SMALL-SCALE PoA CDM VALIDATION REPORT

Negocios Energéticos de Occidente S.A (NEOSA) and South Pole Carbon Asset Management Ltd

VALIDATION OF THE PROGRAM OF ACTIVITIES:

HydroAlliance Programme of Activities

AENOR REFERENCE: 2011/084/CDM/17

VERSION:02

Validation Report:	AENOR Reference nº		Version of this report:	Date:
	2011/084/CDM/17		02	15/10/2012
SSC- PoA-DD:	Title:		GSC publication date:	Comments received:
	Hydro Alliance Programme of Activities		04/05/2011	☐Yes* ☒ No
Parties involved:	Host Party:		Other involved Parties:	
	Guatemala and El Salvador		Switzerland	
Project Participant(s):	In host Party:		In other involved Parties:	
	Negocios Energéticos de Occidente S.A		South Pole Carbon Asset Management Ltd.	
Size of the PoA:	☒ Small scale ☐ Large scale			
Applied methodology/ies:	Title:		Code:	Nº version / Scope:
	Grid connected renewable electricity generation		AMS-I.D	17 / 01
Applied tools:	Title:		Version:	
	Tool to calculate the emission factor for an electricity system		version 02.2.1	
Emission reductions (ER): ☒**Annual average of the ER (tCO_2e)** ☐ **Total ER (tCO_2e)**	GSC PoA-DD:		Final PoA-DD:	
	2,532 (CPA-DD)		3,642 (CPA-DD)	
Previous versions of this document:			Version:	Date:
			1	05/10/2012
Report prepared by:	Climate Change Unit. AENOR			

* The comments are detailed in Section 5 of this Validation Report

Abbreviations

AENOR	Spanish Association for Standardization and Certification
ACM0002	Consolidated baseline methodology for grid-connected electricity generation from renewable sources version 12.3.0
AMS-I.D	Grid connected renewable electricity generation-version 17
BM	Build Margin
CAR	Corrective action request
CL	Clarification
CDM	Clean Development Mechanism
CDM SSC-CPA-DD	CDM Programme Activity Design Document
CDM SSC-PoA-DD	Small Scale CDM Programme Of Activities Design Document
CER	Certified emission reductions
CME	Coordinating and Managing Entity
DECISION 4/CMP.1	Simplified Modalities and Procedures for Small-Scale CDM Project Activities Annex II
DNA	Designated national authority
EB	Executive Board of the CDM of the Kyoto Protocol
EIA	Environmental Impact Assessment
GHG	Greenhouse Gasses
FAR	Forward Action Request
GSC	Global stakeholder consultation process
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring plan
MWh	Megawatt hour

NGO	Non-Governmental Organization
OM	Operating Margin
PP	Project Participant
tC	Carbon tonne
TJ	Terajoule
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

Table 1: Abbreviations

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1 INTRODUCTION

1.1 Objective

This validation concerns a small scale CDM Programme of Activities (hereinafter PoA) implemented by Negocios Energeticos de Occidente S.A (hereinafter NEOSA), and South Pole Carbon Asset Management Ltd (hereinafter, South Pole) in Guatemala and El Salvador, to reduce emissions of CO_2 by means of the development of small scale hydropower plants, that either meet the suppressed energy demand and alleviates energy poverty and /or replaces non-renewable energy (typically energy generated from fossil fuels).

NEOSA has commissioned AENOR to validate this PoA. The objective of the validation process is to have an independent, third party assessment of the proposed Programme of Activities (PoA) and the CDM Programme Activity (CPA) template with generic information applicable to all CPAs under that PoA and the associated El Ixtalito Hydroelectric Project, San Marcos, Guatemala CPA-DD against the applicable CDM requirements. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country issues and criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is considered essential in providing quality assurance for the project.

UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed to in the Bonn Agreement and the Marrakech Accords.

1.2 Scope

The scope of the validation is to assess all aspects of GHG reduction involved in the PoA, including the project design, the baseline, the emissions reductions claimed, the determination of the emission factor of the grid to calculate the project emissions, and the procedures proposed for monitoring the emission reductions in the future.

The following documents were reviewed as part of the scope of the activity:

- CDM SSC-PoA-DD (First /1/ and final version /2/), including baseline study and monitoring plan
- SSC CPA Ixtalito (first version /3/ and final version /4/)
- CDM SSC-generic-CPA-DD (first version /5/ and final version /6/)
- Approved Methodology: AMS I.D version 17 /7/
- Approved Methodology: ACM0002 version 12.3.0 /8/
- Tool to calculate the emission factor for an electricity system, version 02.2.1 /9/
- Decision 3/CMP.1 and relevant decisions and guidelines from the EB. /10/
- Guidelines for demonstrating additionality of microscale project activities, version 04 /11/
- Guidelines on the demonstration of additionality of small-scale project activities EB 68 /12/

- Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 01.0) /13/
- Procedures for Registration of a Programme of Activities as a single CDM project activity and issuance of Certified Emission Reductions for a Programme of Activities, version 04.1 /14/
- Guidelines on the Assessment of Investment Analysis, version 05 /15/
- CDM Validation and Verification Manual version 01.2 /16/
- Letter of Approval from the DNA of Guatemala /17/
- Letter of Approval from the DNA of El Salvador /18/
- Letter of Approval from the DNA of Switzerland /19/
- Associated documentation (environmental requirements, investment analysis, etc)

The validation scope is defined as an independent and objective review of the PoA-DD, the Small Hydro Power Project Ixtalito CPA-DD and generic CPA-DD, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. AENOR, based on the Specific Instruction for the Processing and Conducting of Validation, Registration, Verification and Certification of Kyoto Protocol CDM Project Activities (IE-DTC-039), has used a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consultancy services to the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the PoA-DD.

2 METHODOLOGY

The project assessment aims at being a risk-based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of designated and applicant entities, which aims to harmonize the approach and quality of all such assessments.

The validation of the programme began in May 2011 and was concluded in October 2012. The validation was performed in the manner of an audit, where, first, a desk review of the PoA-DD, Ixtalito Hydroelectric Project CPA-DD and generic CPA-DD was undertaken against the approved methodology and CDM and other relevant criteria. The desk review was followed by a site visit to the Host Country of Ixtalito hydropower plant, to the project site and key stakeholders in Guatemala.

In order to ensure transparency, two validation protocols were customized for the PoA and the CPAs, according to Specific Instruction IE/DTC/039. The protocols show, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria.

The sequence of the validation is given in the table below:

Topic	Date
Submission of PoA-DD for global stakeholder consultation process	04/05/2011
On-site visit	13-15/06/2011
Validation Protocol - Version 01.	17/07/2011
Final Validation Report	15/10/2012

Table 2: Sequence of the main validation activities

2.1 Appointment of team members and technical reviewers

The list of involved personnel and the qualification status are summarized in the table below:

Name	Qualification	
	Position in the team	**Technical areas**
Jose Luis Fuentes Pérez	Chief Validator and Technical Expert	**TA 1.2**
Luis Javier Arribas Alonso	Validator and Technical Expert	**TA.1.2**
Freddy Garro	Validator and Technical Expert	**T.A.1.2**
Mª Carmen Gonzalez Galán	Technical Reviewer	**TA 1.2**
Jose Antonio Gesto Vilacoba	Technical Reviewer	**TA 1.2**

Table 3: List of the personnel involved

Technical areas (TA) mentioned above correspond to the following:

TA code	Technical area
TA 1.1	Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX);
TA 1.2	Energy generation from renewable energy sources.
TA 2.1	Electricity distribution;
TA 2.2	Heat distribution
TA 3.1	Energy demand
TA 4. 1	Cement sector (COMPLEX);
TA 4.2	Aluminium (COMPLEX);
TA 4.3	Iron and steel (COMPLEX);
TA 4.4	Refinery (COMPLEX)
TA 5.1	Chemical process industries (COMPLEX).
TA 6.1	Construction.
TA 7.1	Transport.
TA 8.1	Mining and mineral processes, excluding those included in TA 8.2 below;
TA 8.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).

TA code	Technical area
TA 9.1	Metal production.
TA 10.1	Mining and mineral processes, excluding those included in TA 10.2 below;
TA 10.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).
TA 11.1	Chemical process industries (COMPLEX);
TA 11.2	GHG capture and destruction.
TA 12.1	Chemical process industries (COMPLEX).
TA 13.1	Waste handling and disposal;
TA 13.2	Animal waste management.
TA 14.1	Forestry
TA 15.1	Agriculture
TA 15.2	Animal waste management.

Table 4: List of technical areas

2.2 Document review

The POA-DD, El Ixtalito Hydroelectric Project CPA-DD and generic CPA-DD submitted by the PPs were reviewed against the approved methodology and against CDM and other relevant criteria. Additional background documents related to the project design, baseline and financial analysis were also made available to the AENOR validation team. They are detailed in reference section.

To address the corrective actions and clarification requests that arose from the desk review and on-site visit, the consultants revised the initial PoA design documents submitted and developed the final PoA-DD and CPA-DD.

2.3 Follow-up actions

The AENOR validation team composed by Luis Javier Arribas and Freddy Garro conducted interviews with project developers and main stakeholders in Guatemala to confirm selected information and to resolve issues identified in the document review.

On 13-15/06/2011, AENOR´s validation team performed interviews and physical site inspections with project stakeholders to confirm relevant information, and to resolve issues identified in the document review. During the visit, representatives from Guatemalan project participants, in addition to relevant local stakeholders such as local authorities and local inhabitants, affected by the PoA were interviewed. Also, the AENOR team visited the Guatemalan DNA representative.

Interviewed organization Person/Position	Interview topics

Interviewed organization Person/Position	Interview topics
Luis Alejandro Mejía: Negocios Energeticos de Occidente, S.A. Diego Samayoa: CDM Project Coordinator. Negocios Energeticos de Occidente, S.A.. Ana Terroba: South Pole. Fernando Villasana: South Pole. Raúl Castañeda (Guatemalan DNA) Roxanna Martinez (Guatemalan DNA) Luisa Fernandez (Guatemalan DNA) Sergio Porres: Mayorista de Electricidad S.A Angela Aguilar: Development Communities Council (COCODE) Amilcar Maldonado: Auxiliary Major of "La Conquista" Community. Flora Carmen: COCODE Teresa Constanza: COCODE Silvia Aguilar: COCODE Danilo Guzmán: Third Major. "La Conquista" Community. Teolinda Flores: COCODE Adan Fernando Maldonado: COCODE Virgilio Gonzales: COCODE Denis Ariel. Manager Aldea de la Conquista School. Maria Jacinta. Teacher Artemino Ramirez: Consulting Firm "Asesoria en Recursos Naturales y Constructora Sociedad Anonima" (ARNC)	Programme design. System management. Compliance with environmental law. Permits and authorizations applicable to the Programme Additionality assessment. Ex-ante baseline determination: Consultation with municipal´s authorities, landowners and other stakeholders. Opinion about the Programme. Knowledge of the environmental impacts. Benefits for the community. PoA compliance with local policies and legislation

Table 5. Interview topics

2.4 Findings

As an outcome of the validation process, the team can raise different types of findings according to the CDM Validation and Verification Manual.

A Clarification Request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met; or

Where a non-conformance arises the validation team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

b) The CDM requirements have not been met;

c) There is a risk that emission reductions cannot be monitored or calculated.

Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

A Forward Action Request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

The project participants were requested to address all validation findings and ultimately provided the validation team with sufficient evidence to determine that the applicable CDM requirements have been met. The project participant modified the initial PoA-DD to resolve the validation team concerns and resubmitted a final version of the PoA-DD. AENOR has prepared this report based on the final PoA-DD.

All the validation findings are summarized in section 3 below and documented in section 7 and in the validation protocol included in Annex 1.

2.5 Internal Quality Control

Following the completion of the assessment process by the validation team, all documentation undergoes an internal quality control through a technical review before submission to the CDM-EB. The technical reviewer is a qualified member of AENOR, independent from the team that carried out the validation of the project activity. The technical reviewer or the team appointed for the technical review are qualified in the technical area(s) and sectoral scope(s) of the PoA.

