



Monitoring report form for CDM project activity
(Version 09.0)

Complete this form in accordance with the instructions attached at the end of this form.

MONITORING REPORT

Title of the project activity	Rinconada PV CDM Project		
UNFCCC reference number of the project activity	10549		
Version number of the PDD applicable to this monitoring report	02.3		
Version number of this monitoring report	2.0		
Completion date of this monitoring report	10/11/2021		
Monitoring period number	1		
Duration of this monitoring period	05/02/2020 to 31/05/2021		
Monitoring report number for this monitoring period	01		
Project participants	DE Energia SpA		
Host Party	Chile		
Applied methodologies and standardized baselines	AMS I.D/Version 18 "Grid connected renewable electricity generation"		
Sectoral scopes	Sectoral Scope: 01, Energy Industries (renewable and non-renewable sources)		
Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013 until 31 December 2020	Amount achieved from 1 January 2021
	0 tCO ₂ e	10,538 tCO ₂ e	5,252 tCO ₂ e
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	17,989 tCO ₂ e		

SECTION A. Description of project activity

A.1. General description of project activity

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Rinconada PV CDM Project (“the Project”) is to construct and operate photovoltaic power generation project with the generation capacity of 8 MW in the central region of Chile. DE Energia SpA owns this power generation plant which is connected to the national power grid in Chile (SEN, Sistema Eléctrico Nacional). The power plant is located in the Cachapoal Province of the Region of O'Higgins, Chile.

This photovoltaic power plant will utilize renewable energy sources for electricity generation, which contributes to GHG emission reduction by displacing existing power generation activities based on fossil fuel including oil and coal. As an ex-ante estimation specified in the registered PDD, this project is expected to reduce 13,622 tonnes of CO₂ per year.

General information of the proposed PV power plant		
Major stakeholders of the project	Project Owner	DE Energia SpA
Power Generation and Supply	Technology	Photovoltaic power generation
	Capacity (MW, AC)	8.0
	COD ¹	19-Dec-2019
	Grid Connection	SEN (Sistema Eléctrico Nacional) Grid in Chile

Baseline Scenario

As per the applicable CDM methodology AMS-I.D., a Greenfield power plant is defined as “a new renewable energy power plant that is constructed and operated at a site where no renewable energy power plant was operated prior to the implementation of the project activity”.

As the project activity falls under the definition of a Greenfield power plant, the baseline scenario as per the applied methodology is the following:

The baseline scenario is that the 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 into the grid.

¹ Commercial Operation Date

The scenario existing prior to the implementation of the project activity, is electricity delivered to the grid by the project activity that would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources.

The baseline scenario for this project relates to the electricity from the operation of existing grid-connected power plants and by the addition of new generation sources. The baseline scenario is the same as the scenario existing prior to the start of the implementation of the project activity. In this context, the project boundary includes the CO₂ emissions from electricity generation in fossil fuel-fired power plants that are displaced due to the project activity.

