CLEAN DEVELOPMENT MECHANISM
PROGRAM ACTIVITY DESIGN DOCUMENT FORM (CDM-CPA-DD)
Version 01

CONTENTS

NOTE:

(i) This form is for the submission of CPAs that apply a large scale methodology using provisions of the proposed PoA.

(ii) The coordinating/managing entity shall prepare a CDM Programme Activity Design Document (CDM-CPA-DD)[1,2] that is specified to the proposed PoA by using the provisions stated in the PoA DD. At the time of requesting registration the PoA DD must be accompanied by a CDM-CPA-DD form that has been specified for the proposed PoA, as well as by one completed CDM-CPA-DD (using a real case). After the first CPA, every CPA that is added over time to the PoA must submit a completed CDM-CPA-DD.

[1] The latest version of the template form CDM-CPA-DD is available on the UNFCCC CDM web site in the reference/document section.

[2] At the time of requesting validation/registration, the coordinating managing entity is required to submit a completed CDM-POA-DD, the PoA specific CDM-CPA-DD, as well as one of such CDM-CPA-DD completed (using a real case).

SECTION A. General description of CDM programme activity (CPA)

A.1. Title of the CPA:

Title: "*[PLANT NAME] small hydropower plant – CDM Programme Activity*".

Version number: [VERSION NUMBER].

Date: [DATE OF THE CPA VERSION].

A.2. Description of the CPA:

"*[PLANT NAME] small hydropower plant – CDM Programme Activity*" is being developed as part of "*Omega Energia CDM Programme of Activities for the Promotion of Small Hydropower Plants in Brazil*". The primary objective of this Programme of Activities (PoA) is to help meet Brazil's rising demand for energy due to economic growth and to improve the supply of electricity, while contributing to environmental, social and economic sustainability by increasing the share of renewable energy in total electricity consumption for Brazil (and for the region of Latin America and the Caribbean).

The proposed CDM Programme Activity (CPA) consists of the construction of *[PLANT NAME]* small hydropower plant ("PCH" from Portuguese *Pequena Central Hidrelétrica*) as defined by the Brazilian Power Regulatory Agency ("ANEEL" from the Portuguese *Agência Nacional de Energia Elétrica*). The *[PLANT NAME]* small hydropower plant will be connected to the Brazilian Interconnected System ("SIN" from the Portuguese *Sistema Interligado Nacional*).

[PLANT NAME] project has an estimated installed capacity of [INSTALLED CAPACITY] W and [RESERVOIR AREA] m^2 reservoir area. The project is located in [NAME OF THE RIVER] river, [NAME OF THE MUNICIPALITY(IES)] municipality(ies), state of [STATE], [REGION] region of Brazil. The project is expected to become fully operational [EXPECTED OPERATION STARTING DATE].

This cleaner source of electricity provides an important contribution to environmental sustainability by reducing carbon dioxide emissions that otherwise would have occurred in the absence of the project. The project activity reduces emissions of greenhouse gas (GHG) by avoiding electricity generation by fossil fuel sources (and CO_2 emissions), which would be generated (and emitted) in the absence of the project.

A.3. Entity/individual responsible for CPA:

[CPA ENTITY NAME] is the responsible project developer of the CPA.

[BRIEF DESCRIPTION OF THE CPA ENTITY].

[INFORM IF THE CPA IMPLEMENTER IS A PROJECT PARTICIPANT OF THE POA].

A.4. Technical description of the CPA:

A.4.1. Identification of the CPA:

A.4.1.1. Host Party:

Brazil.

A.4.1.2. Geographic reference of other means of identification allowing the unique identification of the CPA (maximum one page):

[PLANT NAME] small hydropower plant is located in [NAME OF THE MUNICIPALITY(IES)] municipality(ies), state of [STATE], [REGION] region of Brazil (Figure 1 and Figure 2) and explores the hydrological potential of the [NAME OF THE RIVER] River.

The Project's geographical coordinates are [LATITUDE] South and [LONGITUDE] West.

[COUNTRY MAP WITH CPA LOCATION]

Figure 1 - Political division of Brazil showing the project location

Source: [name and date of source]

[REGION/STATE MAP WITH CPA LOCATION]

Figure 2 - Political division of [STATE] showing the project location

Source: [name and date of source]

The baseline scenario of this CPA is according to ACM0002 (version 12.3.0), *i.e. "electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations as described in the "Tool to calculate the emission factor for an electricity system".*

In the CPA scenario, the technology to be employed in the project activity is based on hydraulic turbines. There are many types of hydraulic turbines. The main types are Francis, Kaplan, Pelton and Bulbo. Each type of turbine is chosen and adapted based on waterfall and water flow of hydropower plants. In the case of *[PLANT NAME]* project, [TURBINE NAME] turbines are expected to be used in the project.

[PLANT NAME] is estimated to have the following technical description:

Table 1 – Technical description of *[PLANT NAME]* project

Turbines	
Type	
Quantity	
Nominal power (kW)	
Average efficiency	
Manufacturer	
Generators	
Quantity	
Nominal power (kVA)	
Nominal power factor	
Tension (kV)	
Average efficiency	
Manufacturer	

Name/contact details of the entity/individual responsible for the CPA:

Name: [NAME]

Company: [COMPANY]

Address: [ADDRESS]

Zip code + city: [ZIP CODE AND CITY]

Country: [COUNTRY]

Telephone number: [TELEPHONE NUMBER]

E-mail: [E-MAIL]

A.4.2. Duration of the CPA:

A.4.2.1. Starting date of the CPA:

[(ESTIMATED) DATE OF THE FIRST "REAL ACTION" OF THE PROJECT].

The starting date of the CPA is the date of first "real action" for the project implementation, *i.e.* the date when the [FIRST "REAL ACTION" OF THE PROJECT IMPLEMENTATION].

A.4.2.2. Expected operational lifetime of the CPA:

[EXPECTED OPERATIONAL LIFETIME OF THE PROJECT].

A.4.3. Choice of the crediting period and related information:

Renewable crediting period.

A.4.3.1. Starting date of the crediting period:

[ESTIMATED DATE OF THE STARTING DATE OF THE CREDITING PERIOD].

A.4.3.2. Length of the crediting period, first crediting period if the choice is renewable CP:

7 years (renewable).

NOTE: The end date of the PoA to which this CPA will be added is 24/10/2039.

A.4.4. Estimated amount of emission reductions over the chosen crediting period:

Table 2 - Estimated emission reductions of the CPA

Years	Annual estimation of emission reductions in tonnes of CO_2e
Year 1	[ANNUAL CERs GENERATION]
Year 2	[ANNUAL CERs GENERATION]
Year 3	[ANNUAL CERs GENERATION]
Year 4	[ANNUAL CERs GENERATION]
Year 5	[ANNUAL CERs GENERATION]
Year 6	[ANNUAL CERs GENERATION]
Year 7	[ANNUAL CERs GENERATION]
Total estimated reductions (tonnes of CO_2e)	**[TOTAL CERs GENERATION]**
Total number of crediting years	7
Annual average over the first crediting period of estimated reductions (tonnes of CO_2e)	[ANNUAL CERs GENERATION]

A.4.5. Public funding of the CPA:

No public funding is or will be involved in the CPA.

This CPA is not a diversion of Official Development Assistance (ODA) from an Annex 1 country.

A.4.6. Confirmation that CPA is neither registered as an individual CDM project activity nor is part of another Registered PoA:

The Coordinating/Managing Entity (CME) of the PoA confirms that the CPA is not registered as an individual CDM project activity nor is part of another registered PoA.

SECTION B. Eligibility of CPA and Estimation of emissions reductions

B.1. Title and reference of the Registered PoA to which CPA is added:

"*Omega Energia CDM Programme of Activities for the Promotion of Small Hydropower Plants in Brazil*".

B.2. Justification of the why the CPA is eligible to be included in the Registered PoA :

The eligibility criterion for the inclusion of a CPA under this PoA follows the Annex 3 of the 65th EB Meeting Report as presented below:

(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA.

[PLANT NAME] small hydropower plant project is located in Brazil and, therefore, the project boundary is within the geographical area established in the PoA.

(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (*e.g.* programme logo).

[PLANT NAME] project is uniquely identified and defined in an unambiguous manner as can be checked through the GPS coordinates presented in section A.4.1.2. above. Furthermore, the CME has developed and has implemented a management system to avoid double counting as required by the PoA standard procedures.

(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications.

[PLANT NAME] project is classified as small hydropower plant by ANEEL as can be checked in [INCLUDE SOURCE OF INFORMATION. PREFERABLY FROM ANEEL SOURCE]. Specifications of the technology that will be employed in [PLANT NAME] project are presented in section A.4 above.

(d) Conditions to check the start date of the CPA through documentary evidence.

In the context of a CDM project activity or PoA, the Glossary of CDM Term defines "start date" as the earliest date at which either the implementation or construction or real action of a CDM project activity or PoA begins.

As mentioned in section A.4.2.1, the [PLANT NAME] project starting date is [PROJECT STARTING DATE].

[INCLUDE SOURCE OF INFORMATION OF THE PROJECT STARTING DATE. IF THE STARTING DATE OF THE CPA REFERS TO A FUTURE DATE, IT HAS TO BE DOCUMENTED IN EACH CPA AND IT HAS TO BE INDICATED THAT IT IS AN ESTIMATED DATE].

(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs.

