



Monitoring report form for CDM project activity
(Version 06.0)

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

MONITORING REPORT

Title of the project activity	Agua Fresca Multipurpose and environmental services project	
UNFCCC reference number of the project activity	0122	
Version number of the PDD applicable to this monitoring report	3.1	
Version number of this monitoring report	2	
Completion date of this monitoring report	24/09/2018	
Monitoring period number	1 th monitoring period of the second crediting period 01/01/2013 – 31/12/2017	
Duration of this monitoring period	5 years	
Monitoring report number for this monitoring report	Not applicable	
Project participants	Energía del Río Piedras S.A. E.S.P.	
Host Party	Colombia	
Sectoral scopes	01: Energy industries - Renewable sources	
Applied methodologies and standardized baselines	AMS-I.D. Grid connected renewable electricity generation, version 17.	
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
	0 tCO ₂ e	44, 437 tCO ₂ e
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	54,040 tCO ₂ e	

SECTION A. Description of project activity

A.1. General description of project activity

Agua Fresca Project in its first stage, it is a hydroelectric run-of river power generation project, with a design flow of 2.7 m³/s, an installed capacity of 7.49 MW and an annual production of 63.3 GWh.

The connection of the Project to the National Electrical Grid is done in the Municipality of Fredonia, in the Fredonia Substation of Empresas Públicas de Medellín. For this, a 44 kV transmission line with a length of 15 km was built. It is estimated that the project will displace yearly 10,808 t CO₂e, by displacing the power generation of the thermal plants in the Colombian Electric Sector.

The project reuses the water from the discharge of Rio Piedras Hydroelectric Plant. In case this plant is not operating, or operating with a flow less than 2.7 m³/s, Agua Fresca Power Plant counts with a secondary intake structure that takes water directly from the river. This way, Agua Fresca project is independent and has an increased reliance in its operation.

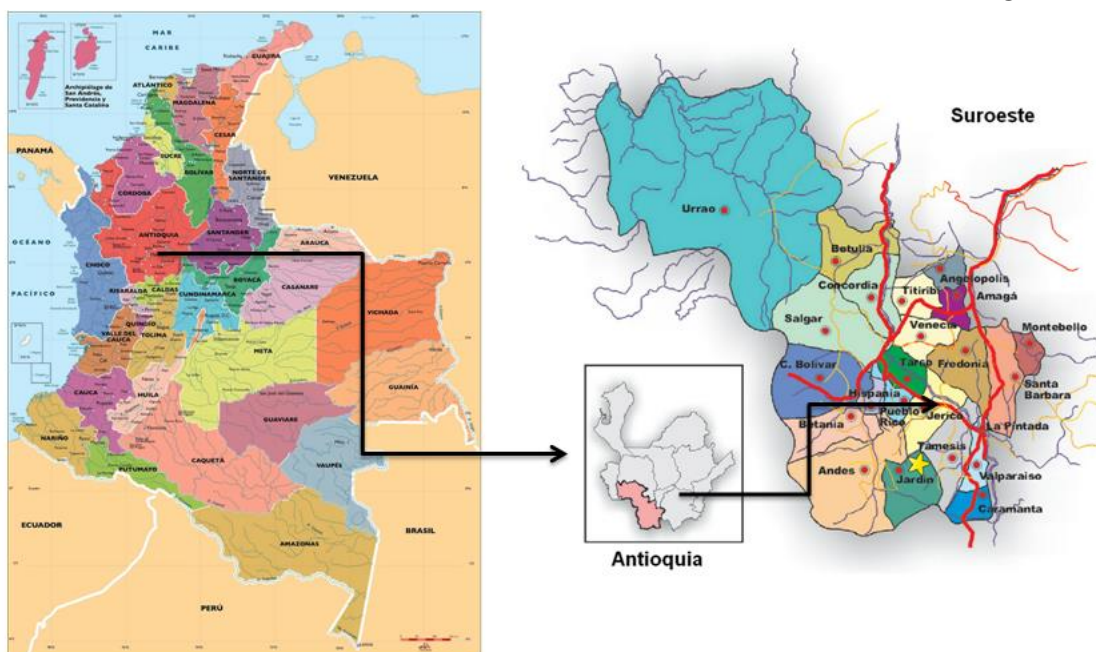
The Commissioning, Operation and Maintenance of the Plant are done by Empresas Públicas de Medellín. This company has a broad experience in hydropower project in Colombia, and it is one of the top utility companies of the country.