3 VALIDATION FINDINGS

3.1 Approval

Regarding the approval requirements, letters of approval were requested from the PPs.

The Letter of Approval /17/ for the proposed PoA from the Guatemalan DNA has been provided to the validation team directly by the project participants. The LoA was issued on 17 November 2011 (No. DNA/029) by the Ministry of Environment and Natural Resources. AENOR confirms that the LoA states the following:

- Guatemala is a Party of the Kyoto Protocol.
- The Participation of Guatemala is voluntary and the proposed Programme of Activities will contribute to the Guatemala´s sustainable development.
- The LoA refers to the precise proposed CDM project activity title in the PoA-DD being submitted for registration.

The Letter of Approval for the proposed PoA /18/ from the DNA of El Salvador has been provided to the validation team directly by the project participants. The LoA was issued on 12 June 2012 by the Ministry of Environment and Natural Resources. AENOR confirms that the LoA states the following:

- El Salvador is a Party of the Kyoto Protocol.
- The Participation of El Salvador is voluntary and the proposed Programme of Activities will contribute to the El Salvador´s sustainable development.
- The LoA refers to the precise proposed CDM project activity title in the PoA-DD being submitted for registration.

The Letter of Approval /19/ for the proposed PoA from the Switzerland has been provided to the validation team directly by the project participants. The LoA was issued on 21 September 2012 by the Federal Office for the Environment (FOEN). AENOR confirms that the LoA states the following:

- Switzerland is a Party of the Kyoto Protocol.
- The Participation of Switzerland is voluntary in the proposed Programme of Activities.
- The LoA refers to the precise proposed CDM project activity title in the PoA-DD being submitted for registration.

Regarding the PoA-DD submitted to GSC, the host countries of Nicaragua and Panama have been discarded regarding the information in the first POAD-DD submitted to GSC, then, LoAs from these countries have not been requested.

AENOR confirms that the LoAs from Guatemala, El Salvador and Switzerland have been issued by the respective parties' designated national authorities and does not doubt the authenticity of the letters of approval received from the PPs; hence AENOR confirms that the LoAs are in compliance with paragraphs 45-48 of the VVM v.1.2. The validation did not reveal any information that indicates that the programme can be seen as a diversion of ODA funding towards host countries.

3.2 Participation

Three Parties, Guatemala, El Salvador and Switzerland are involved in the PoA.

The host Parties Guatemala and El Salvador ratified the Kyoto Protocol on 5 October 1999 and 17 September 1998, respectively, and have appointed DNAs like Switzerland which also ratified the Kyoto Protocol on 9 July 2003.

The PoA CME (Coordinating and Managing Entity) is NEOSA, which is authorized as Project Participant by Guatemalan DNA /17/ and El Salvadorian DNA /18/ and also authorized by the host Parties, Guatemalan DNA /20/ and El Salvador´s DNA /18/ as the Coordinating and Managing Entity. Likewise, South Pole Carbon Asset Management Ltd is also authorized as PP by the Switzerland DNA /19/. All project participants have been listed in section A.3 of the final PoA-DD. Information regarding project participants is confirmed as consistent in the latest PoA-DD and Ixtalito CPA-DD. AENOR confirms that no entities other than those approved as project participants are included in the final PoA-DD.

3.3 Programme Design Documents

Due to the clarifications and corrective actions requested during the validation process, the project participants made a final version of the PoA-DD and the Generic CPA-DD, which include corrections or clarifications to all issues raised.

The PoA-DD and the Generic CPA-DD are in compliance with relevant form and guidance as provided by UNFCCC. The most recent version of the forms under VVM Track is used.

AENOR considers that the guidelines for the completion of the PoA documents in their most recent version have been followed under VVM track. Relevant information was provided by the Managing entity and/or project participants in the applicable PoA-DD sections. Completeness was assessed through the protocol included in Annex 1.

3.4 Programme description

The Hydro Alliance Programme of Activities (PoA) will support the development of new, small-scale, grid-connected-hydropower plants in the Republic of El Salvador and in the Republic of Guatemala contribuiting to sustainable development of the host countries.

PPs have provided the reports "Central American Sustainable Energy Strategy 2020 – Economic Commission for Latin America (ECLA), General Secretariat of the Central American Integration System. 2007" /21/ and "State of the Region on sustainable human development summary 2008 / Program State of Nation. – San José C.R. : the program, 2008" /22/ which confirm that Central America has a large and virtually untapped hydropower potential that could be energy sources for small hydropower plants. The market-share of hydro resources, however, decreased from 70% in 1990 to 55% in 2006, in contrast with the market share of thermal generation based on fossil fuels that increased from 30 to 45% in the same period. Moreover, the report by ECLA states that the Central American energy supply system presents several technical and economic inefficiencies that represent price increases for final consumers.

Taking into account this scenario for hydroresourecs, the small hydropower developments are an attractive energy solution that can meet the growing demand for electricity in the region.

The PoA CME has confirmed that there is no diversion of ODA involved. The starting date of the proposed PoA is properly defined as 04 May 2011 and it is justified in section 3.6.1 of this report. The length of PoA is taken as 28 years.

AENOR has checked other relevant evidence provided /30/ /31/ /32/ which confirm the description of the proposed POA in the DD and demonstrates that the Proposed POA is a voluntary action.

The information presented in the PoA documents on the technical design is consistent with the actual planning and implementation of the project activity confirmed in the following ways:

- A review of data and information.
- An on-site visit to the place where the associated real case CPA is being implemented and interviews with relevant stakeholders and personnel with knowledge of the project in attendance.
- A review of information related to similar projects or technologies which have been used to validate the accuracy and completeness of the project description.

In conclusion, AENOR confirms that the PoA project description, as included in the PoA-DD, is sufficiently accurate and complete in order to comply with the requirements of the CDM and therefore in compliance with VVM paragraphs 58-64.

3.5 Baseline methodology

The PoA-DD describes the baseline methodology, which is in conformance with the approved baseline methodology AMS-I.D version 17 entitled "Grid connected renewable electricity generation".

The PoA-DD applies to a valid tool for the calculation of the grid emission factor, "Tool to calculate the emission factor for an electricity system" version 02.2.1.

The PoA applies to a valid version of a CDM Methodology approved by the EB. By means of cross check it can be confirmed that the applied methodology is directly derived from the methodologies section on the CDM web site. The PoA meets all applicability conditions of the applied methodology and all methodology components referred to in the applied methodology. Beyond this, the proposed PoA meets all the other possible requirements or stipulations mentioned in all sections of the selected methodology.

Furthermore the programme of activities is not expected to result in significant emissions, related to both project and leakage, other than those listed in the methodology. In summary it has been assessed that the PoA applies a valid version of an approved CDM methodology and that the methodology is applicable to the programme.

3.5.1 Applicability of the selected methodology to the Programme of Activities

The selected baseline and monitoring methodology used for the proposed Programme of Activities is AMS-I.D version 17, which is valid from 17 June 2011 onwards and was previously approved by the CDM Executive Board. The version has been updated from first POA-DD submitted to GSC which used version 16.

The methodology is applicable to the Programme of Activities, because:

1. *The applicability of the selected methodology to the proposed CDM project activity has been assessed as it is applicable to renewable energy generation units such as photovoltaic, hydro, tidal|wave, wind, geothermal and renewable biomass:*
    a) *Supplying electricity to a national or a regional grid; or*
    b) *Supplying electricity to an identified consumer facility via national|regional grid through a contractual arrangement such as wheeling.*

As per eligibility criteria 1 and 11, a SSC-CPA will consist of a hydroelectric plant that supplies electricity to a grid within the host countries.

2. *This methodology is applicable to project activities that:*
    a) *Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant);*
    b) *Involve a capacity addition;*
    c) *Involve a retrofit of (an) existing plant(s); or*
    d) *Involve a replacement of (an) existing plant(s).*

As per eligibility criterion 10, the SSC-CPA shall be a project activity that will:
(a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition;(c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).

3. *Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:*
    a) *The project activity is implemented in an existing reservoir with no change in the volume of reservoir;*
    b) *The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W|m2;*
    c) *The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W|m^2.*

As per eligibility criterion 12, a SSC-CPA that comprises a reservoir shall have a power density greater than 10 W|m2.

4. *If the new unit has both renewable and non-renewable components (e.g. a wind|diesel unit), the eligibility limit of* 15 *MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of* 15 *MW.*

As per eligibility criterion 13, the total installed capacity of each SSC-CPA must not be greater than 15 MW.

5. *Combined heat and power (co-generation) systems are not eligible under this category.*

This is not applicable to small hydropower plants.

6. *In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than* 15 *MW and should be physically distinct from the existing units.*

As per eligibility criteria 13 and 19, the total installed capacity must not exceed 15 MW, and the operation of the added units must not interfere with the operation of the existing units; therefore, must be "physically distinct".

7. *In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of* 15 *MW.*

As per eligibility criterion 13 the total installed capacity must not exceed 15 MW.

8. Applicability conditions related to biomass projects are not applicable.
9. *In case the project activity involves the replacement of equipment, and the leakage from the use of the replaced equipment in another activity is neglected, because the replaced equipment is scrapped, an independent monitoring of scrapping of replaced equipment needs to be implemented. The monitoring should include a check if the number of project activity equipment distributed by the project and the number of scrapped equipment correspond with each other. For this purpose scrapped equipment should be stored until such correspondence has been checked. The scrapping of replaced equipment should be documented and independently verified.*

In the case of a SSC-CPA that involves the replacement of equipment; the replaced equipment must be scrapped or destroyed. The scrapping of the replaced equipment must be monitored and documented by an independent party.

AENOR confirms the applicability of the selected methodology to the Programme of Activities. The latest version of the PoA-DD adequately describes the different applicability conditions of the methodology and no deviation from the methodology has been necessary.

The Programme of Activities is not expected to result in emissions other than those allowed by the methodology, and there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

3.5.2 Programme boundary

The boundaries (geographically and related to GHG sources / sinks) are correctly given in section A.4.1.2 of the PoA-DD. The geographical boundary of this PoA is the geographical area of Guatemala and El Salvador.

As per AMS-I.D version 17, The project boundary encompasses the hydropower project site from the water intake to the substation or interconnection point where the electricity is delivered to the grid, and all power plants connected physically to the electricity system that the CDM project power plant is connected to.

The information has been also correctly given in section A.4.1.2 of the real case CPA-DD.

The physical delineation of the CPA under the PoA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA.

In addition, all emission sources and GHGs related included and excluded from the project boundary are clearly identified and described in a complete manner in the latest version of the PoA-DD.

The validation team states that the identified boundary and the selected sources and gases are correctly justified by the project proponent in the PoA-DD, and they are in accordance with the methodology AMS-I.D version 17.

3.5.3 Baseline identification

Regarding the baseline identification, two possible baseline scenarios are considered in the Programme of Activities, depending on the type of hydropower plant to be implemented:

1. If the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.
2. For project activities that involve retrofits or replacements of an existing facility for renewable energy generation the baseline scenario is the continuing operation of the existing plant. The methodology uses historical electricity generation data to determine the electricity generation of the existing plant in the baseline scenario, assuming that the historical situation observed prior to the implementation of the project activity would continue.

   In the absence of the CDM project activity, the existing facility would continue to provide electricity to the grid $EG_{BL,retrofit,y}$ at historical average levels $EG_{historical,y}$ until the time at which the electrical generation facility would be likely to be replaced or retrofitted in the absence of the CDM project activity ($DATE_{BaselineRetrofit}$).

The approved methodology that is selected by the proposed CDM Programme of Activities prescribes the baseline scenarios and no further analysis is required, thus it is not necessary to

identify credible alternatives to the project activity in order to determine the most realistic baseline scenario. *(VVM 1.2 , paragraph 105)*. Therefore, the baseline determination is considered as transparent and reasonable.

3.5.4 Algorithms and/or formulae used to determine emission reductions

Concerning the determination of the emission reductions in the PoA-DD, all evidence, assumptions and official data sources |23| |24| |25| |26| along with the spreadsheet |27| for the determination of the emission reductions have been provided to reproduce the calculation to obtain same results.