[PLANT NAME] project applies the ACM0002 - "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (version 12.3.0). Therefore, this CPA is in compliance with applicability conditions of ACM0002 (version 12.3.0), as follows:

- *The project activity is the installation of a grid-connected hydropower plant/unit (either with a run-of-river reservoir or an accumulation reservoir) at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant).*

  [PLANT NAME] project fulfill all the requirements of ACM0002 (version 12.3.0) consisting of a new grid-connected small hydropower plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant).

- *In case of hydropower plants, at least one of the following conditions must apply:*

  - *The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or*
  - *The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir, as per definitions given in the project emissions section, is greater than 4 W/m^2 after the implementation of the project activity; or*
  - *The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per definitions given in the Project Emissions section, is greater than 4 W/m^2 after the implementation of the project activity.*

    [PLANT NAME] project has been implemented in a [CHOOSE ONE OF THE OPTIONS PRESENTED ABOVE] with [RESERVOIR AREA] m^2 reservoir area, which results in [POWER DENSITY] W/m^2

power density (i.e.[INFORM IF THE POWER DENSITY IS GREATER OR NOT THAN 4W/m^2]).

- *In case of hydropower plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m^2 after the implementation of the project activity all of the following conditions must apply:*
  - *The power density calculated for the entire project activity using equation 5 is greater than 4 W/m^2;*
  - *All reservoirs and hydropower plants are located at the same river and where are designed together to function as an integrated project that collectively constitutes the generation capacity of the combined power plant;*
  - *The water flow between the multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity;*
  - *The total installed capacity of the power units, which are driven using water from the reservoirs with a power density lower than 4 W/m^2, is lower than 15MW;*
  - *The total installed capacity of the power units, which are driven using water from reservoirs with a power density lower than 4 W/m^2, is less than 10% of the total installed capacity of the project activity from multiple reservoirs.*

[INCLUDE INFORMATION IF THIS APPLICABILITY CONDITION APPLIES TO THE PROPOSED CPA]

Furthermore, the project activity cannot involve:

- *Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site.*

  [PLANT NAME] project does not involve switching from fossil fuels to renewable energy sources at the site of the project activity.

- *Biomass fired power plants.*

  [PLANT NAME] project is a small hydropower plant and, therefore, no biomass fired power plant is involved in the project activity.

- *Hydropower plant that result in new single reservoir or in the increase in existing single reservoir where the power density of the reservoir is less than 4 W/m^2.*

[PLANT NAME] project is a small hydropower plants with power density greater than 4 W/m^2.

- *Retrofits, replacements or capacity additions.*

  [PLANT NAME] project does not involve retrofits, replacements or capacity additions.

(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality.

As mentioned in the item (e) above, *[PLANT NAME] project fulfill all the requirements of ACM0002 (version 12.3.0) and referred tools, which include the "Tool for the demonstration and assessment of additionality" (version 6.0.0).*

(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis.

The local stakeholder consultation was held at the PoA level for the compliance of one of the requirements for the issuance of the Letter of Approval and, therefore, it has not been held at the CPA level. Please refer to section D of the PoA.

However, the PoA establishes that the environmental impact analysis should be taken at the CPA level and, therefore, it has been included in section C of this CPA.

(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of Official Development Assistance (ODA).

As mentioned in section A.4.5, since there is no public funding involved in the CPA, this CPA is not a diversion of an Official Development Assistance (ODA) from an Annex 1 country.

Besides of the criterion presented above, the following criteria have to be satisfied:

(i) The CPA shall include small hydropower plant(s) defined by ANEEL only.

[PLANT NAME] project is classified as small hydropower plant by ANEEL as can be checked in [INCLUDE SOURCE OF INFORMATION. PREFERABLY FROM ANEEL SOURCE].

(j) No energy generating equipment shall be transferred from another activity located in a non-annex I party and no existing equipment shall be transferred from the project to another activity.

[CPA ENTITY NAME] *confirms that there is no energy generating equipment transferred from another project activity in a non-annex I party.*

B.3. Assessment and demonstration of additionality of the CPA, as per eligibility criteria listed in the Registered PoA:

As per the paragraph 73 of the 47th EB meeting report, *"additionality is to be demonstrated either at the PoA level or CPA level"*. In the case of the *"Omega Energia CDM Programme of Activities for the Promotion of Small Hydropower Plants in Brazil"*, the additionality will be assessed at the CPA level considering the specific characteristics of each project to be included in the PoA. This assessment follows the steps of the methodological tool "Tool for the demonstration and assessment of additionality": identification of alternatives, investment and/or barrier analysis and common practice analysis as presented below.

Step 1. Identification of alternatives to the project activity consistent with current laws and regulation

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

Scenario 1: The alternative to the CPA is the continuation of the current (previous) situation of electricity supplied by the existing power plants from the interconnected system.

Scenario 2: The proposed CPA undertaken without being registered as a CDM project activity.

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

Both alternatives, the CPA and the alternative scenario, shall be in compliance with all regulations in accordance with the following entities: the National Electric System Operator ("ONS" from the Portuguese *Operador Nacional do Sistema Elétrico*), the Brazilian Power Regulatory Agency ("ANEEL" from the Portuguese *Agência Nacional de Energia Elétrica*), the Mines and Energy Ministry ("MME" in a free translation from the Portuguese *Ministério de Minas e Energia*), the Chamber for the Commercialization of Electric Power ("CCEE" from the Portuguese *Câmara de Comercialização de Energia Elétrica*), the [ENVIRONMENTAL AGENCY RESPONSIBLE FOR THE LICENSE ISSUANCE OF THE PROJECT] and the CDM Executive Board.

SATISFIED/PASS – Proceed to Step 2

Step 2. Investment analysis

The "Guidelines on the assessment of investment analysis" (version 5) shall be used together with the methodological tool "Tool for the demonstration and assessment of additionality".

Sub-step 2a. Determine appropriate analysis method

The additionality of *[PLANT NAME]* project is demonstrated through an investment benchmark analysis (option III). Options I and II are not applicable since:

Option I – Both the CPA and the alternatives identified in Step 1 generate financial and economic benefits other than CDM related income.

Option II – The implementation of other project types of renewable energy generation - *i.e.* cogeneration or wind farm projects - is not potential alternatives in the site where the project is planned.

Sub-step 2b : Option III – Apply benchmark analysis

The financial indicator identified for the *[PLANT NAME]* project is the Internal Rate of Return (IRR). The IRR is compared to the appropriate benchmark of the electric sector (in accordance with paragraph 12, Annex 5, EB62), which is the Weighted Average Cost of Capital (WACC) or the Cost of Equity (Ke). In the case of the proposed CPA, the [CHOOSE WACC OR KE] is used as described below.

[INCLUDE EXPLANATION BELOW RELATED TO WACC OR KE DEPENDING ON THE BENCHMARK CHOSEN].

Weighted Average Cost of Capital (WACC)

The weighted-average cost of capital (WACC) is a rate used to discount business cash flows and takes into consideration the cost of debt and the cost of equity of a typical investor in the sector of the project activity. The benchmark can be applied to the cash flow of the project as a discount rate when calculating the net present value (NPV) of the same, or simply by comparing its value to the internal rate of return (IRR) of the project. The WACC considers that shareholders expect compensation towards the projected risk of investing resources in a specific sector or industry in a particular country.

The WACC calculation is based on parameters that are standard in the market, considers the specific characteristics of the project type, and is not linked to the subjective profitability expectation or risk profile of this particular project developer. Once a small hydropower potential is discovered, any corporate entity is able to obtain the authorization from the government to build the small hydropower plant. In addition to that, even after the project proponent obtains such authorization, it can be

negotiated/sold afterwards. Therefore, the use a sectoral benchmark is applicable as per the guidance provided in paragraph 13, Annex 5, EB62.

The WACC shall be valid and applicable at the time of the investment decision calculated through the formula below:

WACC = Wd x Kd + We x Ke, where:

We and **Wd** are, respectively, the weights of equity and debt typically observed in the sector. The weights shall be derived from the "Guidelines on the assessment of investment analysis"[3], which considers a default value for CDM projects and, therefore, **We** is of [We] and **Wd** is of [Wd]. **Kd** and **Ke** are, respectively, the cost of debt and cost of equity as explained below.

→ Cost of Debt (Kd)

Kd is the cost of debt, which is observed in the market related to the project activity, and which already accounts for the tax benefits of contracting debts. **Kd** is also derived from long term loans applied to the sector in Brazil, and therefore is based on three variables, including the interest rates of BNDES financing endeavour credit line. **Kd** is calculated considering the sum of:

- Financial cost - (TJLP from the Portuguese *Taxa de Juros a Longo Prazo*) (**a**);
- BNDES remuneration (**b**);
- Credit risk rate (**c**).

The financial cost (**a**) is represented by the Long Term Interest Rate ("TJLP" from the Portuguese *Taxa de Juros a Longo Prazo*). TJLP is a variable market figure which assesses the rate of debt to be applied to the average party borrowing from BNDES. This figure is the underlying majority found in the debt portion of borrowers from the BNDES. The TJLP is based on factors pertaining to market rates and spread of corporate rates over government risk.

BNDES remuneration (**b**) and the credit risk rate (**c**) are two other factors that constitute the rate of debt companies in Brazil encounter via BNDES. The BNDES remuneration is the fee attached by BNDES for its administrative and operational costs, and for its remuneration. This rate varies according to BNDES policies and is non-negotiable and the least arguable rate in the equation. Regarding the credit risk rate, each year BNDES provides the lower and upper limits of the variation margin of that rate. It respects its perception of risks, and the banking policies. For the purposes of our calculation and due to the fact that the industry as a whole is being considered, we estimate that rate by averaging the upper limit of the margin with the rate established for loans to direct public administration of States and Cities, which is the lowest rate that could be provided to a private investor.