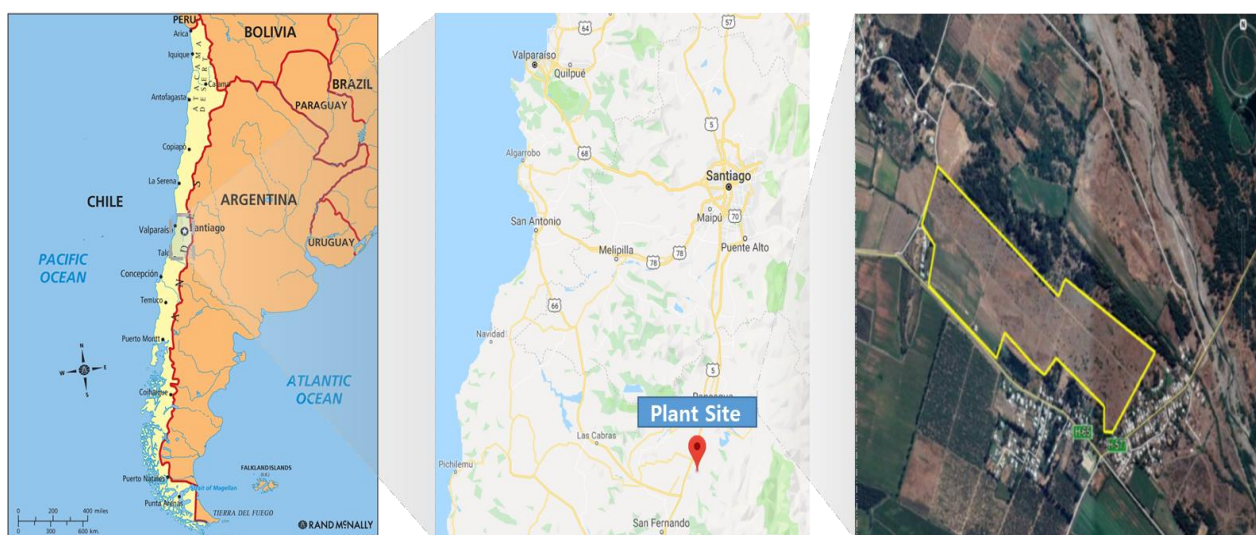
A.2. Location of project activity

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The power plant of the proposed project activity is located in the central region of Chile. The following picture and table describes the detailed location of this power plant.

- **Name of Power Plant:** Rinconada
- **Coordinate of the power plant** (Decimal Latitude and Longitude): -34.40683, -70.81912
- **Administrative area where the plant is located:** Town of La Chimba, Municipality of Rengo, belonging to the Cachapoal Province of the Region of O'Higgins, Chile.

[Figure] Location of power plants under the proposed CDM project



A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Chile (host)	DE Energia SpA (Private Entity)	No

A.4. References to applied methodologies and standardized baselines

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Reference: The project activity meets the eligibility criteria to use the simplified modalities and procedure for small-scale CDM project activities as set out in paragraph 6 (c) of decision 17/CP.7. Details of methodology for baseline calculations for CDM projects of capacity less than 15 MW are available in the “Appendix B of the simplified modalities and procedure for small scale CDM project activities”.

- **Type I** : Renewable Energy Project (Small Scale)
- **Category** : I. “D”, Grid Connected Renewable Electricity Generation
- **Methodology** : AMS-I.D Grid Connected Renewable Electricity Generation (Version 18)²

A.5. Crediting period type and duration

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Type of crediting period for this project	Renewable
Total duration of the crediting period for this project	05 Feb 2020 - 04 Feb 2027

² <https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTXFQQOFQQH4SBK>

SECTION B. Implementation of project activity

B.1. Description of implemented project activity

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The proposed CDM project activity will generate power using solar energy, which is a renewable source of energy. The solar PV system mainly consists of PV modules, inverters, monitoring devices and etc. The solar PV cells convert solar radiation into DC current. The solar panels are installed in arrays. The modules in each array are connected in parallel and/or series in order to get the preferred current & voltage which match with the rated input parameters of the inverter. The inverter connected in each array converts the DC current to AC current. The electricity collected from all the inverters and the voltage of the collected electricity is stepped up and transported to the national grid.

Major activities for the proposed CDM project in the past

Event	Applicability by the power plant
RCA ³	27-Aug-2018
Building Permit ⁴	31-Oct-2018
COD ⁵ (Commercial Operation Date)	19-Dec-2019

Capacity and Expected Amount of Power Generation

The following table specifies the AC/DC capacity of the proposed power plant.

(Rinconada Power Plant)	Expected design of the project
Capacity of each PV module (Wp)	370 / 375
The number of PV modules	16,128 / 9,856 (Total: 25,984)
Capacity of each inverter (kWp)	1600
The number of inverters	5
Capacity of each transformer (kVA)	4,800 / 3,200
The number of transformers	1 / 1 (Total: 2)

³ RCA: Resolucion de Calificacion Ambiental which is environmental approval in Chile.

⁴ Permiso de Edificación in Spanish. Prior to this, IFC(International Finance corporation) must be obtained first.

⁵ COD: Commercial Operation Date (Start date of supplying generated electricity to the grid). For the power plants which started commercial operation at the time of PDD preparation, exact date is specified. In case that the commercial operation has not been started, expected Month of commercial operation is suggested in this table.

DC Capacity of the plant (kW)	9,663
AC Capacity of the plant (kW)	8,000
Expected power generation (MWh/year)	20,932

Technical specification of PV module

As for the power generation module including solar panel, the following table describes the technical characteristics of the photovoltaic modules to be installed for project sites.