The second stage of the project comprehends the construction of a regional aqueduct to provide water for human consumption as for irrigation to the lands and settlements located in the Cauca River canyon between La Pintada and Bolombolo, harnessing the hydrological resource contributed by the Piedras River. This is still in financial evaluation.

A.2. Location of project activity

Agua Fresca Multipurpose and Environmental Services Project is located in the Republic of Colombia at the municipality of Jericó (Department of Antioquia) within the area of influence of the Piedras River basin.

Jericó is at the south west of the department of Antioquia, in the Colombian Andes, with an altitude ranging from 600 m to 3,000 m. The project is located in the lower part of Piedras River's Basin, near the Cauca River and the sector of Puente Iglesias. Whit geographic coordinates 5°49'53.66" North and 75°43'34,38" West (Power house location).



A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Colombia	Energía del Río Piedras S.A. E.S.P.	No

A.4. Reference to applied methodologies and standardized baselines

The methodology applied to the project activity is the AMS-I.D.: Grid connected renewable electricity generation version 17.

Category I.D. comprises renewable energy generation units, such as photovoltaic's, hydro, tidal/wave, wind, geothermal, and biomass, that supply electricity to an electricity distribution system that is or would have been supplied by at least one fossil fuel or non-renewable biomass fired generating unit.

Agua Fresca Project is a hydroelectric renewable energy generation project with an installed capacity lower than 15 MW (7.49 MW), thus the methodology is applicable.

The grid emission factor is calculated according to the "Tool to calculate the emission factor for an electricity system". Version 03.0.0., TOOL07.

The methodological tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period Validity, Version 03.0.1, (EB 66 Annex 47), is also applied

A.5. Crediting period type and duration

The second crediting period of the project activity goes from 01/01/2013 to 31/12/2019 (renewable)

SECTION B. Implementation of project activity

B.1. Description of implemented project activity

The project entered in commercial operation on April 2008, and since then it has been generating hydropower and delivering electricity to the Colombian National Grid. It is currently operated and maintained by Empresas Públicas de Medellín.

On November 19th 2009, the UNFCCC issued 20,015 CER's corresponding to the emission reduced by Agua Fresca Project in its first monitoring period (01/01/2007 – 31/12/2008).

On June 8th 2011, the UNFCCC issued 25,584 CER's corresponding to the emission reduced by Agua Fresca Project in its second monitoring period (01/01/2009 – 31/12/2009).

On September 16th 2011, the UNFCCC issued 24,571 CER's corresponding to the emission reduced by Agua Fresca Project in its third monitoring period (01/01/2010 – 31/12/2010).

On September 7th 2012, the UNFCCC issued 29,454 CER's corresponding to the emission reduced by Agua Fresca Project in its fourth monitoring period (01/01/2011 – 31/12/2011).

On October 11th 2013, the UNFCCC issued 28,879 CER's corresponding to the emission reduced by Agua Fresca Project in its fifth monitoring period (01/01/2012 – 31/12/2012).

Essential technical aspects:

- Run-of-the river facility. The project does not imply the construction of dam or reservoir.
- Installed Capacity: 7.49 MW
- Power Factor (cosine ϕ): 0.925
- Design Flow: 2.7 m³/s
- Total Head: 327 m
- Power generation: 63.3 GWh / year
- Basin: Río Piedras. The project reuses the waters of Río Piedras Hydroelectric Plant.
- Secondary intake structure
- Water inlet to back.
- Powerhouse at surface.
- For electricity generation, technologies are employed: One Pelton turbine with vertical axis of 7.49 MW, 720 rpm, and five jets, with 327 m of total head. One synchronic generator of 8.08 MVA and 4.16 kV of nominal tension.
- Connection to the grid: transmission line (44 kV) 15 km length.
- Emission reduction: 10,808 t CO_{2e} per year (for second crediting period).
- Commissioning, Operation and Maintenance of the Plant by Empresas Públicas de Medellín.