[3] Paragraph 18, EB 62, Annex 5. Available at: <http://cdm.unfccc.int/Reference/Guidclarif/reg/reg_guid03.pdf>.

Two other components for the **Kd** calculation are the marginal tax rate (**t**) and inflation forecast (**π**). In the **Kd** calculation, the marginal tax rate (**t**) is multiplied by the Cost of debt and then by the debt to total cost of capital ratio to ascertain the debt portion of the WACC formula. In the case of Brazil, and specifically to energy projects, this tax factor could either be 34% or 0%. In the case of the *[PLANT NAME]*, the tax regime used is [NAME OF THE TAX REGIME], and therefore, **t** = [choose 0% or 34%].

The nominal rate achieved for debt is used to calculate nominal WACC, which is used to discount nominal cash flow projections. In order to achieve the real cash flow rate, the inflation targeting figure (**π**) for Brazil is reduced from the nominal figure achieved. The **π** is obtained from the Brazilian Central Bank (www.bcb.gov.br) and has experienced very little variance in the past 5 years.

Considering explanations above, **Kd** is calculated through the following equation:

$$\mathbf{Kd = [1 + (a + b + c) \times (1 - t)] / [(1 + \pi) - 1]}$$

Table 3 – Cost of Debt (Kd) calculation

Cost of Debt (Kd)	
(a) Financial cost[4]	[a]
(b) BNDES spread[5]	[b]
(c) Credit risk rate[6]	[c]
(a+b+c) Pre-Cost of Debt	[a+b+c]
(t) Marginal tax rate[7]	[t]
(π) Inflation forecast[8]	[d]
After tax Cost of Debt	[Kd] p.y.

Each data used to calculate the benchmark [CHOOSE WILL BE OR WAS] presented to the DOE. The spreadsheet used for WACC calculation will be available with the Project Participants and [CHOOSE WILL BE OR WAS] provided to the DOE.

[4] 5-year average of the Long term Interest Rate (from the Portuguese *Taxa de Juros de Longo Prazo – TJLP*). Available at [source].

[5] BNDES' remuneration. BNDES policies. Available at [source].

[6] Credit risk rate. BNDES policies. Available at [source].

[7] Federal Service Revenue. Available at: <http://www.receita.fazenda.gov.br/>.

→ Cost of Equity (Ke)

Ke represents the rate of return for equity investments, estimated through the Capital Asset Pricing Model (CAPM). For the **Ke** calculation, the following parameters are used:

- Risk-free rate (**Rf**);
- Equity risk premium (**Rm**);
- Estimated country risk premium (**Rc**);
- Sectorial risk (**β**)

Rf stands for the risk free rate. **Rf** is the risk-free default rate available in the market which represents the standard investment rate available to all investors. This risk-free rate acts as an opportunity cost figure, allowing investors to compare and gauge the value to them from pursuing alternative risk and reward opportunities versus simply purchasing and holding the risk-free instrument freely available for purchase in the market. The internationally accepted standard for the risk-free rate is the United States Treasury bond and, therefore, this figure was considered for the **Ke** calculation.

Sectorial risk stands for the average sensitivity of comparable companies in that industry to movements in the underlying market. The parameter considered for Sectorial Risk is the beta "**β**" derived from the correlation between returns of US companies from the sector and the performance of the returns of the US market. **β** has been adjusted to the leverage of Brazilian companies in the sector, reflecting both structural and financial risks. **β** adjusts the market premium to the sector.

Rm represents the market premium, or higher return, expected by market participants in light of historical spreads attained from investing in equities versus risk free assets such as government bond rates, investors require a higher return when investing in private companies. The market premium is estimated based on the historical difference between the S&P 500 returns and the long term US bonds returns. The spread over the risk-free rate is the average of the difference between those returns.

Note that in the formula above the factor EMBI+ (Emerging Markets Bond Index Plus), considers as the country risk premium, **Rc**. This factor accounts for the country or sovereign risk embedded in the debt of a country. Assuming that relative to the US risk-free debt market EMBI+ is 0, then Brazil's EMBI+ would calculate for the added or reduced risk relative of Brazils debt markets to the US.

Justification for the EMBI+ addition to the risk-free rate lies in the vast differences between the United States in such factors as credit risk, inflation history, politics, debt markets, and more. Ignoring these differences would result in the incorrect application of relevant environmental factors in the decision-making process of an investor in Brazil.

[8] Central Bank of Brazil. Brazilian inflation targeting. Available at: <http://www.bcb.gov.br/>.

In order to adjust the **Ke** calculation, the expected inflation rate (for the United States) (**π'**) is reduced. For its calculation is considered the 10 Year Treasury Note (^TNX), and the TIPS (Treasury Inflation Protected Securities) are considered for its calculation, which are readily quoted in the US market. The ^TNX index carries inflation on their value while the TIPS is an index without inflation. Subtraction from the chosen period average values from the ^TNX and the TIPS results in the estimated inflation. There is no need to adjust for Brazil's expected inflation when dealing with a hurdle rate in real terms.

Considering explanation above, **Ke** is calculated through the following equation:

$$\mathbf{Ke = [(Rf + (\beta \times Rm) + Rc) + 1] / (1 + \pi') - 1}$$

Table 4 – Cost of Equity (Ke) calculation

Cost of Equity	
(Rf) Risk-free rate[9]	[Rf]
(π') US expected inflation[10]	**[π']**
(Rm) Equity Risk Premium[11]	[Rm]
(β) Sectorial risk[12]	[β]
(Rc) Estimated Country Risk Premium[13]	[Rc]
Cost of Equity with Brazilian Country Risk	[Ke] p.y.

Each data used to calculate the benchmark [CHOOSE WILL BE OR WAS] presented to the DOE. The spreadsheet used for WACC calculation will be available with the Project Participants and will be provided to the DOE.

Considering the values presented above, we have the following:

$$WACC = [Wd] \times \textit{[Kd]} + [We] \times \textit{[Ke]}$$

$$WACC = [WACC]$$

[9] 30-year US Treasury Yield. Available at [source].

[10] 10-year T.Notes minus 10-year TIPS. Available at: [source].

[11] Historical S&P500 premium over 10-year US-Treasury Bond. Available at: [source].

[12] Average Beta US Power Companies re-levered to Brazilian leverage. Available at: [source].

Internal Rate of Return (IRR)

As mentioned above, the financial indicator identified for *[PLANT NAME]* project is the [CHOOSE EQUITY OR PROJECT] Internal Rate of Return (IRR). *[PLANT NAME]* cash flow over 20 years[14] shows that the IRR is [IRR].

The table presented below provides a list of the main input values as well as a brief justification for their use.

Table 5 – Main parameters of the cash flow

Parameter	Value	Justification/source of information used
Installed Capacity (W)	*[INSTALLED CAPACITY]*	[INCLUDE SOURCE OF INFORMATION. PREFERABLY BASED ON THE PROJECT DESIGN OF THE SMALL HYDROPOWER PLANT OR ANEEL AUTHORIZATION (IF AVAILABLE)]
Plant Load Factor (PLF)	[PLANT LOAD FACTOR]	The PLF was defined in the [PLF SOURCE]. Therefore, the project applies option [CHOOSE OPTION (a) OR (b)] of the "Guidelines for the reporting and validation of plant load factors" (Annex 11, EB 48): [INCLUDE DESCRIPTION OF THE OPTION CHOSEN]
Energy price (R$/MWh)	[ENERGY PRICE]	[INCLUDE SOURCE OF INFORMATION].
Operation costs (BRL/year)	[OPERATION COSTS]	[INCLUDE SOURCE OF INFORMATION BASED ON LEGISLATION, QUOTATIONS, PREVIOUS EXPERIENCE FROM THE PROJECT SPONSOR WITH OTHER SIMILAR PROJECT AND/OR OTHER DOCUMENTED EVIDENCE FROM THE PROJECT SPONSOR].
100% TUST or TUSD fee (BRL/kW/month)	[TUST/TUSD FEE]	In each power project, the Tariff for the Use of the Transmission System ("TUST" from the Portuguese *Tarifa de Uso do Sistema de Transmissão*) or the Tariff for the Use of the Distribution System ("TUSD" from the Portuguese *Tarifa de Uso do Sistema de Distribuição*) fee must be applied in Brazil. The choice of TUSD or TUST fee depends if the power

[13] Emerging Markets Bond Index Plus Brazil. Index calculated by JPMorgan. Available at: [source].

[14] Maximum assessment period as recommended by the guidance 3, Annex 5, EB 62. *link: http://cdm.unfccc.int/Reference/Guidclarif/reg/reg_guid03.pdf*

		plant is directly or indirectly connected to the electricity connection network (in a free translation from the Portuguese *rede básica de conexão*). However, independently if the project is directly or indirectly connected to the electricity connection network, the fee shall be paid. Electricity producers using renewable sources receive a 50% discount in the TUST and TUSD fee. This discount aims at boosting investments in renewable energy projects and shall be considered as a Type E- policy as defined by Annex 3, EB 22. Additionally, according to this clarification, type E- policies[15] do not need to be considered in the development of the baseline scenario if implemented after 11 November 2001. The reduction in the TUST/TUSD fee was established by ANEEL Resolution nr. 77 dated 18/08/2004[16]. Therefore, the discount is not going to be taken into account. In the case of the proposed project, [INCLUDE SOURCE OF INFORMATION] was used as reference for the financial analysis.
Investment (R$)	[TOTAL INVESTMENT]	[INCLUDE SOURCE OF INFORMATION. PREFERABLY BASED ON QUOTATIONS FROM MANUFATURERS OR EPC SERVICES PROVIDERS]

The project cash flow is available with the Project Participants and [CHOOSE WILL BE OR WAS] presented to the DOE.