Technical Aspect of PV Module	Specification	
Manufacturer	Trinasolar	
Model	TSM-370DE14A(II)	TSM-375DE14A(II)
Peak Power Watts - P_{MPP} (Wp)	370	375
Maximum Power Voltage - V_{MPP} (V)	39.7	40
Maximum Power Current - I_{MPP} (A)	9.33	9.37
Open Circuit Voltage - V_{OC} (V)	48.3	48.5
Short Circuit Current - I_{SC} (A)	9.83	9.88
Module efficiency (%)	19	19.3
Size (mm)	1960 x 992 x 40	
Weight (kg)	22.5 ~ 26	
Life Expectancy (year)	25	

Technical specification of inverter and transformer

Among the inverters and transformers installed in the proposed project power plant, major technical characteristics are summarized in the table below.

Technical Aspect of Inverter		Specification
Manufacturer		Ingeteam
Model		INGECON SUN 1640TL B630
Input (DC)	PV array power range (kWp)	1,620 - 2,128
	Voltage Range at MPP (V)	910 - 1,300
	Maximum voltage (V)	1,500
	Maximum current (A)	1,850
Output (AC)	Power IP54 @30 °C / @50 °C (kVA)	1,637 / 1,473
	Current IP54 @30 °C / @50 °C (A)	1,500 / 1,350
	Rated voltage (Vac)	630
	Frequency (Hz)	50 / 60
Life Expectancy (year)		30

Technical Aspect of Transformer	Specification
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Manufacturer		CELME	
Model		ONAN	
Primary	Power (MVA)	4.8	3.2
	Rated Voltage (V)	15,000	
	Rated Current (A)	184.75	123.17
Secondary	Power (MVA)	4.8	3.2
	Rated Voltage (V)	615	
	Rated Current (A)	4,506.15	3,004.1
Frequency (Hz)		50	
Impedance (%)		7.61	6.44

Monitoring equipment

Data / Parameter	Description	Type of equipment	Accuracy level	Location
Grid _{out,y}	The quantity of electricity generation exported from the plant to the grid	Bi-directional electric meter	±0.2%	Near the access point of transmission line
Grid _{in,y}	The quantity of electricity generation imported from the grid to the plant	Bi-directional electric meter	±0.2%	Near the access point of transmission line

Major events related to technical operation of the power plant

Technical issues during this monitoring period and their relevance to power generation activities under this project are described in the table below.

Incident Date	Affected Device	Description of event	Impact on GHG emission reductions
19 June 2020	Inverter	Repair works after inverter stopped due to insulation failure	Decrease of power generation
17 December 2020	Inverter	Repair work after a faulty LVRT board during on-site check.	Decrease of power generation
22 November 2020	Inverter	Repair works after inverter stopped with an alarm "Fallo DC/AC PWM" and "Inductor Cooling"	Decrease of power generation
3 March 2021	Anemometer	Repair works after on-site trackers stops in flag position	No impact

B.2. Post-registration changes**B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents**

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There is no request for deviation applied during this monitoring period.

B.2.2. Corrections

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The PDD (Ver 2.2), which was officially registered on the UNFCCC website at the time of initial CDM registration (05 Feb 2020), describes the expected date of commercial operation date (COD) as 15th, February of the year 2020. However, actual date of the COD is 19th December 2019 from which the commercial operation of power generation under this project activity has been started. Therefore, the commercial operation date for Rinconada power plant is corrected from 15/Feb./2020 to 19/Dec./2019.

B.2.3. Changes to the start date of the crediting period

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There is no changes to the start date of the crediting period for this CDM project activity.

B.2.4. Inclusion of monitoring plan

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There is no post-registration changes in the monitoring plan during this monitoring period.

B.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

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There is no any permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools during this monitoring period.

B.2.6. Changes to project design

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There has not been any change in the project design during this monitoring period

