hiring of local workers.

4. SDG 10 Reduced inequalities

In order to guarantee equal opportunities, there will be at least one meeting per year with the community and its representatives to record the needs raised, which will be considered internally and incorporated into SECCO's budget to be executed in the following year.

Objectives:

Hold an annual exchange meeting with the community and its representatives.

Organize 2 visits per year to the generation plant for the last years of high school to train and motivate young people.

5. SDG 13: Climate Action

Up to 22,638 tCO_2/a will be reduced.

Objective: to maintain photovoltaic generation following good operation and maintenance practices.

6. SDG 17 Partnership for the goals

SECCO understands that the development and strengthening of alliances is fundamental to achieve the necessary engagement with the community, surrounding organizations and to maintain a healthy relationship with Cementos Avellaneda.

Objectives:

Organize at least one annual on-site training with La Calera's volunteer firefighters and generate an exchange of knowledge. Ensure that they are familiar with the facilities in order to promote efficient emergency response.

Elaborate a list of community referents and neighboring organizations to evaluate the synergies with the CASA Project and the agreements that could be generated.

12 REDD+ safeguards (if applicable)

Not applicable

13 Special categories, related to co-benefits

Not applicable

14 Grouped project (if applicable)

Not applicable

15 Other GHG programs

Not applicable

16 Monitoring plan

16.1 Data and parameters for quantifying emission reductions

Parameter	$EGfacility_{,y}$
Unit	MWh/year
Description	Amount of net electricity generation supplied by the project plant/unit to the grid in the year.
Source	SMEC Class 0.2 meters
Purpose of monitoring	Calculation of reference emissions. Billing per MWh generated.

Monitoring frequency	Continuous measurement In cases where the electricity meters are regulated (as in the case of the La Calera Solar Project), the electricity meter will be subject to regular maintenance and testing as stipulated by the meter supplier and/or according to the requirements established by the grid regulator (CAMMESA) or national requirements. The calibration of the meters, including the frequency of calibration, shall be in accordance with national standards or requirements set by the meter supplier or requirements set by the grid operators. The accuracy class of the meters must be in accordance with the meter supplier's stipulation and/or according to the requirements established by the network operators or national requirements. The Project complies with the above and, as stated in CAMMESA's current procedure, "The OED (Organismo Encargado de Despacho) will carry out the tests and verifications in the measurement and acquisition system of the values with reason for the SMEC Audit, with the scopes, methodologies and procedures set forth in the Technical Procedure issued by the OED for such purpose."

The emission factor, as mentioned in section 3.7.3 GHG emission reductions in the baseline scenario, will remain fixed during the credit period.

Parameter	SDG 5 Gender equality
Unit	% of women involved in the CASA Project
Description	Searches for stable personnel without any clarification of gender preference and the estimated salary for such functions is defined independently of who occupies the position.
Source	Human Resources of Juan F. Secco Industries
Purpose of monitoring	Achieving SDG 5
Monitoring frequency	Annual

Parameter	SDG 7: Affordable and clean energy
Unit	MWh/year

Description	Amount of net electricity generation supplied by the project plant/unit to the grid in the year.
Source	SMEC Class 0.2 meters
Purpose of monitoring	Calculation of reference emissions. Billing per MWh generated.
Monitoring frequency	Continuous measurement

Parameter	SDG 8: Decent Work and Economic Growth
Unit	Meeting/year
Description	Develop 1 annual meeting with the zonal school director and the company Cementos Avellaneda to join efforts and develop a common strategy according to the needs of the stakeholders. Prioritize the hiring of local workers.
Source	Human Resources of Juan F. Secco Industries
Purpose of monitoring	Fulfillment of SDG 8.
Monitoring frequency	Annual

Parameter	SDG 10 Reduced inequalities
Unit	Meeting/year Visits/year
Description	Hold an annual exchange meeting with the community and its representatives. Organize 2 visits per year to the generation plant for the last years of high school to train and motivate young people.
Source	Human Resources of Industrias Juan F. Secco
Purpose of monitoring	Fulfillment of SDG 10.
Monitoring frequency	Annual