Sub-step 2c : Calculation and comparison of financial indicators

[PLANT NAME] cash flow demonstrates that the IRR of the project ([IRR]) is lower than the benchmark ([WACC] or *[Ke]*). This demonstrates that the project activity is not financially attractive to investor.

Sub-step 2d: Sensitivity analysis

[15] From paragraph 6.b) of Annex 3, EB 22 Type E- policies are *National and/or sectoral policies or regulations that give comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programs).*

[16] Available in Portuguese at <http://www.aneel.gov.br/cedoc/ren2004077.pdf>. Accessed on 02/09/2011.

As required by the Additionality Tool, a sensitivity analysis was conducted to demonstrate whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions. Therefore, the sensitivity analysis of the project shall be conducted by altering the following parameters:

- Increase in project revenue (energy price and plant load factor/energy assured);
- Reduction in running costs (operation costs and investments).

According to the Guidelines on the Assessment of Investment Analysis "*only variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation*". In addition, it states that "*variations in the sensitivity analysis should at least cover a range of +10% and -10%*". Therefore, financial analysis shall be performed based on the criteria established above.

Table 6 – Sensitivity analysis

Scenario	% change	IRR (%)
Original	-	[IRR]
Increase in the energy price	10%	[XX]
Increase in the project plant load factor (PLF)/energy assured		[XX]
Reduction in project costs		[XX]
Reduction in project investment		[XX]

[IN CASE WHICH THE RESULTED IRR SURPASSES THE BENCHMARK, AN ASSESSMENT OF THE PROBABILITY OF THE OCCURRENCE OF THIS SCENARIO IN COMPARISON TO THE LIKELIHOOD OF THE ASSUMPTIONS IN THE PRESENTED INVESTMENT ANALYSIS SHALL BE INCLUDED AND DISCUSSED HERE CONSIDERING THE CONTEXT OF THE PROJECT ACTIVITY]

Outcome: The IRR of *[PLANT NAME]* without being registered as a CDM project is below the benchmark, evidencing that the alternative of the project developer is not to invest in the project.

SATISFIED/PASS – Proceed to Step 3

Step 3. Barrier analysis

Not applicable. Additionality was demonstrated through the investment analysis (Step 2).

SATISFIED/PASS – Proceed to Step 4

Step 4. Common practice analysis

According to the methodological tool "Tool for the demonstration and assessment of additionality":

> *"Unless the proposed project type has demonstrated to be first-of-its kind (according to Sub-step 3a), and for measures different from those listed in paragraph 6 the above generic additionality tests shall be complemented with an analysis of the extent to which the proposed project type (e.g. technology or practice) has already diffused in the relevant sector and region (…)*
>
> *§6 Measure (for emission reduction activities) is a broad class of greenhouse gas emission reduction activities possessing common features. Four types of measures are currently covered in the framework:*
>
> *(a) Fuel and feedstock switch;*
> *(b) Switch of technology with or without change of energy source (including energy efficiency improvement as well as use of renewable energies);*
> *(c) Methane destruction;*
> (d) *Methane formation avoidance".*

Considering the measures presented above, the CPA applies option (b) since the project(s) to be considered in the CPA will consist of a switch from grid electricity generation to electricity generation from water source (hydropower plants)[17]. Therefore, only hydropower plants have to be considered in the common practice analysis and only the additionality test is applied.

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

Not applicable since the proposed project activity applies option (b) of the measures described in paragraph 6 of the methodological tool "Tool for the demonstration and assessment of additionality". Please refer to the additionality test below.

Sub-step 4b. Discuss any similar options that are occurring:

[17] Analogously to the example presented in Annex 8 of the EB 62.

Not applicable since the proposed project activity applies option (b) of the measures described in paragraph 6 of the methodological tool "Tool for the demonstration and assessment of additionality". Please refer to the additionality test below.

In accordance with paragraph 47 of the additionality tool, the following additionality test has to be applied:

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

By applying the output range of +/-50% in [INSTALLED CAPACITY] W installed capacity of *[PLANT NAME]* project, we have the range between [XX] W and [XX] W installed capacity.

***Step 2**: In the applicable geographical area, identify all plants that deliver the same output or capacity, within the applicable output range calculated in Step 1 as the proposed project activity and have started commercial operation before the start date of the project. Note their number N_{all}. Registered CDM project activities and projects undergoing validation shall not be included in this step.*

In order to conduct the analysis of Step 2, the definitions of geographical area and output as presented in the methodological tool "Tool for the demonstration and assessment of additionality" have to be used as follows.

(i) Output

The methodological tool "Tool for the demonstration and assessment of additionality" defines "output" as "*goods or services with comparable quality, properties, and application areas (e.g. clinker, lighting, residential cooking)*". Therefore, the output considered is the renewable electricity generated by grid-connected hydropower power plants as established in the PoA.

(ii) Applicable geographical area

The methodological tool "Tool for the demonstration and assessment of additionality" states:

> "*Applicable geographical area covers the entire Host Country as a default; if the technology applied in the project is not country specific, then the applicable geographical area should be extended to other countries*".

The technology to be used in the proposed project is not country specific. Nevertheless, some important aspects regarding the technology have to be considered. Brazil has an extension of 8,514,876.599 square kilometres[18] (with over 4,000 km distance in the North-South as well as in the East-West axis) and 6 distinct climate regions: sub-tropical, semi-arid, equatorial, tropical, highland-tropical

[18] Available at: http://www.ibge.gov.br/english/geociencias/cartografia/default_territ_area.shtm.

and Atlantic-tropical (humid tropical). Considering the distinct climate conditions, precipitation varies from 500 to more than 3,000 mm/year[19]. These varieties of climate obviously have strong influence in the technical aspects related to hydropower plant implementation *since meteorological events have strong influence in hydrologic process*[20]. As cited by VESELKA (2008) *"climate affects all major aspects of the electric power sector from electricity generation, transmission and distribution system to consume demand for power"*[21].

An evidence of the climate regional distinctiveness can be noted by the spot price value division into sub-markets (South, Southeast/Midwest, Northeast, and North), known as Settlement Price for the Differences ("PLD" from the Portuguese *Preço de Liquidação das Diferenças*). PLD is used to price the purchase and the sale of electricity in the short term market.

Nevertheless, the climate conditions are not the only distinguishing feature among the several Brazilian regions. For the use of the transmission system, the Tariff for the Use of the Distribution System ("TUSD" from the Portuguese *Tarifa de Uso do Sistema de Distribuição*) or Tariff for the Use of the Transmission System ("TUST" from the Portuguese the *Tarifa de Uso do Sistema de Transmissão*) has to be applied. The TUSD/TUST tariff varies depending on the state where the power plant is connected to. TUSD/TUST is established under ANEEL regulation and has strong impact in the financial analysis of a project. Just for reference, from the first semester of 2010, TUSD in São Paulo state (located in the same region of Minas Gerais) was BRL 1.82/kW[22] and BRL 4.64/kW[23] in Minas Gerais state (more than two times higher than São Paulo).

Furthermore, each state has a specific environmental agency responsible for determining the technical standards required to obtain all environmental licenses, with regional regulations and distinct administrative process established by each state region.

Therefore, when evaluating the different climate conditions of each region, the specific environmental regulatory framework of each state, the energy price subdivision per markets and different values of TUSD/TUST applied at each Brazilian state, it's clear that the national territory does not consist of the same "comparable environments" as required by the methodological tool "Tool for the demonstration and assessment of additionality". Undoubtedly, these differences among the Brazilian

[19] Public information available at *Instituto Nacional de Metereologia – INMET*'s website. Gráfico de normais climatológicas (1961-1990): <http://www.inmet.gov.br/>.

[20] PINTO, J. A. Climatic indicators study for long term prediction in the river flow of Alto São Francisco basin (in a free translation from the Portuguese *Estudo de indicadores climáticos para a previsão de longo termo de vazões na bacia do Alto São Francisco*). Universidade Federal de Minas Ferais: Belo Horizonte, 2005. Available at: <http://www.smarh.eng.ufmg.br/defesas/20D.PDF>.

[21] VESELKA, T. D. Balance power: A warming climate could affect electricity. Geotimes. Earth, energy and environment news. American Geological Institute: August, 2008. Available at: < http://www.agiweb.org/geotimes/aug08/article.html?id=feature_electricity.html>.

[22] ANEEL Resolution nr. 961 issued on April 6th, 2010. Available at: < http://www.aneel.gov.br/cedoc/atreh2010961.pdf >.

[23] ANEEL Resolution nr. 960 issued on April 6th, 2010. Available at: < http://www.aneel.gov.br/cedoc/atreh2010960.pdf >.

states (climate, energy price, transmission/distribution costs and environmental legislation) have technical, financial and regulatory impacts for the implementation of hydropower plants. Therefore, it is reasonable to consider only projects located in same state of the proposed project(s) to be considered in the CPAs, state of *[STATE]*.