B.2.7. Changes specific to afforestation or reforestation project activity

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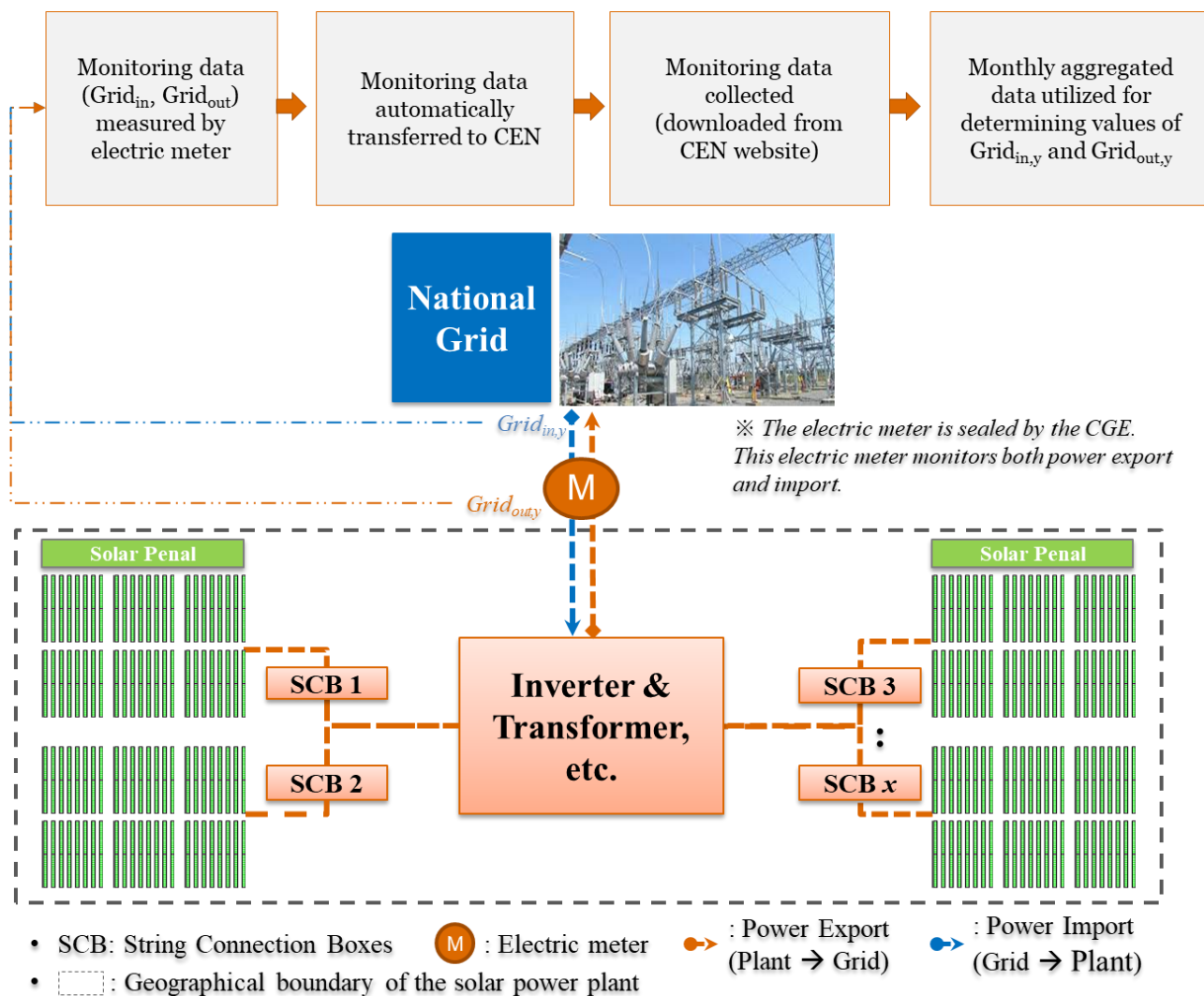
Not Applicable