In accordance with the methodology, the emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y are the total emissions reductions during the year y in tons of CO_2

PE_y are the emissions from the project activity during the year y in tons of CO_2

BE_y are the baseline emissions for the project activity during the year y in tons of CO_2.

Baseline Emissions

Since, two possible baseline scenarios are considered in the Programme of Activities, depending on the type of hydropower plant to be implemented, the following formulae shall be applied:

(a) Installation of a new grid-connected hydropower plant/unit:

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

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y}$$

Where:

BE_y Baseline Emissions in year *y* (t CO_2)

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

$EF_{CO2,grid,y}$ CO_2 emission factor of the grid in year *y* (t CO_2/MWh), calculated using the latest version of the "*Tool to calculate the emission factor for an electricity system version* 2.2.1" (tCO_2/MWh).

(b) Retrofit/capacity addition of hydropower plants:

$$BE_{retrofit,CO2,y} = [EG_{BL,retrofit,y}] * \mathrm{EF}_{\mathrm{CO2}}$$

Where:

$$EG_{BL,retrofit,y} = \mathrm{EG}_{\mathrm{PJ,facility,y}} - (\mathrm{EG}_{\mathrm{historical}} + \sigma_{\mathrm{historical}})$$

$$EG_{BL,retrofit,y} = 0 \; on/after \; DATE_{BaselineRretrofit}$$

Where:

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

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

$EG_{historical}$ Annual average historical net electricity generation by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity (MWh)

Average of historical net electrical energy levels delivered by the existing facility, spanning all data from the most recent available year (or month, week or other time period) to the time at which the facility was constructed, retrofit, or modified in a manner that significantly affected output (i.e. by 5% or more), shall be used.

To determine $EG_{historical}$, project participants may choose between the following two historical periods (This allows some flexibility; the use of the longer time period may result in a lower standard deviation and the use of the shorter period may allow a better reflection of the (technical) circumstances observed during the more recent years).

(a) The three last calendar years (five calendar years for hydro project) prior to the implementation of the project activity; or

(b) The time period from the calendar year following *DATEhist*, up to the last calendar year prior to the implementation of the project, as long as this time span includes at least three calendar years (five calendar years for hydro project), where *DATEhist* is latest point in time between:

(i) The commercial commissioning of the plant/unit;

(ii) If applicable: the last capacity addition to the plant/unit; or

(iii) If applicable: the last retrofit of the plant/unit

$\sigma_{historical}$ Standard deviation of the annual average historical net electricity supplied to the grid by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity (MWh)

$DATE_{BaselineRretrofit}$ Point in time when the existing equipment would need to be replaced in the absence of the project activity (date)

According to the methodology, the POA-DD considers for capacity addition in hydro projects the equation $EG_{BL,retrofit,y} = EG_{PJ,facility,y} - (EG_{historical} + \sigma_{historical})$ but replacing subscript "retrofit" with "capacity addition", where $EG_{PJ,y} = EG_{PJ_Add,y}$, thus, $BE_{add,CO2,y} = [EG_{BL,add,y}] * EF_{CO2}$

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/yr)

EG_{PJ_Addy} = Quantity of net electricity generation supplied to the grid in year y by the project plant/unit that has been added under the project activity (MWh/yr)

According to the baseline methodology AMS-I.D version 17, the $EF_{CO2,grid,y}$ for all SSC-CPAs in this proposed POA has been calculated using the option a) of the methodology, i.e, determining the combined margin following the six steps of the "Tool to calculate the emission factor for an electricity system" version 02.2.1,

Step 1.-Identify the relevant electricity system.

According to the "Tool to calculate the emission factor for an electricity system" (version 2.2.1), a project electricity system has to be defined by the spatial extent of the power plants that are physically connected through transmission and distribution lines to a project activity (in this case, to a SSC-CPA) and that can be dispatched without significant transmission constraints. Correspondingly, in this Programme of Activities the electricity system includes the SSC-CPA site and all power plants attached to grid as defined by the Administration of the Wholesale Market in Guatemala and by the General Electricity and Telecommunications Superintendence in El Salvador. In both countries, the electricity system is nation-wide and includes imports and exports. The detail of the individual systems covered by each grid is shown under step 3 below.

Step 2.- Choose whether to include off grid power plants in the project electricity system.

The option I has been chosen and grid power plants are only included in the calculation.

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

For the calculation of the OM emission factor of both national grids, the simple adjusted OM emission factor calculation method is selected because low cost/ must-run projects constitute more than 50% of the total grid generation.

AENOR has checked and reproduced the emission factor calculations to obtain the same results with spreadsheet provided by PPs /27/ and credible and reliable sources also provided by Administration of the Wholesale Market /23/, by the Guatemalan Centre of Research and Capacity Building on Sugar Reed, Cengicana /24/, by Transaction Unit S.A de CV /25/ and the Electric Statistics Bulletin by the General Electricity and Telecommunications Superintendence (SIGET). /26/.

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

The operating margin in the proposed SSC-PoA for the Guatemalan and Salvadorian grids is calculated ex-ante with a three-year-generation-weighted average CO_2 emissions per unit of net electricity generation (tCO_2/MWh) of all generating power plants serving the system, including low-cost/must-run power plants/units. These estimations follow the Simple adjusted OM calculation method. AENOR has checked that data used in the OM calculations of both countries (Guatemala and El Salvador) are based on the most recent data available at the time of submission of the POA-DD to the DOE for validation, i.e, data from 2008, 2009 and 2010 for both countries.

The Simple adjusted OM emission factor is a variation of the Simple OM emission factor, where the power plants/units *(*including imports*)* are separated in low-cost/must-run power sources *(k)* and other power sources *(m)*. As under Option A of the simple OM, it is calculated based on the net electricity generation of each power unit and an emission factor for each power unit.

The ex-ante calculation of the operating margin is based on public available documentation issued mainly by the Wholesale Market in Guatemala, by the General Electricity and by the Telecommunications Superintendence in El Salvador.

Option A2 is used in the case of Guatemala and El Salvador when only the data on electricity generation and the fuel types used is available.

Where several fuel types are used in the power unit, the fuel type with the lowest CO_2 emission factor for $EF_{CO2,m,i,y}$ is used.

Option A3 is used if for a power unit *m* only data on electricity generation is available, and an emission factor of 0 tCO_2/MWh will be asumed as a simple an conservative approach.

For this PoA, the CME has chosen to apply the emission factor of 0 tCO_2/MWh to net electricity imports and the option A2 is used for calculating the emission factor of each power unit as only the data on electricity generation and the fuel types used is available.

Taking into account these assumptions and data sources used and provided to AENOR, the OM emission factor for Guatemala is 0.8138 tCO_2/MWh and 0.7915 tCO_2/MWh, for El Salvador.

Step 5.- Calculate the build margin emission factor

In terms of vintage of data, project participants have chosen the option 1 of the tool for the grid emission factor estimation of both host countries, using the most recent information available at the time of POA-DD submission to the DOE for validation, i.e, data from 2010 in both countries Guatemala and El Salvador.

As per the tool, capacity additions from retrofits of power plants are not included in the calculation of the build margin.

The CO2 emission factor of each power unit m *(*EFEL,m,y*)* shall be determined as per the guidance for the simple OM, using options A2 in both countries.

In case of Guatemalan grid**, t**he chosen SET_{sample} is $SET_{sample\text{-}CDM}$ that comprises 20% of the annual electricity generation of the CPA electricity system including CDM plants and excluding those plants that started to supply electricity to the grid more than 10 years ago.

AEG total 2010 non-CDM	**7.042.097**	**MWh**	
AEG SET 5-units	**5.101**	**MWh**	
SET ≥ 20% [non-CDM] Includes power units with more than 10 years	**1.419.659**	**MWh**	**20,160%**
SET sample-CMD including	**2.016.875**	**MWh**	**28,640%**

CDM and excluding those older than 10 years	

In case of Salvadorian Grid, the selected SET_{sample} is $SET_{\geq 10\ years}$ including CDM plants, and also plants older than 10 years old, taking into account the following data:

AEG Total 2010 non CDM	**5,664,981.30 mwH**
SET>=20% including CDM and older than 10 years	**1,668,105 MWh**
	29.45%

Considering these assumptions and data sources, the BM emission factor for Guatemala is 0.2611 tCO_2/MWh and 0.4139 tCO_2/MWh for El Salvador.

Step 6.-Calculate the combined margin (CM) emissions factor.

The combined margin emissions factor is is based on one of the following methods:

a. Weighted average CM; or
b. Simplified CM.

The weighted average CM is the preferred method; and the simplified CM method can only be used if:

a. The project activity is located in a Least Developed Country (LDC) or in a country with less than 10 registered projects at the starting date of validation; and
b. The data requirements for the application of step 5 above cannot be met.

The choice of one method over the other one is justified in the individual grid emission factor calculation for each host country. In the case of this proposed POA, the Weighted average CM is chosen.

As per the "Tool to calculate emission factor for an electricity system, version 02.2.1", for hydropower projects, the default weights are as follows: w_{OM} = 0.50 and w_{BM} = 0.50 and the Combined Margin emission factor is calculated as per formula

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

Based on spreadsheet provided, data calculation, and assumptions, the CM Emission Factor of the Guatemalan grid is 0. 5375 tCO_2/MWh and CM Emission Factor of the Salvadorian grid is 0.6027 tCO_2/MWh.

Project Emissions

As per paragraph 20 of AMS I.D v17, for most renewable energy project activities, PEy = 0. However, for emissions from water reservoirs of hydro power plants, project emissions have to be considered following the procedure described in the most recent version of ACM0002.

Paragraph 21 of AMS I.D v17 states also that "CO2 emissions from on-site consumption of fossil fuels due to the project activity shall be calculated using the latest version of the Tool to calculate project or leakage CO2 emissions from fossil fuel combustion".

The SSC-CPA project emissions are calculated as follows:

$$PE_y = PE_{FC,\,y} + PE_{GP,\,y} + PE_{HP,\,y}$$

Where:

PEy = Project emissions in year y (tCO2e/yr)

PEFC, y = Project emissions from fossil fuel consumption in year y (tCO2/yr)

PEGP, y = Project emissions from the operation of geothermal power plants due to the release of non-condensable gases in year y (tCO2e/yr)

PEHP, y = Project emissions from water reservoirs of hydro power plants in year y (tCO2e/yr)

PEGP, y =0, as geothermal power plants are not applicable to the proposed POA.

As per ACM0002 version 12.3.0, which is still applicable, for hydro power project activities that result in new reservoirs and hydro power project activities that result in the increase of existing reservoirs, project proponents shall account for CH_4 and CO_2 emissions from the reservoir if the power density of the project activity is greater than 4W/m^2 and less or equal to 10 W/m^2. In these cases, PE_y will be calculated as:

<u>(a) If the power density of the single or multiple reservoirs *(PD)* is greater than 4 W/m^2 and less than or equal to 10W/m^2:</u>

$$PE_{HP,y} = \frac{EF_{Res} \cdot TEG_y}{1000}$$

Where:

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

EF_{Res} = Default emission factor for emissions from reservoirs of hydro power plants in year *y* ($kgCO_2e/MWh$)

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)

<u>(b) If the power density of the project activity *(PD)* is greater than 10 W/m^2:</u>

$$PE_{HP,y} = 0$$

The power density of the project activity *(PD)* is calculated as follows:

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$

Where:

PD	=	Power density of the project activity *(W/m²)*
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 *(m²)*
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 *(m²)*. For new reservoirs, this value is zero

For project activities in which the power density is greater than 10 W/m2, PEHP,y =0. As per eligibility criterion 12, no project emissions will be generated from the operation of the SSC-CPA under this POA-DD, then PEHP,y =0.