Considering the definitions presented above, only electricity generated by grid-connected hydropower plants located in [STATE] state and whose installed capacities are between the range of [XX] W and [XX] W (as calculated in the Step 1 above) were listed. Furthermore, CDM projects were excluded from this analysis.

Table 7 – Grid-connected hydropower plants from [XX] W to [XX] W installed capacity in [STATE] (without CDM incentives)

Project	Installed power (MW)	Type	PROINFA

Source: ANEEL ([YYYY])[24], UNFCCC ([YYYY])[25] and Eletrobrás ([YYYY])[26]

Considering the table above, N_{all} = [N_{all}].

***Step 3**: Within plants identified in Step 2, identify those that apply technologies different that the technology applied in the proposed project activity. Note their number N_{diff}.*

According to the methodological tool "Tool for the demonstration and assessment of additionality", different technologies are technologies that deliver the same output and differ by at least one of the following (as appropriate in the context of the applicable geographical area and measure applied in the proposed CPA):

(a) Energy source/fuel

[24] ANEEL (YYYY). Summary by state. (from the Portuguese *Resumo Estadual*). Banco de Informações de Geração (BIG). Agência Nacional de Energia Elétrica. Available at: <http://www.aneel.gov.br/>.

[25] UNFCCC (YYYY). Project Activities. Validation. United Nations Framework Convention on Climate Change. Available at <http://cdm.unfccc.int/index.html>.

[26] ELETROBRÁS (YYYY). Centrais Elétricas Brasileiras S/A. Programs and setorial funds. Proinfa. Contracted projects and addendum signed (from the Portuguese *relação de empreendimentos contratados e extratos de contratos e termos aditivos celebrados*). Available at: <http://www.eletrobras.com/elb/data/Pages/LUMISABB61D26PTBRIE.htm>.

Only electricity generation from water source (hydropower plants) has to be considered in this analysis.

(b) Feed stock

Not applicable.

(c) Size of installation (power capacity):

(i) Micro (as defined in paragraph 24 of Decision 2/CMP.5 and paragraph 39 of Decision 3/CMP.6);

(ii) Small (as defined in paragraph 28 of Decision 1/CMP.2);

(iii) Large.

According to the current Brazilian regulation, small scale hydropower plants are defined as plants with installed capacities between 1MW and 30MW and reservoir areas no greater than 3km[227]. Since the proposed project is inserted in the context of the Brazilian legislation, it is reasonable to compare the proposed project with other small hydropower plants according to the Host Country definition of small scale power plants (and not to the CDM-EB definition of small scale).

Considering explanations above, no large scale hydropower plants as defined by ANEEL can be considered in this common practice analysis. Therefore, the technology that delivers the same output of the proposed CPA in the context of the measure and applicable geographical area is the electricity generation by grid-connected small hydropower plants. Large scale hydropower plants have to be considered as having different technology to the proposed project.

[LARGE SCALE HYDROPOWER PLANTS SHALL BE EXCLUDED FROM PROJECTS LISTED IN N_{all}].

(d) Investment climate in the date of the investment decision, inter alia:

(i) Access to technology

Small hydropower plants can differ significantly from each other considering the region to be implemented, climate, topography, availability of transmissions lines, river flow regularity, etc. For those reasons alone it is extremely difficult and not reasonable to compare different hydropower potential and plants. Moreover, hydropower plants cannot be optimally placed (close to load centers and transmission lines) and easily transferred (moved to a new region where a better tariff is offered) as, for example, modular fossil-

[27] *ANEEL – Agência Nacional de Energia Elétrica. Resolution nr. 652, issued on December 9th, 2003.*

fuel-fired (diesel, natural gas) power plants. Differences may be even larger if no big water storage is possible, as in the case of small hydropower plants.

Therefore, depending on the project location, differences related to the technical aspects of small hydropower plant projects have influence in their implementation, even if small hydropower projects are located in the same region. Considering that these technical differences obviously have influence in the investment/financing of a project and project sponsors have different investment capacity, financial information has to be considered when small hydropower projects are analyzed.

[IF FINANCIAL INFORMATION OR INCENTIVES OF SIMILAR PROJECTS IS ACCESSIBLE OR PUBLICLY AVAILABLE, THIS INFORMATION HAS TO BE USED IN THE ANALYSIS FOLLOWING THE ADDITIONALITY TOOL; OTHERWISE, THIS CRITERION CAN BE EXCLUDED FROM THE COMMON PRACTICE ANALYSIS].

(ii) Subsidies or other financial flows

[INCLUDE INFORMATION RELATED TO SUBSIDIES OR OTHER FINANCIAL FLOW. IF SUBSIDIES OF OTHER FINANCIAL FLOWS WERE IDENTIFIED FOR OTHER PROJECTS (ALTHOUGH THIS INFORMATION IS NOT ALWAYS PUBLICLY AVAILABLE), THEY HAVE TO BE CONSIDERED AS DIFFERENT TECHNOLOGIES TO THE PROPOSED PROJECT].

(iii) *Promotional policies*

As mentioned in section A.4.3 of the PoA-DD, PROINFA is a Program of Incentives to Alternative Energy Sources launched by the Brazilian government in 2002. This program provides better tariffs through long-term PPAs. Therefore, projects which have been participating in PROINFA cannot be compared with projects which do not receive this type of incentive. Since the proposed project does not receive PROINFA incentive, PROINFA projects have to be considered as having different technology to the proposed project.

[PROINFA PROJECTS SHALL BE EXCLUDED FROM PROJECTS LISTED IN N_{all}]

(iv) *Legal regulations*

Electricity sector framework: Until the beginning of the 1990's, the energy sector was composed almost exclusively of state-owned companies. From 1995 onwards, due to the increase in international interest rates and the lack of state investment capacity, the government initiated the privatization process. However, by the end of 2000 results were still modest. Although further initiatives, aiming to improve electric generation in the

country, were taken between the 1990's and 2003, they did not attract new investment to the sector. In 2003, the recently elected government decided to fully review the electricity market institutional framework in order to boost investments in the electric energy sector. Market rules were changed and new institutions were created such as Energetic Research Company (in a free translation from the Portuguese *Empresa de Pesquisa Energética – EPE*) – an institution responsible for the long term planning of the electricity sector with the role of evaluating, on a perennial basis, the safety of the supply of electric power – and Chamber for the Commercialization of Electric Power (CCEE) – an institution responsible for the management of electric power commercialization within the interconnected system. This new structure was approved by the House of Representatives and published in March of 2004[28]. Given the new regulatory framework, the Project Participant has to consider only projects which started operation from April of 2004 onwards. Projects that started operations before the new electricity framework have to be considered as having different technology to the proposed project.

[PROJECTS THAT STARTED OPERATIONS BEFORE MARCH 2004 SHALL BE EXCLUDED FROM PROJECTS LISTED IN N_{all}]

(e) Other features, inter alia:

(i) Unit cost of output (unit costs are considered different if they differ by at least 20 %);

[IF UNIT COST OF OUTPUT OF SIMILAR PROJECTS IS ACCESSIBLE OR PUBLICLY AVAILABLE, THIS INFORMATION HAS TO BE USED IN THE ANALYSIS FOLLOWING THE ADDITIONALITY TOOL; OTHERWISE, THIS CRITERION CAN BE EXCLUDED FROM THE COMMON PRACTICE ANALYSIS].

Considering information above, N_{diff} = [N_{diff}].

Step 4: Calculate factor F=1- N_{diff} /N_{all} representing the share of plants using technology similar to the technology used in the proposed project activity in all plants that deliver the same output or capacity as the proposed project activity. The proposed project activity is a "common practice" within a sector in the applicable geographical area if the factor F is greater than 0.2 and N_{all}-N_{diff} is greater than 3.

Since N_{diff} = [N_{diff}] and N_{all} = [N_{all}]:

N_{all} - N_{diff} = [N_{all} - N_{diff}] [CHOOSE < OR >] 3 and,

F = 1- N_{diff} /N_{all} = [F] [CHOOSE < OR >] 0.2

Therefore, [PLANT NAME] project activity is [INCLUDE COMMON PRACTICE OR NOT COMMON PRACTICE].

[28] http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/lei/l10.848.htm

Spreadsheet with complete research of the common practice analysis is available with the Project Participants and [CHOOSE WILL BE OR WAS] presented to DOE during the inclusion process of the CPA.

This result demonstrates that risks related to this type of project are higher, as discussed in Step 2 – Investment Analysis, and that a strong incentive is required to promote the construction of renewable energy projects in Brazil, where it includes small hydropower plants.

***Outcome**:* In summary, this project activity is clearly not common practice, because no similar project started operation during the above mentioned period without some kind of incentive. With the financial benefit derived from the CERs, it is anticipated that other project developers will benefit from this new source of revenue and further will decide to develop such projects. The CDM has made it possible for investors to set up their small hydro plants and sell their electricity to the grid.

SATISFIED/PASS – Project is ADDITIONAL

B.4. Description of the sources and gases included in the project boundary and proof that the CPA is located within the geographical boundary of the registered PoA.

According to the version 12.3.0 of the ACM0002, "*the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system which the CDM project power plant is connected to*".