SECTION C. Description of monitoring system

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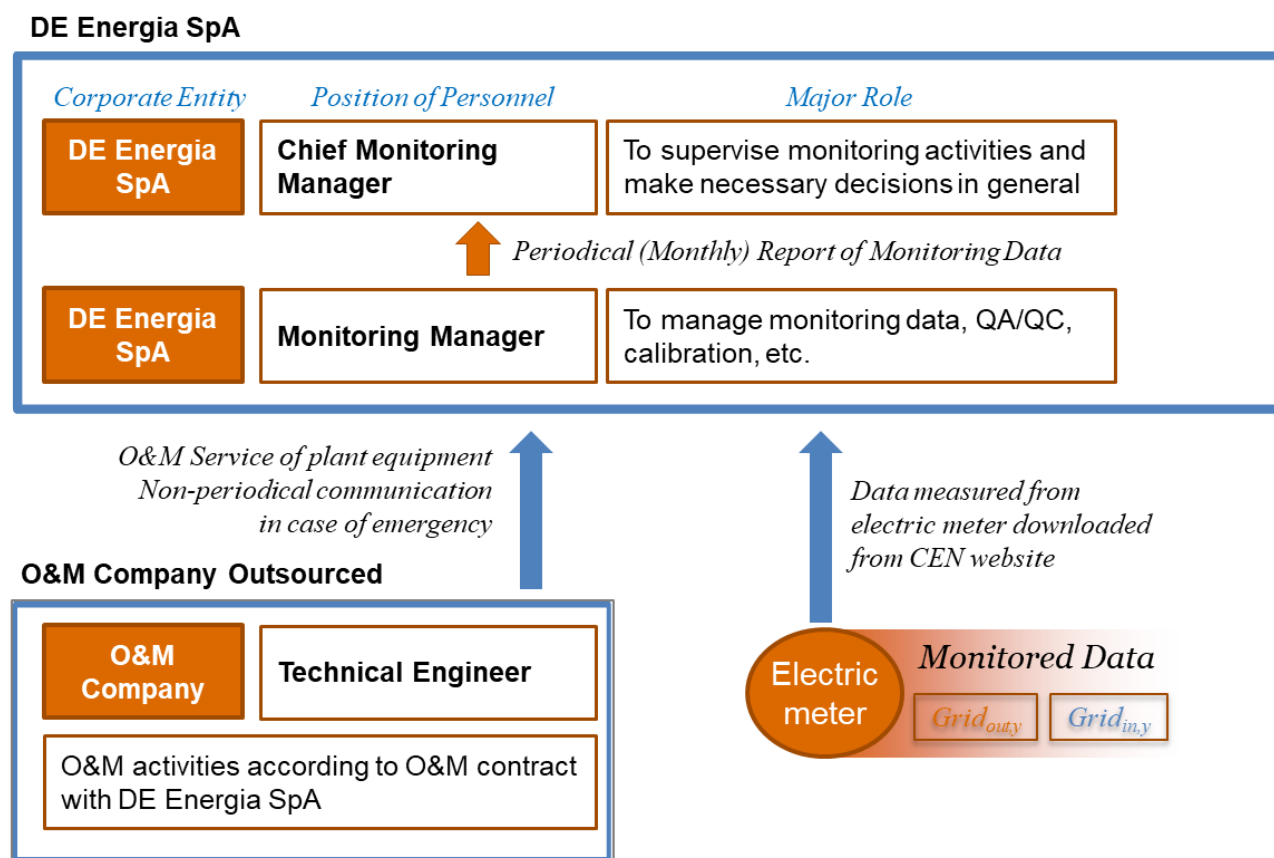
Monitoring Equipment

The electric meter is installed and managed by the CGE⁶ (Electric meter as described in the picture below). This electric meter will monitor both $Grid_{in,y}$ and $Grid_{out,y}$. $Grid_{out,y}$ monitored by this electric meter excludes the electricity that is generated by the proposed power plant and, subsequently, consumed within the power plant. As for the amount of electricity purchased from the Grid and to be consumed within the proposed power plant as a result of the implementation of the CDM project activity in for this monitoring period y ($Grid_{in,y}$), it will be measured by this electric meter (installed and managed by the CGE).



⁶ Compañía General de Electricidad S.A. The biggest distribution company in power sector in Chile as of 2019.

Organization of Monitoring Team



The monitoring plan is designed in consideration of characteristics of operating grid-connected solar power plants. This monitoring plan includes the organization, data storage and archiving, QA/QC of monitoring practices.

Position and Reporting	Job Description
Chief Monitoring Manager	<ul style="list-style-type: none"> Final confirmation of reliability of monitoring data Review of monitoring report Review of monitoring plan Supervision of QA/QC process and activities Responsible for making decision on how to deal with issues raised in case of emergency
Monitoring Manager	<ul style="list-style-type: none"> Review of monitoring data Preparation of CDM monitoring report Preparation of monthly report including monitoring data Implementation of monitoring plan including QA/QC activities Implementation of activities of dealing with issues raised in case of

	emergency <ul style="list-style-type: none"> • Communication with stakeholders concerning CDM MRV activities
O&M Provider	<ul style="list-style-type: none"> • Implementation of O&M activities for the power plant including inverter, transformer, etc. • Quality check of monitoring equipment

Data collection and archiving

Monitoring data is accessed and downloaded from CEN website. The collected data has been reported to a Chief Monitoring Manager on a monthly basis. Then, monthly aggregated data has been used for determining values of $Grid_{in,y}$, $Grid_{out,y}$. The exported and imported power data is recorded and stored in electronic form. This monitoring data will be archived by the project participant 2 years after the end of the crediting period or until the last issuance of CERs for the project activity whichever occurs later.

QA/QC Procedure

- Monitored values has been cross-checked against monitoring data collected and achieved by Monitoring Manager through direct meter readings.
- Monitoring equipment (Electricity meter) will be calibrated at least once in 5 years. As this power plant start its commercial power generation in late 2019, no calibration has not been implemented for the electricity meter of this project power plant.