Regarding the $PE_{FC,y}$, they will be calculated as follows:

$$PE_{FC,j,y} = \sum_i FC_{i,j,y} \times COEF_{i,y}$$

Where:

PEFC,j,y Are the project emissions from fossil fuel consumption in process j during year y *(tCO2/y)*

FCi,j,y Is the quantity of fuel type i combusted in process j during the year y *(mass or volume unit/yr)*

COEFi,y Is the CO2 emission coefficient of fuel type i in year y *(tCO2/mass or volume unit)*

i Are the fuel types combusted in process i during the year y

The CO2 emission coefficient COEFi,y can be calculated using one of the following two Options, depending on the availability of data on the fossil fuel type i, as follows:

Option A: The CO2 emission coefficient COEFi,y is calculated based on the chemical composition of the fossil fuel type i, using the following approach:

If FCi,j,y is measured in a mass unit:

$$COEF_{i,y} = w_{C,i,y} \times 44/12$$

If FCi,j,y is measured in a volume unit:

$$COEF_{i,y} = w_{C,i,y} \times \rho_{i,y} \times 44/12$$

Where:

COEFi,y Is the CO2 emission coefficient of fuel type i *(tCO2/mass or volume unit)*

wC,i,y Is the weighted average mass fraction of carbon in fuel type i in year y *(tC/mass unit of the fuel)*

$\rho_{i,y}$ Is the weighted average density of fuel type i in year y (mass unit/volume unit of the fuel)

i Are the fuel types combusted in process j during the year y

Option B: The CO2 emission coefficient COEFi,y is calculated based on net calorific value and CO2 emission factor of the fuel type i, as follows:

$$COEF_{i,y} = NCV_{i,y} \times EF_{CO2,i,y}$$

Where:

COEFi,y Is the CO2 emission coefficient of fuel type i (tCO2/mass or volume unit)

NCVi,y Is the weighted average net calorific value of the fuel type i in year y (GJ/mass or volume unit)

EFCO2,i,y Is the weighted average CO2 emission factor of fuel type i in year y (tCO2/GJ)

i Are the fuel types combusted in process j during the year y

As per the Tool to calculate project or leakage CO2 emissions from fossil fuel combustion, version 2, Option A should be the preferred approach, if the necessary data is available.

The PE from fossil fuel consumptions will be calculated only when the SSC-CPA comprises a fossil fuel backup engine.

AENOR confirms that the calculation of the Project Emissions included in the latest version of the PoA-DD is correct according to the applied methodology and associated tools and all the formulae have been correctly described.

Leakage

Methodology AMS I.D v17 states that "if the energy generating equipment is transferred from another activity, leakage is to be considered". As energy generating equipment will not be transferred from another activity, leakeage is zero. In cases, where the CPA involves the replacement of equipment, as per eligibility criterion 18, leakage related to the replacement of equipment shall be zero: LEy = 0 since the SSC-CPA shall not consider the installation of existing equipment transferred from another hydropower plant.

Emission Reductions

According to the baseline methodology AMS-I.D version 17, the Emissions Reductions have been calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y Emission reductions in year *y* (t CO_2/y)

BE_y	Baseline Emissions in year *y* (t CO_2/y)
PE_y	Project emissions in year *y* (t CO_2/y)
LE_y	Leakage emissions in year *y* (t CO_2/y)

Based on the above assessment, AENOR confirms that that:

- All assumptions and data used by the project participants are listed in the PoA-DD and CPA-DD, including their references and sources;
- All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD and CPA-DD;
- All values used in the PoA-DD and CPA-DD are considered reasonable in the context of the proposed CDM project activity;
- The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD and CPA-DD.

3.6 Additionality

3.6.1 Starting date of the Programme of Activities

According to the final PoA-DD the starting date of the programme is 04/05/2011, the date when the POA-DD was submitted for GSC. Then, it is deemed as appropriate, thus accepted by the validation team of AENOR.

3.6.1.1 Additionality of the Programme of Activities

The additionality of the programme has been presented in section A.4.3 of the PoA-DD. The approach used in the PoA-DD has been assessed initially through the document review followed by on-site discussions. Finally, the data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral and financial expertise.

The proposed PoA is a voluntary action by the coordinating/managing entity – NEOSA. Based on the submitted documents and substantiation it is evident that this voluntary coordinated action would not be implemented in the absence of the PoA.

It has been clearly demonstrated that there is no mandatory policy or regulation in the host countries enforcing the implementation of small hydropower based projects for electricity generation. This was confirmed based on the on-site interviews and the host country experience of the audit team.

In addition, the PoA-DD establishes in Sections A.4.2.2 (eligibility criteria) and E.5 the conditions that ensure that CPAs meet the requirements pertaining to the demonstration of the additionality. Two tests have been chosen to demonstrate CPA additionality:

Test a: Additionality is demonstrated pursuing EB68, Annex 26, paragraph 2.a.i.

Projects with an up to 5 MW of installed capacity and located in a special underdeveloped zone of the host country are automatically additional. SUZ is defined ad per paragraph 2.a.i) of the guidelines for demonstrating additionality of microscale project activity.

Test b: Test b: Additionality is demonstrated in accordance with the Guidelines on the demonstration of Additionality of Small-Scale Project Activities, version 09 pursuing an investment analysis.

For all the projects that do not fulfill the characteristics described in test a above, the test b shall be applied.

Hence, the demonstration of additionality under test b includes the application of the investment barrier of the "Guidelines on the Demonstration of Additionality of Small-Scale project activities" v.9. Investment barrier will be demonstrated by benchmark analysis to show that the alternative to the project activity would have led to higher emissions and the project IRR is lower than a benchmark in order to be deemed additional.

To be additional, each SSC-CPA will have to pass one of these two tests. If the SSC-CPA does not meet the test a, then, test b) shall be applied. The procedure for conducting the tests at SSC-CPA level is described in detail in section E.5.2 of the POA-DD.

The additionality was justified in accordance with the requirements derived from EB 65, Annex 3 version 01.0, thus, based on the assessment above, the PoA is assessed to be additional by the validation team of AENOR.

3.6.1.2 Additionality of a typical SSC-CPA

The additionality of the PoA has been presented on a CPA level. The PoA-DD specifies clearly that in order to demonstrate additionality the CPA should comply with one of the following tests below. If SSC-CPA meeting Test a qualification, Test b must not be performed accordingly.

Test A: This additionality test is based on annex 26 of EB68 according to which renewable energy projects are deemed additional if their total installed capacity is below or equal to 5 MW and are located in a special underdeveloped zone of the host country.

For this test, the size of the renewable project is chosen as per the generator installed capacity. The definition of the special underdeveloped zone will be considered as per paragraph 2.a.i of the "Guidelines for demonstrating additionality of microscale project activities (version 4)", i.e, SUZ is a region in the host country (zone, municipality or any other designated official administrative unit) identified by the Government in official notifications for development assistance including for planning, management, and investment satisfying any one of the following conditions using most recent available data:

- the proportion of population with income less than 2 USD per day (purchasing power parity) is greater than 50%, or

- the GNI per capita in the country is less than USD 3000 and the population of the region is among the poorest 20% in the poverty ranking of the host country as per the applicable national policies and procedures.

Option B: For qualifying SSC-CPAs that do not meet Test a described above, as per "Guidelines on the demonstration of Additionality of Small-Scale Project Activities", version 09 by barriers analysis. The investment barrier will be assessed individually for each CPA based on benchmark analysis because of the project generates financial benefits other than CDM-related income, pursuant to Step 2 of the "Tool for the demonstration and assessment of additionality" (version 6.0.0) and pursuant to the Guidelines on the Assessment of Investment Analysis (version 5, Para 11). The investment analysis uses pre or post tax project IRR and benchmark pre or post-tax considering that: If the investment analysis uses pre-tax project IRR, then it will have to be compared with a pre-tax benchmark; if the investment analysis uses post-tax project IRR, then it will have to be compared with a post-tax benchmark.

Considering that hydropower projects in Central America are financed using a combination of loan and equity financing, the appropriate benchmark is determined as the Weighted Average Cost (WACC), however, individual CPAs are free to use other benchmark approaches such as Prime Lending Rate or any other internal company specific benchmark. However, all of them shall be valid at the investment decision date.

3.7 Monitoring Plan

3.7.1 Compliance of the monitoring plan with the approved methodology

As stated above, the PoA and CPAs use the approved methodology AMS-I.D version 17 for grid connected renewable electricity generation.

All parameters to be monitored applicable to the proposed project activity and consistent with the project description in the PoA-DD, which are required by the applicable methodology and associated tools have been quoted in the POA-DD and generic CPA-DD. In addition, the quality control and quality assurance to apply for monitoring activities, including the metering equipment, calibration requirements have also been detailed.

The monitoring report will compile all required monitoring information for all SSC-CPAs. For each Project Activity under a SSC-CPA, all relevant parameters defined under section E.7.1 will be monitored by the Project Implementer according to the procedures and monitoring framework established in E.7.2. The monitoring data will be submitted to the CME, who will check and finalize the monitoring documentation for verification by the DOE and store the data in a database in such a way that the status of verification can be determined for each SSC-CPA at any time. Each SSC-CPA is to be verified individually

Applicability of this methodology is justified in the final PoA-DD as it involves grid connected renewable power generation using hydro energy.

The combined margin emission factor is determined ex-ante based on the most recent information available. Accordingly, the monitoring plan includes net electricity generated by the project as relevant parameter to be monitored.

The final PoA-DD clearly identifies the parameters to monitor in compliance with the applicable methodology:

$EG_{facility,y}$: Quantity of net electricity supplied to the grid in year y. The net electricity production will be measured continuosly and recorded at least, monthly. Measured electricity will be crosschecked with electricity sales invoices/receipts to assure data consistency.

Cap_{pj} : Installed capacity of the hydro plant after the implementation of the project activity. Yearly monitored.

A_{pj} :Area of the reservoir measured in the surface of the water, after the implementation of the project, when the reservoir is full. Yearly monitored.

$PE_{FC,j,y:}$ Project emissions from fossil fuel consumption in process *j* during year *y*.

$FC_{i,j,y:}$ Quantity of fuel type *i* combusted in process *j* during the year *y*

Wc,i,y: Weighted average mass fraction of carbon in fuel type i in year y.

$\sigma_{historical}$ Standard deviation of the annual average historical net electricity generation delivered to the grid by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity.

Weighted average density of fuel type *i* in year *y*

$NCV_{i,y:}$ Weighted average net calorific value of fuel type *i* in year *y*.

$EF_{CO2,i,y:}$Weighted average CO2 emission factor of fuel *i* in year *y*.

Roles and responsibilities, training actions, archiving, measuring and calculation procedures, equipment details, and calibration requirements are clearly mentioned in the PoA-DD. Therefore, in the opinion of AENOR's validation team the PP's will be able to implement the monitoring plan.

Therefore, in opinion of the AENOR team, all necessary parameters required by the selected approved methodology are contained in the monitoring plan. They are clearly described and the means of monitoring, described in the plan, comply with the requirements of the methodology. The monitoring of the parameters involved in the emission reductions has been established in a transparent and clear way. Thus, the monitoring plan is in compliance with the requirements of the applied methodology.

3.7.2 Implementation of the Monitoring Plan

After the review of evidence provided by the PPs, the interview and communications with PPs, AENOR confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the means considered for the implementation, including data

management, quality and assurance control procedures, are sufficient to ensure that the emission achieved resulting from the proposed PoA can be reported ex post and verified.

Finally, AENOR considers that the project participant is able to implement the monitoring plan stated in the PoA-DD taking into account all the reasons explained above.

3.8 Comments by Local Stakeholders

Local stakeholders' consultation is chosen to be done at CPA level.

By considering the local stakeholders' comments for each specific CPA, the Programme of Activities ensures that the impact of the specific hydropower plants in the neighbour communities will be considered.

3.9 Environmental Impacts

Environmental impact assessments will be conducted for each SSC-CPA according to the applicable laws and regulations at the time of inclusion of SSC-CPA to SSC-PoA.

At the time/date this PoA-DD was written, the rules governing Environmental Impact Assessments were laid out in the following documents:

El Salvador:

- General Law of Electricity *(Ley General de Electricidad)*, approved by the Congress of the Republic of El Salvador.