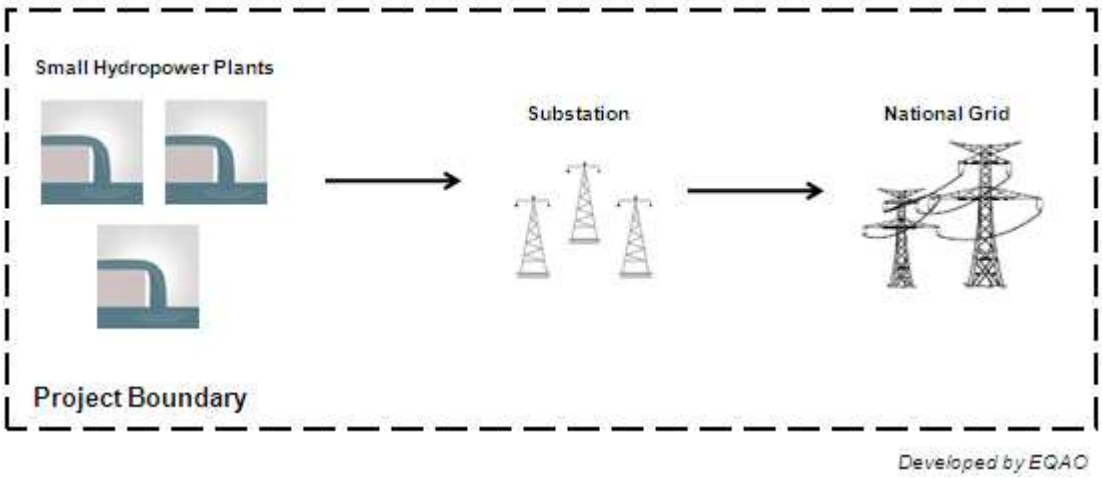

Figure 3 – Project boundary of the CPAs

The greenhouse gases and emission sources included in or excluded from the project boundary are shown in the table below.

Table 8 – Greenhouse gases and emission sources included or excluded in the project boundary

	Source	Gas	Included ?	Justification/Explanation
Baseline	CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity.	CO_2	Yes	Main emission source.
		CH_4	No	Minor emission source.
		N_2O	No	Minor emission source.
Project Activity	Emissions of CH_4 from the reservoir.	CO_2	No	Minor emission source.
		CH_4	Yes	Main emission source.
		N_2O	No	Minor emission source.

As mentioned in A.4.1 section, *[PLANT NAME]* is located within the Brazilian boundaries. This is in compliance with the boundaries defined in PoA.

B.5. Emission reductions:

B.5.1. Data and parameters that are available at validation:

Data / Parameter:	Cap_{BL}
Data unit:	W
Description:	Installed capacity of the hydro power plant before the implementation of the project activity. For new hydropower plants, this value is zero.
Source of data used:	Project site.
Value applied:	0

Justification of the choice of data or description of measurement methods and procedures actually applied :	Determine the installed capacity based on recognized standards.
Any comment:	The methodology states that this value shall be applied for new hydropower plants.

Data / Parameter:	A_{BL}
Data unit:	m^2
Description:	Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m^2). For new reservoirs, this value is zero.
Source of data used:	Project site.
Value applied:	0
Justification of the choice of data or description of measurement methods and procedures actually applied:	Measured from topographical surveys, maps, satellite pictures, etc.
Any comment:	The methodology states that this value shall be applied for new hydropower plants.

[FOR POWER DENSITY OF THE SINGLE OR MULTIPLE RESERVOIRS (*PD*) GREATER THAN 4 W/m^2 AND LESS THAN OR EQUAL TO 10 W/m^2, INCLUDE THE PARAMETER PRESENTED BELOW]

Data / Parameter:	EF_{Res}
Data unit:	$kgCO_2e/MWh$
Description:	Default emission factor for emissions from reservoirs of hydropower plants.
Source of data used:	Decision by EB23
Value applied:	90 $kgCO_2e/MWh$
Justification of the	Default value as presented in ACM0002 (version 12.3.0).

choice of data or description of measurement methods and procedures actually applied:	
Any comment:	Applicable only if the power density of the single or multiple reservoirs (*PD*) is greater than 4 W/m^2 and less than or equal to 10 W/m^2.

B.5.2. Ex-ante calculation of emission reductions:

Emission reductions (ER_y)

According to the selected approved methodology ACM0002 (version 12.3.0), emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y \qquad \textbf{Equation 1}$$

Where:

ER_y = Emission reductions in year y (tCO_2e);

BE_y = Baseline emissions in year y (tCO_2);

PE_y = Project emissions in year y (tCO_2e).

Baseline emissions (BE_y)

Baseline emissions are calculated as follows:

$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y} \qquad \textbf{Equation 2}$$

Where,

BE_y = Baseline emissions in year y (tCO_2);

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

$EF_{grid,CM,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh).

I. Calculation of the combined margin CO_2 emission factor for grid connected power generation ($EF_{grid,CM,y}$)

STEP 1 - Identify the relevant electricity systems

Following Resolution nr. 8, issued by the Brazilian DNA ("CIMGC" from the Portuguese *Comissão Interministerial de Mudança Global do Clima*) on May 26th, 2008, the Brazilian Interconnected Grid corresponds to the system to be considered. It covers all the five macro-geographical regions of the country (North, Northeast, South, Southeast and Midwest)[29] as presented in the figure below.

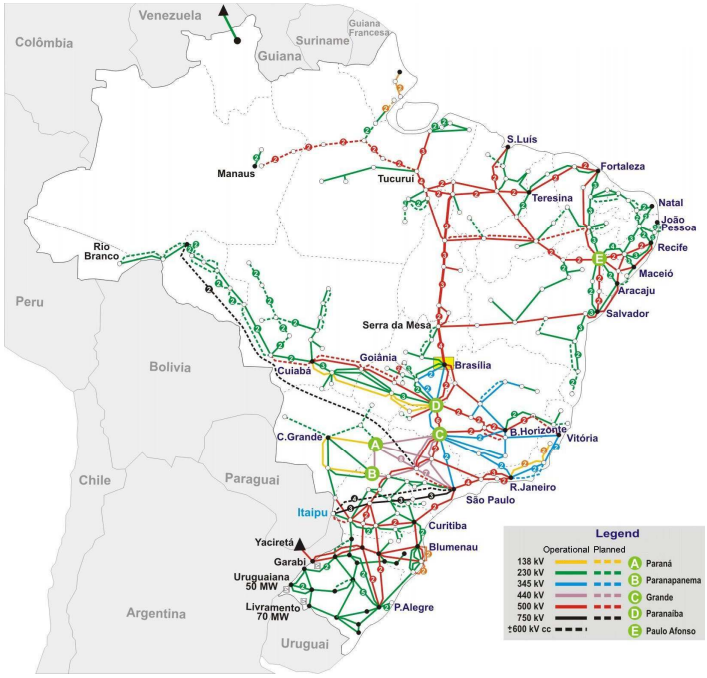

Figure 4 – Brazilian Interconnected System

Source: ONS (2011)[30]

STEP 2 – Choose whether to include off-grid power plants in the project electricity system (optional)

The Brazilian DNA made available the emission factor calculation based on information of the grid power plants only – option (i) – following the "Tool to calculate the emission factor for an electricity system". More information of the methods applied can be obtained at the DNA's website (http://www.mct.gov.br/index.php/content/view/4016.html).

[29] Information available at: <http://www.mct.gov.br/upd_blob/0024/24719.pdf>.

[30] ONS (2011). Mapas do SIN. Available at < http://www.ons.org.br/conheca_sistema/mapas_sin.aspx>.

STEP 3 - Select a method to determine the operating margin (OM)

Since there is no preferable method for the calculation of the OM emission factor, the Project Participants have chosen the method and calculation made available by the Brazilian DNA, using option (c) Dispatch data analysis OM. More information of the OM emission factor can be obtained at the DNA's website (http://www.mct.gov.br/index.php/content/view/74689.html).

STEP 4 - Calculate the operating margin emission factor according to the selected method

The Brazilian DNA made publicly available the OM emission factor through the dispatch data analysis OM (option c). Therefore, data of [THE MOST RECENT YEAR THAT INFORMATION IS AVAILABLE] was used (the most recent data available) as presented below.

$$EF_{grid,OM\text{-}DD,y} = [EF_{grid,OM\text{-}DD,y}]\ tCO_2e/MWh$$

STEP 5 - Calculate the build margin (BM) emission factor

The Brazilian DNA made publicly available the build margin emission factor. Therefore, data of [THE MOST RECENT YEAR THAT INFORMATION IS AVAILABLE] was used (the most recent data available) as presented below.

$$EF_{grid,BM,y} = [EF_{grid,BM,y}]\ tCO_2e/MWh$$

STEP 6 – Calculate the combined margin (CM) emission factor

Applying the results presented above in STEPS 4 and 5 above to the formulae below and considering the weights $w_{OM} = 0.5$ and $w_{BM} = 0.5$ (as per method ***a)*** of the tool) we obtain:

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

$$EF_{grid,CM,y} = [EF_{grid,OM\text{-}DD,y}] \times 0.5 + [EF_{grid,BM,y}] \times 0.5\ tCO_2e/MWh$$

$$EF_{grid,CM,y} = [EF_{grid,CM,y}]\ tCO_2e/MWh$$

II. Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity ($EG_{PJ,y}$)

According to ACM0002 (version 12.3.0), the calculation of $EG_{PJ,y}$ is different depending on the case of the project as follows:

(a) Greenfield plants (installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity);

(b) Retrofits and replacements of an existing renewable energy power plant;

(c) Capacity addition to an existing renewable energy power plant.