Project operation during this monitoring period

Year	Operational readiness	Capacity Factor
2013	97,99%	93,72%
2014	97,88%	87,64%
2015	97,05%	70,54%
2016	98,94%	74,12%
2017	98,96%	99,31%
Average	98,16%	85,07%

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

There were no temporary deviations from registered monitoring plan or applied methodology during the current monitoring period.

B.2.2. Corrections

There were no corrections from registered monitoring plan or applied methodology during the current monitoring period.

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

There were no changes to the start date of the crediting period from registered monitoring plan or applied methodology during the current monitoring period.

B.2.4. Inclusion of monitoring plan

There were no inclusions from registered monitoring plan or applied methodology during the current 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 applied standards or tools

There were no permanent changes from registered monitoring plan or applied methodology during the current monitoring period.

B.2.6. Changes to project design

There are no changes to project design of registered project activity

SECTION C. Description of monitoring system

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The Monitoring Plan is based on i) recording electricity generation of Agua Fresca hydro power plant and ii) obtaining the data required to calculate the grid emission factor: electricity generation and fuel consumption of all power plants serving the interconnected national system.

Considering the project boundary and that the emission factor is determined ex-ante, the electricity generation is the only parameter to be monitored in order to calculate emissions reduction.

Electricity Generation

Accordingly, with the AMS I.D. – Renewable electricity generation for a grid - shall consist of metering the electricity generated by the renewable technology.

All the power generation plants in Colombia have records of their hourly generation and these records are public because of the market condition. All this information is gathered by XM Expertos en Mercados, a Colombian company that provides the integral services of operation, administration and development for the Colombian wholesale power market. More information on this company is available in the webpage <http://www.xm.com.co>. The hourly generation per year of Agua Fresca

project is available at all times at <http://informacioninteligente10.xm.com.co>¹ (go to link supply - oferta, and then to historical supply - oferta historica).

The hourly generation for the period January 1st, 2013 to December 31st, 2017 is attached in the spreadsheets "Generation Agua Fresca Project from 2013-2017" (Annex I). This information was checked comparing the data delivered by - Empresas Públicas de Medellín (until 10th July 2017) and measurement managers Gestión de Energía Consultores (CGM), from 11th July 2017 - with the information available in the XM webpage (Annex II).

There are power gauges that measure the power delivered to the national grid. These gauges are maintained and calibrated by Empresas Públicas de Medellín periodically. The calibration certificates are contained in the Annex III.

The energy meters of the plant, located in Fredonia substation are latest generation equipment. They are calibrated for Empresas Públicas de Medellín – EPM -, who is in charge to operate and maintain the substation. As explained above EPM was the one who reads and transmits data from the energy meters to the National Dispatch Center through XM Expertos en Mercado, until 10th July 2017. After that date, CGM was designated as the measure manager to continue performing this task.

The registration information of the energy generated by the central is performed through two (2) energy gauges, one is the main gauge and the other is the back gauges, which are located at the Fredonia Substation. The energy gauges are bidirectional.

Colombia had no regulations governing the frequency of calibrating measuring equipment at the moment of second crediting period validation – year 2013. However, with reference to the provisions of the UNFCCC, according to the "Guidelines for Assessing Compliance With The calibration frequency requirements", Annex 60, Version 01, EB52. Number 8, if you do not specify the frequency of calibration of the equipment is taken as reference established by the technical specifications of the equipment or international standards.

In accordance with the above international standards and where the periodicity consulted varies between 4 and 20 years, decision was taken to perform the calibration of the measuring equipment every five (5) years.

In 2014 after the project second crediting period renewal, in Colombia was issued a new regulatory electrical measurement code (CREG Resolution 038/2014), which enters into force by 2016. According to this resolution, the equipment calibration frequency might be performed every 4 years for the measurement point type that holds Agua Fresca (type 2-3). Therefore, according to this resolution, next calibration of the meters might be performed in 2020.