Emergency Plan

The project participant is being prepared for emergency situations such as the following cases. However, there has been no actual cases or implementation of such emergency plan during the monitoring period in question.

- In case that there is malfunction of the major monitoring equipment (i.e. electric meter), the amount of power export and import will refer to other sources of data (e.g. alternative method suggested by public authority for transaction of buying and selling electricity, internal monitoring data measured by inverters, etc.)
- In case that there is national disaster or extreme weather events which negatively affect monitoring equipment, monitoring activities and/or quality of monitoring data, chief monitoring manager should take necessary actions which should be reported and archived in the monitoring report as well as the results of such actions.

Personnel training

In order to ensure proper functioning of the project activity and monitoring of emission reductions, the operating manager has been trained about the monitoring plan of the PDD as well as relevant MRV standard and process of UNFCCC CDM.

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante

Data / Parameter	$EF_{grid,OM,y}$
Unit	tCO ₂ /MWh
Description	Operating Margin CO ₂ emission factor in for this monitoring period y
Source of data	Calculated
Value(s) applied	0.7341
Choice of data or Measurement methods and procedures	Calculated as per “Tool to calculate the emission factor for an electricity system, Version 7” as 3-year generation weighted average using data for the year 2016~2018. The data are obtained from the National Energy Commission of Chile(CNE) in Mar. of 2019.
Purpose of data	Calculation of the Baseline Emission.
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

Data / Parameter	$EF_{grid,BM,y}$
Unit	tCO ₂ /MWh
Description	Build Margin CO ₂ emission factor in for this monitoring period y
Source of data	Calculated
Value(s) applied	0.4008
Choice of data or Measurement methods and procedures	Calculated as per “Tool to calculate the emission factor for an electricity system, Version 7” BM is calculated ex-ante based on the most recent information available at the time of submission of PDD and is fixed for the entire crediting period. The data are obtained from the National Energy Commission of Chile(CNE) in Mar. of 2019.
Purpose of data	Calculation of the Baseline Emission.
Additional comment	This parameter is fixed ex-ante for the first crediting period. 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.

Data / Parameter	$EF_{grid,y}$
Unit	tCO ₂ /MWh
Description	Combined Margin CO ₂ emission factor in for this monitoring period y
Source of data	Calculated
Value(s) applied	0.6508

Choice of data or Measurement methods and procedures	<p>The combined margin emissions factor is calculated as follows:</p> $EF_{\text{grid,CM},y} = EF_{\text{grid,OM},y} * W_{\text{OM}} + EF_{\text{grid,BM},y} * W_{\text{BM}}$ <p>Where:</p> <p>W_{OM} = Weighting of operating margin emissions factor (%) = 75%</p> <p>W_{BM} = Weighting of build margin emissions factor (%) = 25%</p> <p>Value for W_{BM} and W_{OM} are decided according to "Tool to calculate the emission factor for an electricity system, Version 7".</p>
Purpose of data	Calculation of the Baseline Emission.
Additional comment	This parameter is fixed ex-ante for the entire crediting period.

D.2. Data and parameters monitored

Data/Parameter	Grid _{out,y}
Unit	MWh
Description	Quantity of electricity generation that is exported from the project power plant to the grid as a result of the implementation of the CDM project activity for this monitoring period y
Measured/calculated/default	Measured
Source of data	Electricity meter
Value(s) of monitored parameter	<p>- 16,235.602 MWh for the period from the Start Date of Monitoring Period (05-Feb-2020) to 31-Dec-2020</p> <p>- 8,090.538 MWh for the period from 01-Jan-2021 to the end of this monitoring period (31-May-2021)</p>
Monitoring equipment	<p>Manufacturer: Schneider</p> <p>Model Name: METSEION7400</p> <p>Accuracy: 0.2% (Active Energy), 2% (Reactive Energy)</p> <p>Serial Number: MR-1904B709-02</p>
Measuring/reading/recording frequency	Continuous measurement & monthly recording by one bi-directional meter installed at the project site. Both Grid _{in,y} and Grid _{out,y} is monitored by this one bi-directional electricity meter.
Calculation method (if applicable)	N/A

QA/QC procedures	Frequency of calibration for monitoring equipment: At least once in 5 years and in accordance with relevant Chilean regulation	
	Calibration schedule for monitoring equipment for Grid _{out}	
	Date of initial calibration	26 April 2019
	Duration for which initial calibration is valid (From ~ Until)	26 April 2019 ~ 25 April 2024 (i.e. 5 years from the date of completing the initial calibration)
	Due date for second calibration	Second calibration to be completed before the end date of initial calibration (i.e. 25 April of 2024)
	The monitored values will be cross-checked with monitoring data collected and archived by the monitoring manager of the plant site.	
Purpose of data/parameter	Calculation of baseline emissions	
Additional comments	Data is archived in paper & electronic form for two years after the end of crediting period or of the last issuance of CERs for this project activity, whichever occurs later.	