The CPAs to be added to this PoA in the future may consist of new small hydropower plants only and, therefore:

$$EG_{PJ,y} = EG_{facility,y} \qquad \textbf{Equation 3}$$

Where,

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year *y* (MWh);

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

The quantity of net electricity generation supplied by the project' plant to the grid in year *y* ($EG_{faciclity,y}$, in MWh) was determined, for the purpose of ex-ante estimative, as being equal to the installed capacity of each plant multiplied by the plant load factor (PLF) and by the number of hours in which the plant is forecasted to be operational during year *y*.

However, the energy exported to the grid by the power plants is commonly calculated by the assured energy (in MW- ave) of projects, which is the result of the multiplication of the installed capacity and the PLF. In the case of this CPA, the [CHOOSE BETWEEN ASSURED ENERGY OR PLF][31] of [INCLUDE VALUE OF THE ASSURED ENERGY OR PLF] of the proposed project is used as presented in [SOURCE OF THE ASSURED ENERGY OR PLF].

Considering the 8,760 hours of operation in the year, the energy delivered to the grid is [ELECTRICITY DISPATCHED TO THE GRID PER YEAR] MWh/year. Therefore, the proposed project applies option [CHOOSE OPTION (a) OR (b) of the "Guidelines for the reporting and validation of plant load factors" AND INCLUDE DESCRIPTION].

[31] The assured energy (from the Portuguese *energia assegurada*) of a hydropower plant is calculated based on hydrological data, height of the dam and efficiency of turbine/generator/transformer. In the Brazilian electricity sector, the assured energy is always used to estimate the electricity to be dispatched to the grid of a power plant. Therefore, as described in the PoA, the assured

Project emissions (PE_y)

Only emissions from water reservoirs of hydropower plants ($PE_{HP,y}$) are applicable to the proposed PoA when power density (PD) is greater than 4 W/m^2 and less than or equal to 10 W/m^2.

The power density of the project activity is calculated as follows:

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}} \qquad \textbf{Equation 4}$$

Where:

PD = Power density of the project activity, in W/m^2;

Cap_{PJ} = Installed capacity of the hydro power plant after the implementation of the project activity (W);

Cap_{BL} = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero;

A_{PJ} = Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m^2);

A_{BL} = Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m^2). For new reservoirs, this value is zero.

Considering the equation above, the power density of *[PLANT NAME]* project is [POWER DENSITY] W/m^2.

[INCLUDE THE FOLLOWING INFORMATION IF THE POWER DENSITY (*PD*) OF THE PROJECT IS GREATER THAN 4 W/M^2 AND LESS THAN OR EQUAL TO 10 W/M^2]

Since the power density of the single or multiple reservoirs (*PD*) of *[PLANT NAME]* project is greater than 4 W/m^2 and less than or equal to 10 W/m^2, emissions from water reservoir is calculated as follows:

$$PE_y = \frac{EF_{Res} \times TEG_y}{1000} \qquad \textbf{Equation 5}$$

energy can be used to estimate the expected net electricity of proposed CPA and, consequently, the emission reductions of this CPA.

Where:

$PE_{HP,y}$ = Project emissions from water reservoirs (tCO_2e);

EF_{Res} = Default emission factor for emissions from reservoirs of hydropower plants, and the default value as perEB23 is 90 Kg CO_2e/MWh;

TEG_y = Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y (MWh).

Considering equation above, project emissions of *[PLANT NAME]* project is XX tCO_2.

[INCLUDE THE FOLLOWING INFORMATION IF THE POWER DENSITY (*PD*) OF THE PROJECT IS GREATER THAN 10W/M^2:]

Since the power density of *[PLANT NAME]* project is greater than 10W/m^2, PE_y = 0 tCO_2.

Leakage emissions (LE_y)

As explained in the above section, there are no sources of leakage emissions associated with the implementation of a typical CPA considered in the context of the proposed PoA. Therefore, LE_y = 0.

B.5.3. Summary of the ex-ante estimation of emission reductions:

Table 9 – Estimated project emissions, baseline emissions, leakage and emission reductions during the 1st crediting period of the project

Year	Estimation of project activity emissions (tonnes of CO_2 e)	Estimation of baseline emissions (tonnes of CO_2 e)	Estimation of leakage (tonnes of CO_2 e)	Estimation of overall emission reductions (tonnes of CO_2 e)
Year 1	[ANNUAL PROJECT EMISSIONS]	[ANNUAL BASELINE EMISSIONS]	0.00	[ANNUAL CERs GENERATION]
Year 2	[ANNUAL PROJECT EMISSIONS]	[ANNUAL BASELINE EMISSIONS]	0.00	[ANNUAL CERs GENERATION]
Year 3	[ANNUAL PROJECT EMISSIONS]	[ANNUAL BASELINE EMISSIONS]	0.00	[ANNUAL CERs GENERATION]
Year 4	[ANNUAL PROJECT EMISSIONS]	[ANNUAL BASELINE EMISSIONS]	0.00	[ANNUAL CERs GENERATION]
Year 5	[ANNUAL PROJECT EMISSIONS]	[ANNUAL BASELINE EMISSIONS]	0.00	[ANNUAL CERs GENERATION]
Year 6	[ANNUAL PROJECT EMISSIONS]	[ANNUAL BASELINE EMISSIONS]	0.00	[ANNUAL CERs GENERATION]
Year 7	[ANNUAL PROJECT EMISSIONS]	[ANNUAL BASELINE EMISSIONS]	0.00	[ANNUAL CERs GENERATION]
Total	**[TOTAL PROJECT**	**[TOTAL BASELINE**	**0.00**	**[TOTAL CERs**

(tonnes of CO_2 e)	EMISSIONS]	EMISSIONS]		GENERATION]

B.6. Application of the monitoring methodology and description of the monitoring plan:

B.6.1. Description of the monitoring plan:

The project activity will proceed according to the "Approved consolidated baseline and monitoring methodology ACM0002" – "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (version 12.3.0).

There will be energy meters (principal and backup) in the nearest substations ("connection points") to each power plants of the proposed PoA. These substations adjust the tension of the electricity generated by the power plants and dispatch it to the national grid. Meters located in the substation measures the net electricity of power plants, since losses from the power plant to the substation are already discounted. These meters shall have the necessary technical specifications as required by the National Electric System Operator ("ONS" from the Portuguese *Operador Nacional do Sistema Elétrico*).

In some cases, there will be energy meters at the power plants, however, this will depend on the ONS requirements. Anyway, projects have to proceed with the necessary measures for the power control and monitoring as established by ONS, the Brazilian Power Regulatory Agency ("ANEEL" from the Portuguese *Agência Nacional de Energia Elétrica*) and the Chamber of Electric Energy Commercialization ("CCEE" from the Portuguese *Câmara de Comercialização de Energia Elétrica*).

CCEE makes feasible and regulates the electricity energy commercialization. In addition, CCEE will have online access to the measurement data from the meters located at the substation.

Calibration of meters located in the "connection point" of the grid will be made every 2 years as required by ONS[32]. The responsibility of calibration can be from the project sponsor, power utility or the energy trader to be contracted by the project sponsor. However, the project sponsor will make sure that calibrations will follow the ONS requirements.

Data monitored and required for verification and issuance will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

The parameters to be monitored are as follows:

Data / Parameter:	$EG_{facility,y}$

[32] Sub-módulo 12.3. Measurement system maintenance for invoicing, in a free translation from the Portuguese *Manutenção do Sistema de Medição para Faturamento*. Available at: <http://extranet.ons.org.br/operacao/prdocme.nsf/videntificadorlogico/5DA0C134065FB70F83257945005B1BDF/$file/Submodulo%2012.3_Rev_2.0.pdf?openelement>

Data unit:	MWh
Description:	Quantity of net electricity generation supplied by the project/unit to grid in year *y*.
Source of data to be used:	Project activity site.
Value of data applied for the purpose of calculating expected emission reductions in section B.5	**[ELECTRICITY DISPATCHED TO THE GRID PER YEAR]**
Description of measurement methods and procedures to be applied:	Monitoring frequency: continuously measurement and at least monthly recording. Data from electricity meters, which can be checked through sales receipt or by documents/reports from the Chamber of Electric Energy Commercialization (from the Portuguese *Câmara Comercializadora de Energia Elétrica – CCEE*). Electronically archived.
QA/QC procedures to be applied:	Cross check measurement results with sales receipt (records for sold electricity) or internal control (if available). If data from CCEE is made available to check the net electricity of the project and sales receipt can be used to verify the net electricity generated by the project, sales receipt will be used for cross-checking purposes. It may be available the project sponsor internal control at that time of the verification, which can also be used for cross-checking purposes. Equipments used have by legal requirements extremely low level of uncertainty). Frequency and procedure of calibration of electricity meters will be conducted following ONS requirements.
Any comment:	-

Data / Parameter:	Cap_{PJ}
Data unit:	W
Description:	Installed capacity of the hydropower plant after the implementation of the project activity.
Source of data to be used:	Project site.