Article 13 states that any applicant interested in acquiring a concession for use of the hydro resources must provide a written application to the SIGET (General Electricity and Telecommunications Superintendence) and enclose an Environmental Impact Assessment, among other documents.

Guatemala:

- Decree 68-89, Law of Environmental Protection and Improvement (Ley de Protección y Mejoramiento del Medio Ambiente), approved by the Congress of the Republic of Guatemala.

The Decree specifies in the Article 8 that any project or activity that given its characteristics may impact the natural resources, or the environment, or modify in a notorious and/or negative way the landscape or cultural vestiges, must submit an Environmental Impact Assessment.

- Decree 93-96, approved by the Congress of the Republic of Guatemala on October 16th, 1996.

Article 10 of the Decree refers to the electric generation and transportation and states that hydroelectric projects with an installed capacity greater than 5 MW must apply for a water and land use license.

Thus, each and every CPA will have the relevant permits and licences ensuring the compliance with the relevant applicable regulation

4 SPECIFIC PROGRAMME OF ACTIVITIES REQUIREMENTS

4.1 Operational Management and Verification Plan

Management structure of the monitoring plan is defined in Section A.4.4 of the CPA-DD.

Operational management and verification plan in the final PoA-DD is assessed to be appropriate for the purpose of the programme monitoring. The overall responsibility for the monitoring will be held by the NEOSA (Coordinating and Managing Entity), except the Implementation of the hydropower plant project activity (construction, daily operation, and maintenance of hydropower plant) and the praparation of monitoring data that will be carried out by the project implementer.

The operational and management plan for this PoA is based on written procedures and guidelines to facilitate the multinational operational requirements of the CME.

According to paragraph 17 of the "*Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities*". *Version* 01 (*EB*65, *Annex*03,) the CME has developed a Management System which has been provided to the DOE team at the time of validation. AENOR has verified that CME's management system contains the appropriate information in compliance with the CDM requirements for PoAs. AENOR assessed the components of the Management System and confirms that includes the following:

a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies.

b) Records of arrangements for training and capacity development for personnel;

c) Procedures for technical review of inclusion of CPAs;

d) A procedure to avoid double counting

e) Records and documentation control process for each CPA under the PoA;

f) Measures for continuous improvements of the PoA management system;

Operational management and verification plan in the final PoA-DD is assessed to be appropriate for the purpose of the programme monitoring.

The CME will collect the information submitted by each CPA of the PoA. All monitoring data will be stored and archived. Emission reduction calculation of each CPA will be based on data collected and analyzed by NEOSA according to the Management System developed for de proposed PoA.

The database is confirmed as the data management system designed specifically for the PoA to ensure the data accuracy, to avoid double counting, to address uncertainty (QA/QC), and to manage monitoring data storage for the monitoring of all CPAs. Furthermore, a procedure to ensure that new CPAs are not a de-bundled component of another CPA or CDM project activity, has been developed according to eligibility criteria nº 15 and to the "Guidance for determining the occurrence of de bundling under a programme of activities" (EB 54, Annex 13).[28]

4.2 Criteria for Inclusion of SSC-CPA in the PoA

According to paragraphs 13 and 14 of the "*Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities*". *Version* 01 *(EB*65, *Annex*03,*)* the CME has developed the eligibility criteria for inclusion of a CPA under the PoA. Evaluation criteria have been defined to crosscheck that all the eligibility criteria fulfil the requirements of the Standard, under the PoA Management System.

A complete list of CPA Eligibility Criteria has been set up in section A.4.2.2 of the final PoA-DD and section B.2 of the generic CPA-DD. The list of eligibility criterion has been validated along with the evaluation criterion and they are deemed as appropriate and sufficient according to the criteria specified in paragraph 14 of the Standard.

	Eligibility criterion	**Each eligibility criterion will be verified assessing the following information:**
1	The SSC-CPA must be a hydroelectric plant located within the geographical boundary of either one of the host countries (Republic of El Salvador or the Republic of Guatemala).	Project description and geographical co-ordinates of the SSC-CPA.
2	The inclusion of the SSC-CPA in the SSC-PoA should not lead to double counting of the emissions reduction.	- Unique geographical co-ordinates. - Confirmation from CPA owner on not applying as an individual CDM project neither being part of any other PoA. A check on the CDM website among registered projects and projects under Validation.
3	The SSC-CPA must consist of a hydroelectric power project, connected to the national grid of either El Salvador or Guatemala; and that comprises any technology that harvest the kinetic or potential energy of water. These can include capacity additions, replacements and retrofits.	Detailed project report, quotation from technology provider, purchase order, EPC, feasibility study or any other similar information assessed or evaluated by a third party.
4	The SSC-CPA must have a project start date in compliance with the definition of "Start date" as per the CDM Glossary of Terms (version 6) /29/ and after the PoA validation start date (which is the date in which the PoA-DD, generic SSC-CPA-DD, and specific SSC-CPA-DD were submitted	Start date of CPA can be verified from Equipment Purchase Contract or any applicable available document. The criteria will comply with the CDM requirements that are defined as: "The starting date of a CDM programme activity is the earliest date at which either the implementation or construction or real action of a programme

	to the UNFCCC for public comments, May 4, 2011).	activity begins."
5	The SSC-CPA must comply with all applicability conditions defined in the methodology AMS I.D. version 17.	Compliance to all requirements listed in section E.2 of the PoA-DD.
6	All SSC-CPAs must comply with one of the additionality tests outlined in section E.5.1 and detailed in section E.5.2 of the SSC-PoA-DD. a) Projects with an up to 5 MW of installed capacity and located in a special underdeveloped zone of the host country are automatically additional. SUZ is defined as per paragraph 2.a.i) of the EB 68, annex 26. b) For all the projects that do not fulfill the characteristics described in point a above, the project IRR must be lower than a benchmark in order to be deemed additional.	To be taken into account and described in the CPA-DD section B.3. The CPA-DD will be deemed additional if it complies with one of the the eligibility criteria for aditionality. a) Projects with an up to 5 MW of installed capacity and located in a special underdeveloped zone of the host country are automatically additional. b) For all the projects that do not fulfill the characteristics described in point above, the project IRR must be lower than a benchmark in order to be deemed additional.
7	A local stakeholder consultation must have been conducted.	As per provided description of local stakeholder invitation, summary of comments received and how they have been taken into account, in the CPA-DD section D.
8	The SSC-CPA must comply with relevant environmental requirements applicable at the time of inclusion of the SSC-CPA into the SSC-PoA.	- Policies showing that an environmental impact analysis is not required or; - Environmental impact analysis report outlined in section C of the SSC-CPA-DD.
9	The SSC-CPA should not result into the diversion of official development assistance.	Declaration from CPA implementer and if available, loan funding documents.
10	The SSC-CPA must be a project activity that will: a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity	Detailed project report, quotation from technology provider, purchase order, EPC, feasibility study or any other similar information assessed or evaluated by a third party.

	(Greenfield plant); b) involve a capacity addition; c) involve a retrofit of (an) existing plant(s); or d) involve a replacement of (an) existing plant(s).	
11	The SSC-CPA must export the generated renewable electricity to a relevant and clearly identified grid within the geographical boundary of El Salvador or Guatemala.	Power Purchase Agreement, Letter of Understanding with a potential buyer, authorization of interconnection issued by the grid company, or similar.
12	If the power plant comprises a reservoir, the power density of the power plant shall be greater than 10 W/m^2.	Calculations performed on the basis of Detailed project report, feasibility study, or any other similar source assessed or evaluated by a third party.
13	Generates electricity with a capacity below or equal to the type I small-scale threshold during the whole crediting period of the SSC-CPA. In case of a capacity addition/retrofit/replacement activity at an existing hydropower plant the electricity generation by the total installed capacity must be below the type I small-scale threshold during the whole crediting period of the SSC-CPA. SSC-CPAs that fall into this category, shall comply with the requirements of the Guidelines on the Demonstration of Additionality of Small-Scale Project Activities, version 9. This requirement must be fulfilled in case CPA is following additionality test b, as described in section E.5.2 of the PoA-DD. If additionality test a is done, this eligibility criterion does not need to be considered.	Detailed project report, EPC, feasibility study or any other similar information assessed or evaluated by a third party. For each monitoring period the CPA owner must provide the CME with a declaration under oath that the SSC-CPA remains within the 15 MW threshold. Additionally, during each verification visit the CME will check the total installed capacity to ensure that it remains under the threshold of 15 MW.
14	As per the Guidelines for Demonstrating	As per details in CPA-DD and corresponding

	Additionality of Microscale Project Activities version 4, CPAs with a total maximum installed capacity below or equal to 5 MW shall be considered "Microscale CDM Project Activities" and must fulfil the requirements of such guidelines. If additionality is proven by test a, the total installed capacity of the SSC-CPA must remain within the microscale threshold during the whole crediting period. This requirement must be fulfilled in case CPA is following additionality test a, as described in section E.5.2 of the PoA-DD. If additionality test b is done, this eligibility criterion does not need to be considered.	supporting documents. If additionality is proven by test a, for each monitoring period the CPA owner must provide the CME with a declaration under oath that the SSC-CPA remains within the 5 MW threshold. Additionally, during each verification visit the CME will check the total installed capacity to ensure that it remains under the threshold of 5 MW. If additionality is proven by test b, the evaluation criteria stated in eligibility requirement 13 above shall be applied instead.
15	The SSC-CPA included in the SSC-PoA must not a de-bundled component of another CDM programme activity *(CPA)* or CDM project activity. SSC-CPA shall be deemed to be a de-bundled component of a large scale activity if there is already an activity, which satisfies both conditions *(a)* and *(b)* below*:* *(a)* Has the same activity implementer as the proposed small scale CPA or has a coordinating or managing entity, which also manages a large scale PoA of the same technology/measure, and*;* *(b)* The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point.	- If applicable, project list of same activity implementer as CPA implementer, applying the same technology/measure. - If applicable, list of CPAs of a large scale PoA with the same coordinating and managing entity applying the same technology / measure. GPS coordinates of above projects near to the implemented CPA.

	As per Guidelines on the Assessment of De-bundling for SSC Project Activities, v3 (EB54 annex 13), only hydropower projects with a size greater than 150 kW will perform the de-bundling check.	
16	Have an agency contract with the CME that governs the SSC-CPA's participation in the Hydro Alliance PoA, and comply with the code of conduct of the CME	Contract with the CME.
17	Provide a letter of compliance for the project activity, issued by the DNA, if required by the internal procedures of the DNA.	Letter of compliance, only if applicable.
18	In the case of a SSC-CPA that involves the replacement of existing equipment at the project site; the replaced equipment must be scrapped or destroyed. The scrapping of the replaced equipment must be monitored and documented by an independent Party. The SSC-CPA shall not consider the installation of existing equipment transferred from another hydropower plant.	Detailed project report, feasibility study, purchase order, or any other similar information assessed or evaluated by a third party that shows that the SSC-CPA will not comprise the installation of existing equipment transferred from another hydropower plant. In case of replacement of existing equipment at the project sitea quotation from scrapping facility or final waste disposal site, or proofs of such disposal are required.
19	In the case of a SSC-CPA that involves the addition of renewable energy generation units at an existing renewable power generation facility, the added generating units must be capable of generating electricity without the operation of existing units, and must not directly affect the mechanical, thermal, or electrical characteristics of the existing facility.	Detailed project report, quotation from technology provider, purchase order, EPC, feasibility study or any other similar information assessed or evaluated by a third party.

Each CPA will have to demonstrate the additionality individually at CPA level and this will be checked at the CPA level by the managing entity and can be confirmed by the DOE during inclusion. Every CPA will have to meet all the criteria to ensure eligibility to participate in this PoA.

4.3 Provisions in case the eligibility criteria shall be updated

Provisions regarding updating eligibility criteria have been established in the PoA-DD in accordance with the "*Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities*" *Version* 01 *(EB*65, *Annex*03*)*. Eligibility criteria will be updated by the CME in the following cases:

- If the applied methodology is revised or replaced by inclusion in a consolidated methodology.
- If the boundary of the PoA is amended post-registration to expand the geographic coverage or to include an additional host Party/ies.
- If the revision of eligibility criteria is requested by the Board at any time during the lifetime of the PoA.
- If an issue related to environment integrity is identified, the revision of eligibility criteria may be requested by the Board at any time during the lifetime of the PoA.