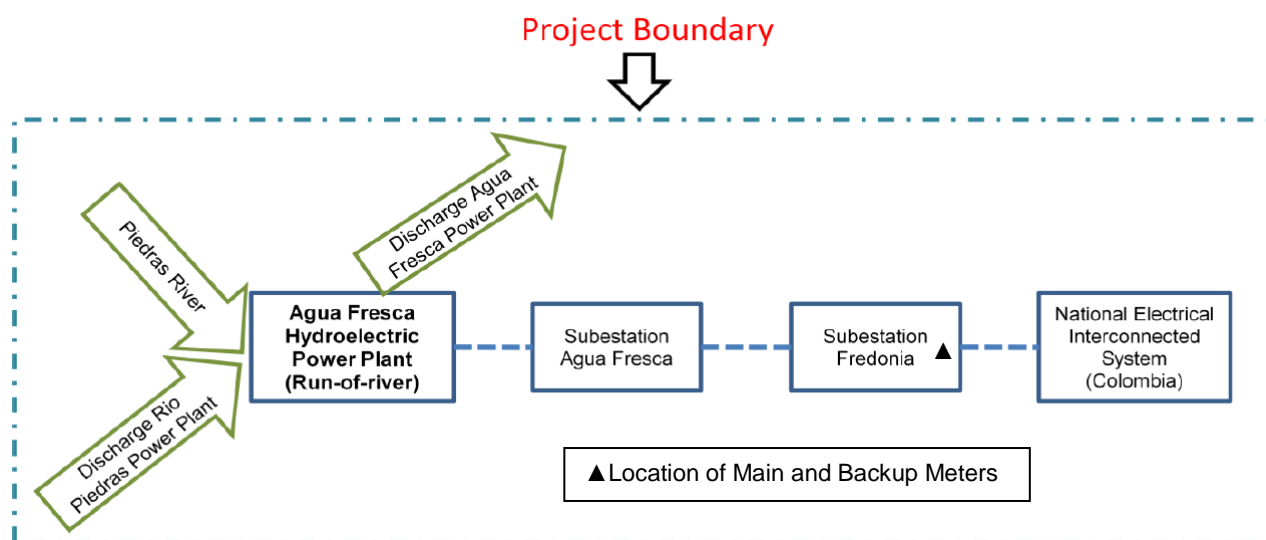
It is important to remark that XM according to resolution 038 of 2014, must perform a commercial boundary verification every 5 year to the meters located at Fredonia Substation. In this way, during this year 2018 Agua Fresca Meters received the verification process according to the law. During this process no anomalies were found in the measurement equipment (no findings), complying with everything established in resolution 038 of 2014.

¹ See web page:
<http://informacioninteligente10.xm.com.co/oferta/Paginas/HistoricoOferta.aspx?RootFolder=%2Foferta%2FHistorico%20Oferta%2FGeneraci%C3%B3n&FolderCTID=0x01200075F2CCF9F779EE4B93D2D54764CDB78A&View={9F21C71E-AD8F-4E3F-B2EA-0B38F49A9BA8}>

Electronic Electricity Meters

Meter ID	Description	Energy Meter Type	Location
SMC TR 01: MAIN METER Serial: 36068848	Commercial Measurement System (SMC) Agua Fresca TR 01: Main Meter Nominal Voltage: 3x57.7/100-3x240/415V	Brand: ACTARIS Model: SL761A061 Type: 3F-4H Class: 0.2S	Substation Fredonia (EPM)
SMC TR 01: BACKUP METER Serial: 36061873	Commercial Measurement System (SMC) Agua Fresca TR 01: Backup meter Nominal Voltage: 3x57.7/100-3x240/415V	Brand: ACTARIS Model: SL761A061 Type: 3F-4H Class: 0.2S	Substation Fredonia (EPM)

The following scheme shows the project boundary including the power plant, substations and metering points.



Calibration of monitoring equipment

Meter ID	Serial and Type	Class	Calibration frequency	Calibration dates
MAIN METER	Serial: 36068848 Type: 3F-4H	0.2S	5y	1) 08/09/2007 2) 27/04/2010 3) 16/03/2011 4) 06/01/2012 5) 19/09/2012 6) 15/03/2018 Next calibration date: 15/03/2023 For this monitoring period from 01/01/2013 to 31/12/2017 a calibration was required for 19/09/2017 but did not happened until 15/03/2018, therefore the hourly data of 12 days of September 2017, plus the months of October, November and December of 2017 received the maximum permissible error of the meter 0,2 S.
BACKUP METER	Serial: 36061873 Type: 3F-4H	0.2S	5y	1) 08/09/2007 2) 27/04/2010 3) 16/03/2011 4) 06/01/2012

Meter ID	Serial and Type	Class	Calibration frequency	Calibration dates
				5) 19/09/2012 6) 15/03/2018 Next calibration date: 15/03/2023 For this monitoring period from 01/01/2013 to 31/12/2017 a calibration was required for 19/09/2017 but did not happened until 15/03/2018, therefore the hourly data of 12 days of September 2017, plus the months of October, November and December of 2017 received the maximum permissible error of the meter 0,2 S.