Parameter	SDG 13: Climate Action
Unit	tCO_2/year

Description	Maintain photovoltaic generation following good operation and maintenance practices.
Source	Chief Operating Officer, Juan F. Secco Industries
Purpose of monitoring	Fulfillment of SDG 13.
Monitoring frequency	Annual

Parameter	SDG 17 Partnership for the goals
Unit	training/year meetings/year
Description	Organize at least one annual on-site training with La Calera's volunteer firefighters and generate an exchange of knowledge. Ensure that they are familiar with the facilities in order to promote efficient emergency response. Elaborate a list of community referents and neighboring organizations in order to evaluate the synergies with the CASA Project and the agreements that could be generated.
Source	Human Resources of Industrias Juan F. Secco
Purpose of monitoring	Fulfillment of SDG 17.
Monitoring frequency	Annual

16.2 Additional information to determine the baseline of reference scenario

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 will be measured according to the national rules and regulations for wholesale market participants (CAMMESA - Compañía Administradora del Mercado Mayorista Eléctrico rules). SMECs will be installed at the plant's interconnection point (see figure 1); protection relays in medium voltage cells (at SECCO's distribution center) and multi-meters (at the solar farm's transformation centers) in the medium voltage cells.

All meters will have records and generation data ready to be downloaded remotely and/or locally by CAMMESA and the project developer. The information will be acquired at programmable intervals ranging from a minimum to a maximum of one hour.

The information is supported by the operational team (COG). Data is included in an Excel spreadsheet for emission reduction calculations on a monthly basis. All data collected as part of the monitoring process is archived electronically and retained for

at least two years after the end of the last crediting period. After that period the information will be stored in backup copies that can be reconstructed if necessary. In the ET CASA Solar PV Central Monitoring and Control Procedure, the reports to be generated, technical information, responsibilities and parameters achieved by this project are detailed.

16.3 Information related to the environmental impact assessment of GHG project activities.

1. Plant and process principals:
   1.1. Irradiance in the horizontal plane, in the plane of the trackers
   1.2. Ambient temperature; of the module
   1.3. Wind and direction
   1.4. Dirt rate
   1.5. Generation power at the PDI; transformer stations; inverters
   1.6. Daily, weekly, monthly and annual energy
   1.7. Key indicators, daily, monthly and annual Performance Ratio (PR).
   1.8. Inverters quantity in operation, failure or shutdown
   1.9. Status trackers; position angle
2. Secondary:
   2.1. Inverter MPP voltages
   2.2. Inverter MPP currents
   2.3. Yields
   2.4. Hours of daily generation
   2.5. Losses
   2.6. Efficiencies
3. As monitoring practices will be carried out:
   3.1. Warning notices
   3.2. Alarm equipment installed on screen
   3.3. Possibility to set configurable limit values for display indications.

SECCO will monitor compliance with the Reforestation Plan and, on an annual basis, compliance with the objectives set forth in the chapter "11 Sustainable Development Goals (SDGs)".

16.4 Procedures established for the management of GHG emission reductions or removals and related to quality control

Bi-directional meters (main and backup) will be installed at the solar plant substation to measure the supply of electricity directly and continuously to the grid.

The accuracy class of the expected bidirectional SMEC (commercial metering system) electricity meters is 0.2S. The verification and recalibration of the meters is performed by CAMMESA who audits the installation on site and performs a contrast without a defined periodicity. SECCO checks that the measurement of the main meter is in accordance with that of the backup meter.

Data from the main and backup meters are checked monthly for quality control before reconciliation is agreed upon as the basis for billing.

All data collected as part of the monitoring process are archived electronically and retained for at least two years after the end of the last accreditation period.

Continuous monitoring will be carried out from the Generation Operation Center (COG) in the city of Rosario.