1. Once changes have been approved by the Board, the inclusion of all new CPAs shall be based on the updated eligibility criteria applying the new generic CPA- DD;
2. If the revision of the eligibility criteria was done because the methodology was put on hold *(*see bullet 1 above*)*, CPAs that were included before the methodology was put on hold shall apply the revised version of the generic CPA-DD only at the time of the renewal of the crediting period.

- At the renewal of the crediting period of a PoA *(*at the renewal of the first CPA*)*, the CME shall update the eligibility criteria as per the latest revised applicable methodology and include them in a new version of the PoA-DD and new generic CPA-DD validated by a DOE, and shall be submitted to the Board for approval..

No action will be required if the version of methodology/ies applied by the PoA is revised without being placed on hold or is withdrawn for the purpose of inclusion in a consolidated methodology/ies unless otherwise indicated in the respective report of the meeting of the Board that has approved the new methodology/ies.

5 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to Decision 3/CMP.1, the validator shall make the PoA-DD, specific CPA-DD and generic CPA-DD publicly available and receive comments on the validation requirements from parties, stakeholders and UNFCCC accredited NGOs within 30 days, and make them publicly available.

AENOR published the project document on CDM website *(*http://unfccc.cdm.int*)* on 2011/05/04 and invited comments by Parties, stakeholders and non-governmental organizations. No comments were received.

6 VALIDATION OPINION

AENOR has performed a validation of the Programme of Activities "Hydro Alliance Programme of Activities". The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria given for the Programmes of Activities to provide for consistent operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the programme design, the baseline and the monitoring plans; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion. All CARs and CLs detected were closed.

The review of the programme design documentation and additional documents related to baseline and monitoring methodology, and the subsequent background investigation, follow-up interviews and review of comments by parties and stakeholders have provided AENOR with sufficient evidence to validate the fulfilment of the stated criteria.

The conclusions can be summarised in detail as follows:

- The PoA is in line with all relevant host countries criteria and with all relevant UNFCCC requirements for Programme of Activities.
- The operational and management plan established by the coordinating entity is suitable for the PoA validated.
- The baseline has been appropriately identified as per the applied methodology.
- Eligibility criteria in the PoA-DD are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA. These requirements include the means of demonstrating the additionality of the CPA and the applicability of the applied methodology.
- The programme's additionality is sufficiently justified in the PoA-DD.
- The monitoring plan and the Operational and Management Plan are transparent and adequate.
- The calculation of validated CPA emission reductions has been carried out in a transparent and conservative manner, following the approved methodology AMS-I.D version 17.
- Information on the local stakeholders' consultation by the project participants prior to submitting the PoA for validation is sufficiently provided in the PoA-DD.
- All information has been also consistently applied in the generic CPA-DD form.

In our opinion, the Program correctly applies and meets the relevant UNFCCC requirements for the CDM Programme of Activities and the relevant host country criteria.

The validation has been performed using a risk based approach, as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle.

Hence, AENOR cannot be held liable by any party for decisions made or not made based on the validation opinion, which would go beyond the purpose.

15/10/2012

Luis Robles Olmos	Jose Luis Fuentes Perez
Authorized person	Chief Validator

7. REFERENCES

Ref	Document Name	Author/Competent Authority
1	First POA-DD V.1	Project Participant. 4 May 2011
2	Final POA-DD V.2	Project Participant. 2 October 2012
3	First CPA-DD El Ixtalito v.1	Project Participant. 4 May 2011
4	Final CPA-DD El Ixtalito v.2	Project Participant. 2 October 2012
5	First CPA-DD Generic v1	Project Participant. 4 May 2011
6	Final CPA-DD Generic v.2	Project Participant. 2 October 2012
7	AMS-I.D version 17	UNFCCC
8	ACM0002 version 12.3.0	UNFCCC
9	Tool to calculate the emission factor for an electricity system version 2.2.1	UNFCCC
10	Decision 3/CMP.1	UNFCCC
11	Guidelines for demonstrating additionality of micro scale project activities, version 04	UNFCCC
12	Guidelines on the demonstration of Additionality of Small-Scale Project Activities, version 09	UNFCCC
13	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 01.0).	UNFCCC
14	Procedures for Registration of a Programme of Activities as a single CDM project activity and issuance of Certified Emission Reductions for a Programme of Activities, version 04.1	UNFCCC
15	Guidelines on the Assessment of Investment Analysis, version 05	UNFCCC
16	CDM Validation and Verification Manual version 01.2	UNFCCC
17	Letter of Approval from the DNA of Guatemala Nº DNA029	Guatemalan DNA. 17/11/2011
18	Letter of Approval from the DNA of El Salvador Nº MARN-DGCCAE-028/2012	El Salvadorian DNA. 12/06/2012

Ref	Document Name	Author/Competent Authority
19	Letter of Approval from the DNA of Switzerland	Federal Office for the Environment FOEN. 21 September 2012
20	Letter of Authorization from the DNA of Guatemala Nº DNA001	Guatemalan DNA. 17/11/2011
21	Central American Sustainable Energy Strategy 2020	– Economic Commission for Latin America (ECLA),General Secretariat of the Central American Integration System. 2007
22	State of the Region on sustainable human development summary 2008 .	Program State of Nation. – San José C.R. 2008.
23	Administration of the Wholesale Market; Executed Load Dispatch from the Interconnected National System, 2008, 2009, 2010 and Installed capacity in the National Electric System.	Administration of the Wholesale Market (AMM), Guatemala
24	Guatemalan Centre of Research and Capacity Building on Sugar Reed, Cengicana: Statistics Report, Year 10, No.2, November 2009.	Cengicana, Guatemala.
25	Schedule Summary of Wholesale Electricity Market from Jan 1, 2008 to December 31, 2010 and Type of Fuel Report.	Transaction Unit SA de CV, El Salvador.
26	Electric Statistics Bulletin No. 12 2010.	General Electricity and Telecommunications Superintendence. (SIGET). El Salvador.
27	Spreadsheet Calculations	Project Participant
28	Guidance for determining the occurrence of de bundling under a programme of activities" (EB 54, Annex 13).	UNFCCC
29	Glossary CDM Terms version 6	UNFCCC
30	financing agreement between NEOSA and a banking institution	NEOSA. September 16, 2010
31	Signature of a service agreement between NEOSA and South pole Carbon Asset management, Ltd for the CDM project development.	South Pole. November 25, 2010
32	Contract between the CME and the first project implementer for the first CPA	NEOSA. August 25 2011

8. CORRECTIVE ACTIONS AND CLARIFICATIONS. FINDINGS LIST.

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 1**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The Letters of Approval of the countries involved in each of the CPAs to be included in the PoA are requested.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	LoAs from Guatemala, El Salvador and Switzerland have been provided to AENOR. However, Nicaragua and Panama have not been provided at these countries have been removed from the proposed POA.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	AENOR has checked the LoAs from countries included in the PoA. They are correct and fulfil with CDM requirements, then CAR 1 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 2**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**All the parties involved shall be included in the section A.3 of the POA-DD.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section A.3 was updated to include all the host countries.		
It shall provide and indentified the evidences proposed (if applicable)	A new PoA-DD		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The modification is considered adequate since all the Parties involved in the POA are detailed in the referred section.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 3**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The criteria of elegibility are not complete.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section A.4.2.2 was updated to include in the eligibility criteria all requirements in compliance with the applicable standard from EB 65, annex 3. Sections E.4 and E.6.1 in the PoA-DD were updated to include the estimation of the emission reductions in project activities that are not Greenfield. Evaluation criterion have been included to check the fulfillment of each criteria.		
It shall provide and indentified the evidences proposed (if applicable)	POA-DD		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The elegibility criteria have been cleared. They are correct in opinion of AENOR. Then, CAR 3 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 4**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The tools used in the POA shall be clearly detailed in Section E. of the POA.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section E details how the most recent version of the "*Tool to calculate the emission factor of an electricity system*" will be employed.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	An updated version of the referred tool has been used for the grid emission factor. AENOR has checked the spreadsheet provided and confirm the appropriate applicability of the tool. Section E details version used. Then, CAR 4 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 5**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**Provisions regarding the updating of the CPAs in case of methodology is put on hold or it is withdraw shall be taken into account.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The PoA-DD has been updated to gather provisions for cases requested by the DOE.		
It shall provide and indentified the evidences proposed (if applicable)	PoA-DD		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The CAR 5 is closed as latest version of DDs gather these provisions in compliance with the CDM requirements for POAs.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 6**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**An inconsistency regarding the description of the sources and gases included in the boundaries and the graph included in Section E.3 of the POA-DD shall be solved.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Graph in section E.3 was updated to include the electricity grid at the interconnection point in the boundaries of the SSC-CPA.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The inclusion of the relevant grid has been considered in the graph stated in the boundary description.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 7**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The footnote 16 does not work.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The reference was sent to the DOE and the wording of the footnote was rearranged.		
It shall provide and indentified the evidences proposed (if applicable)	La_Energia_en_Guatemala_OLADE.pdf		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The documentation has been provided and the information included in the POA-DD is consistent with it. Then, CAR 7 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 8**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**All the documented evidence shall be provided to the validation team such as reports mentioned in footnotes 1, 2, 17 of the PoA-DD version 1.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Evidences are enclosed to this document.		
It shall provide and indentified the evidences proposed (if applicable)	Central American Sustainable Energy Strategy 2020 – Economic Commission for Latin America (ECLA),General Secretariat of the Central American Integration System. 2007 State of the Region on sustainable human development summary 2008 / Program State of Nation. – San José C.R. : the program, 2008.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	All evidence have been provided to AENOR, then, CAR 8 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 9**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The "*Guidelines for demonstrating additionality of microscale project activities*" considered in the PoA DD and also in the CPA-DD shall be the latest one.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The PoA-DD has been updated to state the requirements from the latest version of the Guidelines for demonstrating additionality of microscale project activities.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	Requirements of the latest version of the "Guideline for demonstrating the addionality of microscale projects activities" have been applied at PoA-DD and CPA-DD and provisions have been clearly included in the DDs to fulfill with the requirements of the guidelines. AENOR has checked with evidence provided by the proposed CPA of Ixtalito the fulfillment with these requirements. Then CAR 9 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 10**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**Regarding the Test b*)* specified in section E.5.2, the investment analysis is used for demonstration of additionality at CPA level. However, the investment analysis shall be carried out taking into account the tool for demonstration and assessment of additionality and the guidelines on the assessment on investment analysis, thus, further information shall be provided in the POA regarding options to be used for the analysis, parameters, their description, source of information... to be used in the analysis.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The DDs have been update in accordance with v.6.0.0 of the additionality tool and version 5 of the guidelines for investment analysis.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	CAR 10 is closed as all issues requested have been correctly quoted in the latest POA-DD and CPA-DD in compliance with the version of the additionality tool v 6.0.0 and guidelines on investment analysis v 5. Inputs parameters to calculate the financial indicators have been provided. Further information has been included to perform the sensitivity analysis and a clear statement has been included in the POA regarding the condition to be complied to be additional under this test b*)*. Then, Car 10 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 11**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The title of the method proposed to be used in the CPAs for the OM calculation shall be clearly detailed in the POA.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section E.6.1 was revised to include the title of the method proposed to be used in the CPAs for the OM calculation.		
It shall provide and indentified the evidences proposed (if applicable)	POA-DD		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	CAR 11 is closed as information requested has been clearly stated in the PoA-DD. Then, CAR 11 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 12**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The parameters used for the emission factor calculation shall be detailed in section E.6.3 of the POA-DD.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section E.6.3 was updated to include all the data and parameters that are to be reported in CDM-SSC-CPA-DD form.		
It shall provide and indentified the evidences proposed (if applicable)	POA-DD		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	Once options to be applied in the calculation of emission reductions have been clearly defined, all applicable parameters have been included in section E.6.3 of the POA and CPA Generic in accordance with the applicable methodology and associated tools. Then, CAR 12 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 13**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The formulae used by the CPAs for the emission factor calculation shall be detailed in the POA-DD.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section E.6.1 of the PoA-DD was updated to detail the grid emission factor estimation method that will be followed to estimate the grid emission factor of each country, according to the 'Tool to calculate the Emission Factor for an electricity system' version 2.2.1.		
It shall provide and indentified the evidences proposed (if applicable)	POA-DD		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	AENOR has checked that tool for the emission factor for an electricity system has been correctly applied in calculations. Formulae have been correctly applied and quoted in the POA-DD and CPA Generic, then CAR 13 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 14**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**Provisions for the calculation of the power density of each CPA shall be detailed in the POA-DD.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The estimation of the power density of each SSC-CPA is detailed in section E.6.1 of the PoA-DD and on section B.5.2 of the CPA-DD generic form.		
It shall provide and indentified the evidences proposed (if applicable)	Topography information for the proposed CPA.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The correction is considered adequate, as well as evidence provided to check the applied value in the proposed CPA of Ixtalito. Then, CAR 14 is closed.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 15**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The Monitoring Plan shall state the activities of the participants. Since the DOE is an independent entity, its activities shall not be included in the POA-DD.** **On the other hand, the list of parameters to be monitored shall be complete to gather all parameters applicable to the proposed POA.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The monitoring plan was re-written to include only the activities carried-out by the Coordinating and Managing Entity and the CPA implementer. Monitoring Plan of the DDs have been updated to state all applicable parameters to the POA.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The monitoring Plan in the latest POA-DD does not include the DOE activities, and has been reinforced detailing further information regarding the CME activities. Thus, CAR 15 is closed. The list in section E.7.1 of the POA-DD and Generic CPA is complete.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 16**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**Further information shall be provided in the monitoring plan of the POA-DD regarding sampling requirements.**		
PP RESPONSE #1 *It shall address the corrective action taken in details*	Monitoring plan has been modified to include further information in this issue. According to step 2 of section A.4.4.2 of the POA-DD, "The monitoring report will compile all required monitoring information for all SSC-CPAs that will be verified by the DOE. This report will unambiguously set out the data on emission reductions generated by each specific SSC-CPA during the monitoring period consistent with the requirements of this SSC-PoA-DD and the corresponding SSC-CPA-DD". Also, the following information has been included: For each Project Activity under a SSC-CPA, all relevant parameters defined under section E.7.1 will be monitored by the Project Implementer according to the procedures and monitoring framework established in E.7.2. The monitoring data will be submitted to the CME, who will check and finalize the monitoring documentation for verification by the DOE and store the data in a database in such a way that the status of verification can be determined for each SSC-CPA at any time. Each SSC-CPA is to be verified individually.		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be*	The explanation included in Step 2 of section A.4.4.2 is considered appropriate as all parameters required will be monitored for each CPA under the proposed POA and each CPA will be verified independently. Then, CAR 16 is closed.		