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante

(Copy this table for each data or parameter.)

Data/Parameter	Emission Factor
Unit	tCO ₂ e/MWh
Description	Colombian Grid Emission Factor For Small Scale Project
Source of data	"Report of Emission Factor calculation the National Grid according to the method and option selected by Energía del Río Piedras S.A. E.S.P.".
Value(s) applied	0.1707
Choice of data or measurement methods and procedures	<p>The calculation of the CO₂ emission factor was developed by Environmental Business & Technologies - EB&T – a consulting company contracted by the project owner for the development of this factor. This calculation was performed under the Methodology ACM0002, version 13.0.0, EB67, using the methodological tool to calculate the emission factor: "Tool to emission factor for an electricity system", version 03.0.0. For the calculation of the emission factor of the Colombian national power grid, has considered the following criteria:</p> <ul style="list-style-type: none"> • Solely use information from official sources available to the public at large. • Apply the "Simple Adjusted Operating Margin" to calculate the OM emission factor. • Apply the "Ex-ante" approach on the data employed to calculate the emission factor. <p>According Procedure for Renewal of the Crediting Period of a Registered CDM Project Activity, Annex 29, Version 06.0, EB 63, 29th September, 2011. Chapter II, Item 2 (a) and 3. Taking into account the above, remains the same baseline of the project and is updated only the calculation of the reduction of CO₂ emissions with current emission factor and methodology of monitoring.</p> <p>Also for calculating the emission factor applies the Tool to calculate the emission factor for an electricity system, Version 02.2.1, EB63 - Annex 19, 29th September, 2011. according Chapter II. BASELINE METHODOLOGY PROCEDURE, Steep 6: Calculate the combined margin emissions factor, (a) Weighted average CM...."The following default values should be used for W_{OM} and W_{BM}:</p> <p style="text-align: center;">Recalculation de Emission Factor</p> <p>Emission Factor (tCO₂e/MWh) for second period crediting= 0.1707 Operating Margin (tCO₂e/MWh) (W_{OM}= 0.25) = 0.1414 Build Margin (tCO₂e/MWh) (W_{BM}= 0.75) = 0.0293</p>

Purpose of data/parameter	Calculating emission reductions generated by the Power Plant
Additional comments	

D.2. Data and parameters monitored

(Copy this table for each data or parameter.)

Data/Parameter	Electricity generated and delivered to the grid by the project activity
Unit	kWh
Description	Power dispatched each year by Agua Fresca Hydropower Plant Project to the National Grid
Measured/calculated/Default	Measured
Source of data	EPM (Empresas Públicas de Medellín) - XM Expertos en Mercados (Colombia's Power Whole sale Market Administrator)
Value(s) of monitored parameter	See files Annex I - Generation Agua Fresca Project from 2013-2017 Annex II - XM Generation Data from 2013-2017
Monitoring equipment	<u>Principal meter</u> Brand: ACTARIS Model: SL761A061 Type: 3F-4H Class: 0.2S Serial: 36068848 <u>Backup meter</u> Brand: ACTARIS Model: SL761A061 Type: 3F-4H Class: 0.2S Serial: 36061873
Measuring/reading/recording frequency	Hourly measurements
Calculation method (if applicable)	Electricity gauges installed complying with country regulations, records double-checked with receipt of sales.