Data/Parameter	Grid _{in,y}
Unit	MWh
Description	Quantity of electricity generation that is imported from the grid as a result of the implementation of the CDM project activity for this monitoring period y
Measured/calculated/default	Measured
Source of data	Electricity meter
Value(s) of monitored parameter	- 42.755 MWh for the period from the Start Date of Monitoring Period (05-Feb-2020) to 31-Dec-2020 - 19.743 MWh for the period from 01-Jan-2021 to the end of this monitoring period (31-May-2021)
Monitoring equipment	Manufacturer: Schneider Model Name: METSEION7400 Accuracy: 0.2% (Active Energy), 2% (Reactive Energy) Serial Number: MR-1904B709-02
Measuring/reading/recording frequency	Continuous measurement & monthly recording by one bi-directional meter installed at the project site. Both Grid _{in,y} and Grid _{out,y} is monitored by this one bi-directional electricity meter.
Calculation method (if applicable)	N/A

QA/QC procedures	Frequency of calibration for monitoring equipment: At least once in 5 years and in accordance with relevant Chilean regulation	
	Calibration schedule for monitoring equipment for Grid_{out}	
	Date of initial calibration	26 April 2019
	Duration for which initial calibration is valid (From ~ Until)	26 April 2019 ~ 25 April 2024 (i.e. 5 years from the date of completing the initial calibration)
	Due date for second calibration	Second calibration to be completed before the end date of initial calibration (i.e. 25 April of 2024)
	The monitored values will be cross-checked with monitoring data collected and archived by the monitoring manager of the plant site.	
Purpose of data/parameter	Calculation of baseline emissions	
Additional comments	Data is archived in paper & electronic form for two years after the end of crediting period or of the last issuance of CERs for this project activity, whichever occurs later.	

D.3. Implementation of sampling plan

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No sampling is required for this CDM project activity.

SECTION E. Calculation of emission reductions or net anthropogenic removals

E.1. Calculation of baseline emissions or baseline net removals

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The baseline emissions are the product of electrical energy baseline $EG_{PJ,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor.

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

Where,

BE_y	Baseline emissions in for this monitoring period y (tCO ₂ e)
$EF_{grid,CM,y}$	Combined margin CO ₂ emission factor for grid connected power generation in for this monitoring period y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO ₂ /MWh)
$EG_{PJ,y}$	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 for this monitoring period y (MWh)

Year	Month	BE_y	$EG_{PJ,y}$	$EF_{grid,CM,y}$
		t CO ₂	MWh	tCO ₂ /MWh
2020	2	929	1,427	0.6508
	3	985	1,514	0.6508
	4	756	1,162	0.6508
	5	663	1,018	0.6508
	6	282	433	0.6508
	7	397	610	0.6508
	8	839	1,290	0.6508
	9	1,054	1,620	0.6508
	10	1,449	2,226	0.6508
	11	1,457	2,238	0.6508
	12	1,727	2,654	0.6508
Total (05-Feb-2020 to 31-Dec-2020)		10,538	16,192.847	0.6508
2021	1	1,552	2,385	0.6508
	2	1,098	1,687	0.6508
	3	1,185	1,822	0.6508
	4	873	1,342	0.6508
	5	543	835	0.6508
Total (01-Jan-2021 to 31-May-2021)		5,252	8,070.794	0.6508

$$EG_{PJ,y} = EG_{PJ, facility,y} = Grid_{out,y} - Grid_{in,y}$$

Grid_{out,y} Quantity of electricity generation that is exported from the project power plant to the grid as a result of the implementation of the CDM project activity in for this monitoring period y (MWh)

Grid_{in,y} Quantity of electricity generation that is imported from the grid as a result of the implementation of the CDM project activity in for this monitoring period y (MWh)