added		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 17**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The frequency of the calibration activities of the metering equipment shall be detailed in POA-DD.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section E.7.1 of the SSC-PoA-DD was updated to include the frequency of the calibration of the metering equipment according to the "*General Guidelines to SSC CDM methodologies*" v.17 Section B.6.1 of the SSC-CPA-DD specific and SSC-CPA-DD was revised to include these guidelines.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	Further information has been included in the POA-DD and CPA-DD regarding calibration requirements. According to the monitoring plan the meters should be certified to national or IEC standards and calibrated according to the national standards and reference points or IEC standards and recalibrated at appropriate intervals according to manufacturer specifications, but at least once every three years. Then, CAR 17 is closed as information requested is appropriate and consistent with provisions in the *General Guidelines to SSC CDM methodologies*" v.17		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CAR 18**		
Classification	CAR ☒	CL ☐	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**Section E.8 of the POA-DD is not complete since the date of the baseline and monitoring settling is not detailed.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Date of completion of the application of the baseline study and monitoring methodology was included in section E.8.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The date included in the POA-DD is consistent with the timeline of the POA.		
Conclusion *Tick the appropriate checkbox*	CAR CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 1**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The description of the PoA shall be documented. The evidence available to demonstrate the actual situation is required.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Financing for the CDM development of the SSC-PoA is reached via a Financing Agreement between NEOSA and a banking institution on September 16, 2010; and CDM project development starts on November 25, 2010 with the signature of a service agreement between NEOSA and South pole Carbon Asset management, Ltd. The PoA-DD was revised to include the events mentioned above in section A.4.3.		
It shall provide and indentified the evidences proposed (if applicable)	NEOSA_Financing_Agreement_Final and Service_Agreement_NEOSA_South_Pole.pdf		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The documentation provided is considered adequate to demonstrate the current situation, then, CL1 is closed.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 2**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**A schedule for the implementation of the PoA is required.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section A.4.3 of the PoA-DD has been revised to include a table that provides a brief timeline of the history of the SSC-PoA and of the 1st SSC-CPA, which are intrinsically associated.		
It shall provide and indentified the evidences proposed (if applicable)	Memorandum_of_Cooperation_KfW_ABO.pdf; NEOSA_and_KFW_Financing_Agreement_Final; HydroAlliance_PIN.doc; Contract_CME_Ixtalito.pdf; and Service_Agreement_NEOSA_South_Pole.pdf		
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	No shedule has been provided since it is a Programme of Activities. The brief timeline included in the POA-DD is considered adequate and the evidences provided are valid, thus, CL 2 is clarified.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 3**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The documented evidences regarding the description and ownership of Transmission Lines of each CPA is required.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The evidence regarding the description an ownership of Transmission Lines of each CPA is provided at CPA level. CPA-DD generic form has been updated to address this issue.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The correction and evidences are considered adequate. Then, CL3 is closed.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 4**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**It shall be clarified in the PoA-DD based on the latest additionality tool and guidelines in investment analysis whether the guidance 12 is correctly applied since the chosen financial indicator is the project IRR and the Benchmark calculation considers the expected/required returns on equity.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section E.5.2 was revised to follow guidance 12 of the latest version of the "Guidelines on the assessment of investment analysis".		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	Final POA-DD has been modified to fulfil with the guidance 12 of the guidelines on the investment analysis. Then CL 4 is closed.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 5**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The spreadsheets prepared for the calculation of the emission reductions of each of the CPAs shall be provided to the validation team.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Spreadsheet has been revised and enclosed to this document.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The spreadsheets provided are considered adequate. Then CL5 is closed.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 6**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**Documented evidences regarding the low-cost/must-run resources of all the countries involved in the POA, in the five most recent years shall be provided.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Evidences of the low-cost/must-run resources of all the countries involved in the POA, in the five most recent years have been provided as an Excel document enclosed to this document.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The documentation provided is considered adequate, and it has been crosschecked against the official sources of each one of the countries. Then CL 6 is closed.		
PP RESPONSE #2	*This section shall be filled by the PP.*		
Corrective action			
Evidences proposed			
DOE Assessment #2			
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 7**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**A clarification regarding the potential existence of project emissions in accordance with the applied methodology is required.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Section E.6.1 was modified to include the estimation of the power density to prove the absence of project emissions and therefore, compliance with eligibility criterion.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The final POA DD has been strengthen in this issue to state the potential existence of project emissions pursuant with the applicable methodology. Then, CL 7 is closed.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 8**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**A clarification regarding the suitability of the sampling approach given the size of the population is required.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	Final POA-DD has been updated to clarify the approach. Section of the monitoring plan has been re-written.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The explanation included in section A.4.4.2 is considered appropriate as all parameters required will be monitored for each CPA under the proposed POA and each CPA will be monitored and verified independently. The correction is considered in accordance with the guidelines of the UNFCCC, thus, CL 8 is closed.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 9**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The methodology for the keeping the data of each of the CPA involved in the emission reduction calculation shall be clarified.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The methodology for the keeping system of data has been more detailed in the latest POA-DD. The record-keeping system has been updated to include monitoring data of each CPA.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1 *The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added*	The record keeping system has been modified in order to allow the monitoring of all requested parameters. Therefore, CL 9 is clarified.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

TITLE	**Hydro Alliance Programme of Activities**		
FINDING	**CL 10**		
Classification	CAR ☐	CL ☒	FAR ☐
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	**The duration of 26 years of the Contractual Agreement shall be clarified.**		
PP RESPONSE #1	*This section shall be filled by the PP.*		
It shall address the corrective action taken in details	The duration of 26 years of the Agreement with the CME is due to the fact that the project maximum crediting period is 21 years. The remaining 5 years are a timeframe for validation and renewal of the crediting period.		
It shall provide and indentified the evidences proposed (if applicable)			
DOE Assessment #1	Explanations are deemed as appropriate per evidence provided. Then, CL is closed.		
Conclusion *Tick the appropriate checkbox*	CL CLOSED ☒	To be checked during the first periodic verification ☐	

ANNEX 1: CDM VALIDATION PROTOCOL

VALIDATION PROTOCOL
PROGRAMME OF ACTIVITIES: "Hydro Alliance Programme of Activities"

PROJECT PARTICIPANT:
Negocios Energeticos de Occidente S.A. (Neosa) and South Pole Carbon Asset Management Ltd.

Validation Type	
☒ Validation of a Programme of Activities	
Validation Team: Jose Luis Fuentes Pérez (Chief Validator) Luis Javier Arribas (Validator) Freddy Garro (Validator)	
Version of this Validation Protocol: 02	Date: 2012-10-15

CHECKLIST TOPIC / QUESTION	MoU.	COMMENTS	Draft Conclusion	Final Conclusion
A. GENERAL DESCRIPTION OF PROGRAMME OF ACTIVITIES				
A.1. Approval				
A.1.1 Have all the parties involved in the Programme of Activities provided a written Letter of Approval of the Programme of Activities?	DR I	No LoAs has been provided. **CAR 1 – The Letters of Approval of the countries involved in each of the CPAs to be included in the PoA are requested.** During the on site visit, the validation team interviewed the representatives of the DNA. It was confirmed that the process of approval of Programmes of Activities is currently undergoing. This **CAR 1 is closed** as LoAs from all parties involved Guatemala, El Salvador and Switzerland have been provided.	**CAR 1**	OK

A.1.2 Do the Letters of Approval confirm that: • The Party is a Party to the Kyoto Protocol • The participation is voluntary • The CDM Programme of Activities contribute to the sustainable development (host Party) • The title of the Programme of Activities is precise and coincides with the title included in the POA-DD?	DR I	Once all LoAs have been provided, AENOR can confirm that each LoA confim that: • The Party is a Party to the Kyoto Protocol • The participation is voluntary • The CDM Programme of Activities contribute to the sustainable development (host Parties) • The title of the Programme of Activities is precise and coincides with the title included in the POA-DD.	**CAR 1**	OK
A.1.3 Has the Letter of Approval be obtained from the project participants or directly from the DNA? In case that it has been obtained from the Project participant, how has been assessed its authenticity?	DR I	All LoAs have been obtained directly from PPs, and AENOR does not doubt of the authenticity of each one based on checks in the CDM and DNA´s Websites.	**CAR 1**	OK
A.1.4. Does the coordinating entity of the PoA identify measures to ensure that all CPAs under its PoA are neither registered as an individual CDM project activity nor included in another registered PoA and that the CPA is subscribed to the PoA? (Double accounting methodology)	DR I	The coordinating entity of the PoA identify measures to ensure that all CPAs under its PoA are neither registered as an individual CDM project activity nor included in another registered PoA and that the CPA is subscribed to the PoA.	**CAR 1**	OK
A.2. Project participants				