QA/QC procedures	<p>The energy meters of the plant, located in Fredonia substation are latest generation equipment. They are calibrated for Empresas Públicas de Medellín – EPM -, who is in charge to operate and maintain the substation. As explained above EPM was until 10th July 2017 the project measurement manager, who reads and transmits data from the energy meters to the National Dispatch Center through XM - Expertos en Mercado. After that date, Gestión de Energía Consultores – CGM, was designated as the measurement manager to continue performing this task.</p> <p>The registration information of the energy generated by the central is performed through two (2) energy gauges, one is the main gauge and the other is the back gauges, which are located at the Fredonia Substation. The energy gauges are bidirectional.</p> <p>Colombia had no regulations governing the frequency of calibrating measuring equipment at the moment of second crediting period validation – year 2013. However, with reference to the provisions of the UNFCCC, according to the "Guidelines for Assessing Compliance With The calibration frequency requirements", Annex 60, Version 01, EB52. Number 8, if you do not specify the frequency of calibration of the equipment is taken as reference established by the technical specifications of the equipment or international standards.</p> <p>In accordance with the above international standards and where the periodicity consulted varies between 4 and 20 years, decision was taken to perform the calibration of the measuring equipment every five (5) years.</p> <p>In 2014 after the project second crediting period renewal, in Colombia was issued a new regulatory electrical measurement code (CREG Resolution 038/2014), which enters into force by 2016. According to this resolution, the equipment calibration frequency might be performed every 4 years for the measurement point type that holds Agua Fresca (type 2-3). Therefore, according to this resolution, next calibration of the meters might be performed in 2020.</p> <p>It is important to remark that XM according to resolution 038 of 2014, must perform a commercial boundary verification every 5 year to the meters located at Fredonia Substation. In this way, during this year 2018 Agua Fresca Meters received the verification process according to the law. During this process no anomalies were found in the measurement equipment (no findings), complying with everything established in resolution 038 of 2014.</p>
Purpose of data/parameter	Emission Reduction calculation
Additional comments	

D.3. Implementation of sampling plan

There is no sampling involved in the monitoring of the proposed project activity

SECTION E. Calculation of emission reductions or net anthropogenic removals

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

According to the applied methodology, baseline emissions are calculated as follow:

The baseline emissions are:

$$BE_y = EG_{BLy} * EF_{CO2.grid.y}$$

BE_y = Baseline Emissions in year y (tCO₂).

$EG_{BL,y}$ = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh).

$EF_{CO_2 \text{ grid } y}$ = CO_2 emission factor of the grid in year (t CO_2 /MWh).

In the project activity, EG_y is the project net electricity generation and EF_y is the grid emission factor calculated as the weighted average of the Operating Margin emission factor ($EF_{OM,y}$) and the Build Margin emission factor ($EF_{BM,y}$).

Electricity Generation (EGy)

Year	Month	Net Electricity Generation (kWh)	Net Electricity Generation (MWh)	Penalized generation (MWh)
2013	January	3,480,224.69	3,480.22	0.00
	February	3,529,276.64	3,529.28	0.00
	March	4,377,228.62	4,377.23	0.00
	April	4,974,622.87	4,974.62	0.00
	May	5,404,537.63	5,404.54	0.00
	June	5,049,559.42	5,049.56	0.00
	July	4,819,606.47	4,819.61	0.00
	August	5,037,584.98	5,037.58	0.00
	September	4,861,680.67	4,861.68	0.00
	October	5,210,339.39	5,210.34	0.00
	November	5,132,517.40	5,132.52	0.00
	December	5,343,305.15	5,343.31	0.00
2014	January	4,746,794.90	4,746.79	0.00
	February	4,066,161.43	4,066.16	0.00
	March	5,296,551.26	5,296.55	0.00
	April	4,405,119.91	4,405.12	0.00
	May	5,333,519.80	5,333.52	0.00
	June	4,970,619.47	4,970.62	0.00
	July	3,159,747.46	3,159.75	0.00
	August	3,076,157.38	3,076.16	0.00
	September	3,342,857.43	3,342.86	0.00
	October	5,039,282.09	5,039.28	0.00
	November	5,084,603.92	5,084.60	0.00
	December	5,071,572.96	5,071.57	0.00
2015	January	4,146,092.38	4,146.09	0.00
	February	2,163,199.11	2,163.20	0.00
	March	2,359,498.04	2,359.50	0.00
	April	4,040,276.05	4,040.28	0.00
	May	3,753,530.31	3,753.53	0.00
	June	4,191,520.64	4,191.52	0.00
	July	3,635,049.52	3,635.05	0.00
	August	2,957,966.19	2,957.97	0.00
	September	2,614,179.85	2,614.18	0.00
	October	4,237,751.79	4,237.75	0.00
	November	5,057,170.66	5,057.17	0.00
	December	4,056,677.78	4,056.68	0.00
2016	January	2,443,846.51	2,443.85	0.00
	February	1,700,740.78	1,700.74	0.00
	March	2,320,264.76	2,320.26	0.00
	April	2,910,421.01	2,910.42	0.00
	May	4,938,009.92	4,938.01	0.00