Value of data applied for the purpose of calculating expected emission reductions in section B.5	[INSTALLED CAPACITY]
Description of measurement methods and procedures to be applied:	Monitoring frequency: yearly. Installed capacity of the power plant will be checked by DOE during verification on-site visit. TAG's equipment and licenses issued by the Environmental Agency of the State will be available at that time. Electronically archived.
QA/QC procedures to be applied:	Determine the installed capacity based on recognized standards.
Any comment:	-

Data / Parameter:	A_{PJ}
Data unit:	m^2
Description:	Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full
Source of data to be used:	Project site
Value of data applied for the purpose of calculating expected emissions reductions in section B.5	[RESERVOIR AREA]
Description of measurement methods and procedures to be applied:	Monitoring frequency: yearly. The reservoir are will be monitored through topographical data in the location of the project activity (made once at the time of the project design) and the reservoir level, which will yearly monitored by project sponsor. Electronically archived.
QA/QC procedures:	Measured from topographical surveys, maps, satellite pictures, etc.
Any comment:	-

Data / Parameter:	$EF_{grid,CM,y}$
Data unit:	tCO_2/MWh
Description:	Combined margin CO_2 emission factor for grid connected power generation in

	year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system".
Source of data to be used:	Calculated following the steps provided by the "Tool to calculate the emission factor for an electricity system" applying the numbers published by the Brazilian DNA (http://www.mct.gov.br/index.php/content/view/74689.html)
Value of data applied for the purpose of calculating expected emissions reductions in section B.5	[$EF_{grid,CM,y}$] tCO_2/MWh
Description of measurement methods and procedures to be applied:	Monitoring frequency: yearly. Once option c) dispatch data analysis OM was chosen by the Brazilian DNA, this value will be updated following the prescription of the tool. More information of the OM emission factor can be obtained at the DNA's website.
QA/QC procedures:	Official source of data.
Any comment:	For estimative purposes, data of [THE MOST RECENT YEAR THAT INFORMATION IS AVAILABLE] year was used.

Data / Parameter:	$EF_{grid,OM,y}$
Data unit:	tCO_2/MWh
Description:	Operating margin CO_2 emission factor in year *y*
Source of data to be used:	Brazilian DNA website (http://www.mct.gov.br/index.php/content/view/74689.html)
Value of data applied for the purpose of calculating expected emission reductions in section B.5	[$EF_{grid,OM,y}$] tCO_2/MWh
Description of measurement methods and procedures to be applied:	The selected option to calculate the operating margin is the dispatch analysis which does not permit the vintage of *ex-ante* calculation of the emission factor. Hence, this value will be calculated annually applying the numbers published by the Brazilian DNA and following the steps provided in the "*Tool to calculate the emission factor for an electricity system*". The $EG_{PJ,h}$ parameter required for the calculation of the $EF_{grid,OM,y}$ parameter will be monitored as explained in $EG_{facility,y}$ as required by the "*Tool to calculate the emission factor for an electricity system*". The $EF_{EL,DD,h}$ parameter will be provided by the Brazilian DNA in order to calculate the $EF_{grid,OM,y}$ as required by the "*Tool to calculate the emission factor for an electricity system*".

QA/QC procedures to be applied:	Official source of information (*i.e.* Brazilian DNA) will be used.
Any comment:	-

Data / Parameter:	$EF_{grid,BM,y}$
Data unit:	tCO_2/MWh
Description:	Build margin CO_2 emission factor in year *y*
Source of data to be used:	Brazilian DNA website (http://www.mct.gov.br/index.php/content/view/74689.html)
Value of data applied for the purpose of calculating expected emission reductions in section B.5	$[EF_{grid,BM,y}]$
Description of measurement methods and procedures to be applied:	The selected option to calculate the operating margin was the dispatch analysis which does not permit the vintage of *ex-ante* calculation of the emission factor. Hence, this value will be calculated annually applying the numbers published by the Brazilian DNA and following the steps provided in the "*Tool to calculate the emission factor for an electricity system*".
QA/QC procedures to be applied:	Official source of information (*i.e.* Brazilian DNA) will be used.
Any comment:	For the purpose of the emission reductions estimation the data from the most recent publicly available information at the time the validation of the proposed project activity started was used.

[FOR POWER DENSITY OF THE SINGLE OR MULTIPLE RESERVOIRS (*PD*) GREATER THAN 4 W/m^2 AND LESS THAN OR EQUAL TO 10 W/m^2, INCLUDE THE PARAMETER PRESENTED BELOW]

Data / Parameter:	TEG_y
Data unit:	MWh
Description:	Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year *y*.
Source of data to be used:	Project activity site.
Value of data applied for the purpose of calculating expected emissions reductions in section B.5	[TOTAL ELECTRICITY PRODUCED BY THE PROJECT ACTIVITY PER YEAR]
Description of measurement methods	Monitoring frequency: continuous measurement and at least monthly recording.

and procedures to be applied:	
QA/QC procedures:	Equipments used have by legal requirements extremely low level of uncertainty.
Any comment:	Applicable to hydropower project activities with a power density of the project activity (PD) greater than 4 W/m^2 and less than or equal to 10 W/m^2.

SECTION C. Environmental analysis

C.1. Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken:

☐ Please tick if this information is provided at the PoA level. In this case sections C.2. and C.3. need not be completed in this form.

Since small hydropower plant projects have difference impacts during implementation, mainly depending on the project location, a separated description of the environment impacts and their assessment would be more reasonable if conducted at CPA level.

Furthermore, according to the Brazilian legislation, the environmental analysis and the issuance of licenses for power generation utilities are conducted by national or state environmental agency depending on the case. Therefore, the environmental analysis of the project activities will be conducted at the CPA level for conservative reasons.

C.2. Documentation on the analysis of the environmental impacts, including transboundary impacts:

In Brazil, the sponsoring of any project that involves construction, installation, expansion or operation of any polluting or potentially polluting activity or any other capable to cause environmental degradation is obliged to secure a several permits from the relevant environmental agency (federal and/or local, depending on the project).

According to the National Environmental Council ("CONAMA" from the Portuguese *Conselho Nacional do Meio Ambiente*), the following licenses must be obtained in these cases (CONAMA Resolution nr. 237/97[33]) are:

- The preliminary license (*Licença Prévia* or LP);
- The construction license (*Licença de Instalação* or LI); and
- The operating license (*Licenca de Operação* or LO).

The process starts with a previous analysis (preliminary studies) by the environmental department. After that, if the project is considered environmentally feasible, the sponsors have to prepare the Environmental Assessment.

[33] Available at: http://www.mma.gov.br/port/ conama/res/res97/res23797.html.

The result of those assessments is the Preliminary License (LP), which reflects the environmental agency positive understanding about the environmental project concepts.

In order to obtain the Construction License (LI) it is necessary to present (a) additional information about previous assessment; (b) a new simplified assessment; or (c) the Environmental Basic Project, according to the environmental agency decision informed at the LP.

The Operation License (LO) is a result of pre-operational tests during the construction phase to verify if all demands made by environmental local agency were fulfilled.

[PLANT NAME] project [CHOOSE HAS OR IS IN PROCESS TO OBTAIN] the [CHOOSE LP, LI AND/OR LO] [ENVIRONMENTAL AGENCY RESPONSIBLE FOR THE LICENSES ISSUED OF THE PROJECT].

According to the environmental study of the project, [INCLUDE THE CONCLUSION OF THE ENVIRONMENTAL STUDY].

It is also important to mention that the following environmental and social programs [CHOOSE HAVE BEEN OR ARE PLANNED TO BE] implemented given the project implementation:

[INCLUDE THE LIST OF THE ENVIRONMENTAL AND SOCIAL PROGRAMS]

C.3. Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA):

Accordingly to article 3 of CONAMA Resolution nr. 237 dated December 19th, 1997 and Complementary Law nr. 38 dated November 21st, 1995, in order to issue licenses, the Environmental Impact Study (from the Portuguese *Estudo de Impacto Ambiental – EIA*) and the Environmental Impact Report (from the Portuguese *Relatório de Impacto Ambiental – RIMA*) are required for hydropower projects with installed capacity greater than 10 MW. However, according to article 12 of CONAMA Resolution nr. 237, the competent entity (environmental agency of the state or national responsible for the licensing) shall evaluate the significance of impact of the project implementation and the types of studies required for each project:

- EIA/RIMA (mentioned above) or;
- Simplified Environmental Report (from the Portuguese *Relatório Ambiental Simplificado – RAS*).

Considering explanations above, depending on the project (type, size, location, and others), an EIA/RIMA or a RAS can be requested by the environmental agency responsible for the licensing process. In the case of *[PLANT NAME]* project, [CHOOSE AN EIA/RIMA OR A RAS] is required for the licensing process.

SECTION D. Stakeholders' comments

D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:

☒ Please tick if this information is provided at the PoA level. In this case sections D.2. to D.4. need not be completed in this form.

Considering the lack of knowledge of future CPAs, the local stakeholder was conducted at the PoA level based on the requirements of the Brazilian Designated National Authority "*Comissão Interministerial de Mudanças Globais do Clima*" in order to obtain the Letter of Approval.

D.2. Brief description how comments by local stakeholders have been invited and compiled:

Not applicable.

D.3. Summary of the comments received:

Not applicable.

D.4. Report on how due account was taken of any comments received:

Not applicable.

Annex 1

CONTACT INFORMATION ON ENTITY/INDIVIDUAL RESPONSIBLE FOR THE CPA

Organization:	
Street/P.O.Box:	
Building:	
City:	
State/Region:	
Postfix/ZIP:	
Country:	
Telephone:	
FAX:	
E-Mail:	
URL:	
Represented by:	
Title:	
Salutation:	
Last Name:	
Middle Name:	
First Name:	
Department:	
Mobile:	
Direct FAX:	
Direct tel:	
Personal E-Mail:	

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Annex 2

INFORMATION REGARDING PUBLIC FUNDING

No official development assistance or related public funding was or will be used in proposed project.

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Annex 3

BASELINE INFORMATION

This section is intentionally left blank. Detailed information is presented in section B.5.

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Annex 4

MONITORING INFORMATION

This section is intentionally left blank. Detailed information is presented in section B.6.

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