Year	Month	EG _{PJ,y}	Grid _{in,y}	Grid _{out,y}
		MWh	MWh	MWh
2020	2	1,427.286	2.425	1,429.711
	3	1,513.859	3.333	1,517.192
	4	1,161.659	3.921	1,165.580
	5	1,018.417	4.924	1,023.341
	6	433.047	4.652	437.700
	7	609.948	4.804	614.752
	8	1,289.901	4.474	1,294.376
	9	1,620.002	3.994	1,623.996
	10	2,226.293	3.689	2,229.982
	11	2,238.219	3.339	2,241.558
	12	2,654.215	3.199	2,657.414
Total (05-Feb-2020 to 31-Dec-2020)		16,192.847	42.755	16,235.602
2021	1	2,385.413	3.273	2,388.686
	2	1,687.097	3.300	1,690.397
	3	1,821.531	3.967	1,825.498
	4	1,341.667	4.298	1,345.965
	5	835.087	4.905	839.992
Total (01-Jan-2021 to 31-May-2021)		8,070.794	19.743	8,090.538

E.2. Calculation of project emissions or actual net removals

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According to AMS I.D Ver.18, it states that, for most renewable power generation projects activities, $PE_y=0$. The exceptional cases including on-site fossil fuel combustion during the project activity, emission from the operation of geothermal power plants due to the release of non-condensable gases, emission from water reservoir of Hydro should be accounted for the project emission. Since the proposed CDM project activity does not involve these activities, **project emissions of this project corresponds to zero ($PE_y=0$).**

E.3. Calculation of leakage emissions

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According to AMS I.D Ver.18, in case of biomass-based projects (e.g. capacity addition to biomass power plants, see para. 29 of the methodology), leakage emissions should be considered in the calculation of emission reductions. However, as this project involves greenfield construction of photovoltaic power generation plants, **the leakage emissions from this project corresponds to zero ($LE_y=0$).**

E.4. Calculation of emission reductions or net anthropogenic removals

	Baseline GHG emissions or baseline net GHG removals (t CO ₂ e)	Project GHG emissions or actual net GHG removals (t CO ₂ e)	Leakage GHG emissions (t CO ₂ e)	GHG emission reductions or net anthropogenic GHG removals (t CO ₂ e)			
				Before 01/01/2013	From 01/01/2013 until 31/12/2020	From 01/01/2021	Total amount
Total	15,790	0	0	0	10,538	5,252	15,790

E.5. Comparison of emission reductions or net anthropogenic removals achieved with estimates in the registered PDD

Amount achieved during this monitoring period (t CO ₂ e)	Amount estimated ex ante for this monitoring period in the PDD (t CO ₂ e)
15,790	17,989

E.5.1. Explanation of calculation of “amount estimated ex ante for this monitoring period in the PDD”

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As per CDM registered PDD, 13,622 tCO₂e is the amount of CERs generated annually. Therefore, following unitary method, the amount of estimated ex ante for this monitoring period is identified. The total number of days in this monitoring period is 482 days.

$$= (13,622 \text{ tCO}_2\text{e} \div 365 \text{ days}) \times 482 \text{ days}$$

$$= 17,989 \text{ tCO}_2\text{e} \text{ (“amount estimated ex ante for this monitoring period in the PDD”)}$$

E.6. Remarks on increase in achieved emission reductions

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Actual Emission reduction is lower than the estimated value, due to various reasons including weather, variation of sunlight and the major technical events occurred during the current monitoring

period. In terms of maintenance and repair activities of equipment and facilities being used for this project activity, they are related to power generation also directly and/or indirectly affect the technical operation and performance of the power plant in general. In this context, the major repair and maintenance works during this monitoring period, as described in B.1 of this monitoring report, have negative impact on the amount of power generation under this project activity.

E.7. Remarks on scale of small-scale project activity

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The project activity remained within the limit of small scale project activity in each year of the crediting period as the emission reductions are less than the limit of small scale CDM Project activity.

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
09.0	8 October 2021	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 03.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN).
08.0	6 April 2021	Revision to: <ul style="list-style-type: none"> • Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).
07.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN); • Add a section on remarks on the observance of the scale limit of small-scale project activity during the crediting period; • Add "changes specific to afforestation or reforestation project activity" as a possible post-registration changes; • Clarify the reporting of net anthropogenic GHG removals for A/R project activities between two commitment periods; • Make editorial improvements.
06.0	7 June 2017	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 01.0 of the “CDM project standard for project activities” (CDM-EB93-A04-STAN); • Make editorial improvements.
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: <ul style="list-style-type: none"> • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: <ul style="list-style-type: none"> • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB 70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01.0	28 May 2010	EB 54, Annex 34. Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: monitoring report		