Year	Month	Net Electricity Generation (kWh)	Net Electricity Generation (MWh)	Penalized generation (MWh)
	June	3,740,260.57	3,740.26	0.00
	July	3,897,067.46	3,897.07	0.00
	August	3,168,541.14	3,168.54	0.00
	September	4,982,135.62	4,982.14	0.00
	October	4,959,323.18	4,959.32	0.00
	November	5,100,721.55	5,100.72	0.00
	December	5,358,874.74	5,358.87	0.00
2017	January	5,267,891.25	5,267.89	0.00
	February	3,722,920.78	3,722.92	0.00
	March	4,685,506.60	4,685.51	0.00
	April	5,169,839.86	5,169.84	0.00
	May	5,338,824.89	5,338.82	0.00
	June	5,221,574.22	5,221.57	0.00
	July	5,396,043.36	5,396.04	0.00
	August	5,142,813.42	5,142.81	0.00
	September	5,143,833.46	5,143.83	4.00
	October	5,380,474.23	5,380.47	10.78
	November	4,979,399.75	4,979.40	9.98
	December	5,327,365.39	5,327.37	10.68
TOTAL		260,323,078.70	260,323.08	35.44

Emission Factor (EFy)

For calculating the emission factor applies the “Tool to calculate the emission factor for an electricity system”. Version 03.0.0, TOOL07. according Chapter II, BASELINE METHODOLOGY PROCEDURE. Step 6: Calculate the combined margin emissions factor (EF_{CM}), (a) Weighted average CM.

As per the registered PDD for the second crediting period, the grid emission factor is determined once at the validation stage, thus no monitoring or recalculation of the emissions factor during the crediting period is required.

Emission factor calculation:

- Operating Margin (OM): 0.1414 tCO₂/MWh
- Build Margin (BM): 0.0293 tCO₂/MWh

Combined Margin (CM) EFy. is the grid emission factor (combined margin emission factor calculated as the weighted average of the Operating Margin emission factor ($EF_{OM,y}$) and the Build Margin emission factor ($EF_{BM,y}$). as follows:

$$EFy = w_{OM} \times EF_{OM,y} + w_{BM} \times EF_{BM,y}$$

The relative weights according to the default value provided by the methodology are 0.25 for w_{OM} and 0.75 for w_{BM} .

$$EFy = 0.25 \times 0.1414 \text{ tCO}_2/\text{MWh} + 0.75 \times 0.0293 \text{ tCO}_2/\text{MWh} = 0.1707 \text{ tCO}_{2e}/\text{MWh}$$

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

The project does not have any emissions associated to its operation.

E.3. Calculation of leakage emissions

No leakage emissions are considered in the present project activity

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 to 31/12/2017	Total amount
Total	44,437	0	0	128,503	44,437	172,940

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

Year	Amount achieved during this monitoring period from 2013 to 2017 (t CO ₂ e)	Amount estimated ex ante from 2013 to 2017 (t CO ₂ e)
2013	9,768	10,808
2014	9,148	10,808
2015	7,376	10,808
2016	7,770	10,808
2017	10,375	10,808
Total	44,437	54,040

E.6. Remarks on increase in achieved emission reductions

Agua Fresca Hydro Power Plant reduced 44,437 tCO₂e from the Colombian electric Grid between the years 2013-2017. Considered that the estimated ex ante emission reduction according to the updated PDD are 54,040 tCO₂e for the last 5 years to be verified, there is not increase in achieved emission reductions for this period (see table on section E.5). However, there was a decrease of 17.8% due to the occurrence of El Niño – Southern Oscillation (ENSO), throughout years 2015-2016.

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
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.
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		