A.2.1. Is the form required for the indication of project participants correctly applied in the POA-DD?	DR	Yes, the form is correctly included in the POA-DD. Nevertheless, not all the parties involved have been included on it. **CAR 2 – All the parties involved shall be included in the section A.3 of the POA-DD.** Section A.3 has been updated, thus **CAR 2 is closed.**	**CAR 2**	OK
A.2.2. Is the participation of all project participants approved by a Party to the Kyoto Protocol?	DR	The participation of all PPs is approved by a party of the Kyoto Protocol. CAR 1 is closed.	**CAR 1**	OK
A.2.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the POA-DD (in particular annex 1)?	DR	The information inlcuded in Annex 1 corresponds to the Annex I company and the Coordinating entity involved in the Programme of Activities. It is considered consistent. CAR 2 is closed.	**CAR 2**	OK
A.2.4. Have parties participating in the CDM POA designated a national authority and a coordinating/managing entity for the POA?	DR I	The Coordinating/Managing Entity is designated and transparent detailed in the PoA-DD. Nevertheless, since there are not LoA issued, the approval of the Coordinating Entity has not been checked. The parties participating in the CDM POA have designated to NEOSA as the coordinating/managing entity for the POA. Guatemala has designated to the Ministry of Environment and Natural Resources as Guatemalan DNA, El Salvador has designated to the Ministry of Environment and Natural Resources as El Salvadorian DNA and Switzerland has designated to the Federal Office for the Environment FOEN as DNA. CAR 1 is closed.	**CAR 1**	OK

A.2.5. Is the authority and responsibility of the coordinating/management entity clearly described?	I	Yes. The coordinating/managing entity is Negocios Energéticos de Occidente S.A (NEOSA). The role and main activities of the Coordinating Entity are clearly described and it was confirmed during the on site visit.	OK	OK
A.2.6. Is the Coordinating Agency a project participant authorized by all participating host countries DNAs involved and identified in the modalities of communication as the entity which communicates with the Board?	DR I	NEOSA is auhorized by all host countries involved in the proposed POA and it is identified as the entity which communicate with the Board. CAR 1 is closed.	**CAR 1**	OK
A.3. Programme Design Document				
A.3.1. Does the used programme title clearly enable to identify the unique CDM Programme of Activities? Is it consistent in all section of the POA-DD and in all documents?	DR I	Yes, the title is "*Hydro Alliance Programme of Activities*". The title is consistent in the entire document.	OK	OK
A.3.2. Is there any indication concerning the version number and the date of the version?	D	Yes, there are indications concerning the version number and the date of the version.	OK	OK
A.3.3. Is this consistent with the time line of the project's history?	DR	Yes, documents and dates are consistent.	OK	OK
A.3.4. Is the POA-DD prepared in accordance with the latest template and guidance from the CDM Executive Board?	DR	Yes, the format of the CDM-PoA-DD used is exactly in accordance with the last format published in the UNFCCC web page (CDM SSC-PoA-DD version 01) under VVM track	OK	OK
A.3.5. Has the POA-DD been published for Global Stakeholder Consultation (GSC) in the UNFCCC webpage?	DR	Yes, the PoA-DD, and the CPA-DD were published for Global Stakeholder Consultation (GSC) in UNFCCC website on 04/05/2011	OK	OK

A.3.6. Have there been any comments during the GSC process?	DR	No comments have been received	OK	OK
A.3.7. Have them correctly addressed by the validation team?	DR	No comments have been received	OK	OK
A.4. Description of the Programme of Activities The POA-DD *(section A.2)* shall contain a clear description of the Programme of Activities that provides the reader with a clear understanding of the precise nature of the Programme of Activities.				
A.4.1. Is the description delivering a transparent overview of the Programme of Activities?	DR I	The description of the Programme included in the PoA-DD seems transparent. Nevertheless, no evidence has been provided. **CL 1 – The description of the PoA shall be documented. The evidence available to demonstrate the actual situation is required.** This CL1 is closed as evidence provided confirm the description of the proposed POA. Contract with first project implementer, contract with South Pole for developing the CDM project and contract with a financing institutions were provided and confirm the description of the POA.	**CL 1**	OK
A.4.2. What proofs are available demonstrating that the programme description is in compliance with the actual situation or planning?	DR I	A schedule of the project along with contracts referenced in this report have been provided to demonstrate that the description is in compliance with the planning.	**CL 1**	OK
A.4.3. Is the information provided by these proofs consistent with the information provided by the POA-DD?	DR	Evidence provided are consistent with information in POA-DD, then, CL1 is closed.	**CL 1**	OK

A.4.4. Has the validation team conducted a physical site inspection to confirm the description of the POA-DD? If not, justify.	I	Yes, an onsite visit was made during 13-15/June/2011.	OK	OK
A.5. Technical description of the Programme of Activities The POA-DD (section A.4) shall contain a clear description of the Programme of Activities that provides the reader a clear understanding of the technical aspects of its implementation.				
A.5.1. *Location of the Programme of Activities*				
A.5.1.1. Is the definition of the boundary for the POA established in terms of a geographical area within which all CPAs will be implemented?	DR I	Yes, the Programme of Activities will be implemented within the geographical limits of the host countries: • Republic of El Salvador • Republic of Guatemala • Republic of Nicaragua • Republic of Panamá Nicaragua and Panama have been discarded, in the final POA-DD.	OK	OK
A.5.1.2 Do the requirement that all applicable national and/or sectoral policies and regulations of the host country within the boundaries chosen taken into account?	DR I	Yes. The boundaries of the Programme have been well established, and all sectoral policies and regulations of the host countries have been taken into account	OK	OK
A.5.1.3. Are the eligibility criteria for inclusion of a CPA in the POA clearly defined?	DR	**CAR 3 – The criteria of elegibility are not complete.** Last POA-DD gathers eligibility criteria in a full and complete manner, then CAR 3 is closed. On the other hand, during on site visit it was detected that the elegibility criteria was going to be modified since retrofits were included in the	**CAR 3**	OK

		programme. Final POA-DD gathers eligibility criteria for the retrofits, then CAR 3is closed.		
A.5.2. Category of the Programme of Activities				
A.5.2.1. To which category(ies) does the Programme of Activities belonging to? Is this category correctly identified and indicated?	DR I	Section A.4.2.1 of the POA-DD states that the proposed SSC-PoA falls in the type I scope 1 (Energy industries (renewable - / non-renewable sources) category.	OK	OK
A.5.2.2. Does the Programme qualify as a small scale CDM Programme of Activities as defined in paragraph 6 (c) of decision 3/CMP.1 on the modalities and procedures for the CDM?	DR	Yes the POA qualify as a small scale CDM Programme of Activities.	OK	OK
A.5.2.3. Does proposed POA confirm to one of the project categories defined for small scale CDM project activities?	DR	Yes, section A.4.2.1 confirms the type I category.	OK	OK
A.5.2.3. In the case of a small scale Programme of Activities, is it justified that the CPAs are not a debundled component of a larger CPAs?	DR I	Yes, the SSC-CPAs included in the POA will not be a de-bundled component from another CDM Programme Activity (CPA) or large scale CDM project activity. As it is established in section A.4.4.1 of the POA-DD, the coordinating entity will follow guidance provided by the "Guidelines on Assessment of De-bundling for SSC Project Activities",. So, for each CPA of the POA it will be checked according to what the Guidelines estates.	OK	OK
A.5.3. Technology to be employed by the Programme of Activities				

A.5.3.1. Does the description of the technology to be applied provide sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance? And, is the explanation how the programme will reduce greenhouse gas emission transparent and suitable?	DR I	The description of the technology to be applied provide sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance and explanations on how the programme will reduce greenhouse gas emission are transparent and suitable. Appropriate evidence have been provided which confirm the description of the POA in the DD.	**CL 1**	OK
A.5.3.2. Does the programme require extensive initial training and maintenance efforts in order to be carried out as scheduled during the life POA period? If so, does the POA make provisions for meeting training and maintenance needs?	DR I	There are forecasted training activities, as it is stated in the POA. The entity in charge of the training is NEOSA, and this training is forecasted in the Agreement form prepared by NEOSA, to be signed with the operators of the CPAs.	OK	OK
A.5.3.3. Is a schedule available for the implementation of the POA and are there any risks for delays?	DR I	No schedule has been provided. **CL 2 - A schedule for the implementation of the PoA is required.** The brief timeline has been included in the POA-DD and it is considered adequate and the evidences provided are valid, thus, **CL 2 is clarified**. No significant risks for delays are detected.	**CL 2**	OK
A.5.4 Public funding of the Programme of Activities				
A.5.4.1. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance?	DR I	No public financing will be used in this PoA and related CPAs.	OK	OK
A.5.4.2. Is all information provided consistent with the details	DR	Yes, the information provided is consistent.	OK	OK

given in remaining chapters of the POA-DD (in particular annex 2)	I			
B. BASELINE AND MONITORING METHODOLOGY				
B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1. Are reference number, version number, and title of the approved baseline and monitoring methodology clearly indicated?	DR	Yes, the POA-DD published for global stakeholder consultation clearly indicates the baseline and monitoring methodology: AMS.I.D "Grid connected renewable electricity generation", version 16. During the validation process the version was updated to version 17.	OK	OK
B.1.2. Is the applied version the most recent one and / or is this version still applicable?	DR	The version 16 is not the most recent one, nevertheless, requests for registration can be submitted until 17 Feb 2012. The version has been updated to version 17.	OK	OK
B.1.3. Does the POA-DD refer to the corresponding tools with their latest approved versions?	DR	No tool has been detailed in the POA-DD. **CAR 4 - The tools used in the POA shall be clearly detailed in Section E. of the POA.** Version 02.2 of the "*Tool to calculate the emission factor for an electricity system*" has been detatiled in the POA-DD. However, during the validation process has been updated to version 2.2.1 which is still applicable.. Then CAR 4 is closed.	**CAR 4**	OK
B.1.4. Is the baseline methodology applicable to Programmes	DR	Yes, the methodology AMS.I.D is applicable to Programme of Activities	OK	OK

of Activities?	I	under this category.		
B.2. Applicability of the selected methodology to the Programme of Activities				
B.2.1. Are the chosen tools considered applicable in accordance with the design of the POA and the provisions of the applied methodology?	DR	The most recent version of the tool to calculate the emission factor has been finally used, then CAR 4 is closed.	**CAR 4**	OK
B.2.2. Is the choice of the methodology correctly justified by the POA-DD and is the POA in conformance with all applicability criteria of the applied methodology?	DR	Yes, the methodology is transparently justified in the POA-DD and each one of the applicability criteria is detailed in the document.	OK	OK
B.2.3. Are provisions regarding the updating the CPAs in case of held or withdraw the methodology be taken into account in the POA-DD?	DR	No, there is no provisions regarding the updating of the CPAs in case of held or withdraw of the methodology AMS.I.D. **CAR 5 – Provisions regarding the updating of the CPAs in case of methodology is put on hold or it is withdraw shall be taken into account.** Provisions have been included in the last POA-DD on this matter, then CAR 5 is closed.	**CAR 5**	OK
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with "No"				
The version of the methodology used has been updated to number 17, and the applicability criteria have changed, thus, this section has been re-edited using the new applicability criteria:				
B.2.4. Criterion 1:	DR		**CL 1**	OK

This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.		**Applicability checklist** / **Yes/No** Criterion discussed in the POA-DD? / Yes Evidence provided? / **Yes** Compliance verified? / **Yes** National grid will receive the electricity generation		
B.2.5. Criterion 2: This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	DR	**Applicability checklist** / **Yes/No** Criterion discussed in the POA-DD? / Yes Evidence provided? / **Yes** Compliance verified? / **Yes**	**CL 1**	OK
B.2.6. Criterion 3: Hydropower plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: • The project activity is implemented in an existing reservoir with no change in the volume of reservoir; • The project activity is implemented in an existing reservoir,	DR	**Applicability checklist** / **Yes/No** Criterion discussed in the POA-DD? / Yes Evidence provided? / **Yes**	**CL 1**	OK

where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m2; • The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m2.		Compliance verified? **Yes** This CL1 is closed as per explanations and evidence provided.		
B.2.7. Criterion 4: If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	DR	This CL1 is closed as per explanations and evidence provided. **Applicability checklist** / **Yes/No** Criterion discussed in the POA-DD? Yes Evidence provided? **Yes** Compliance verified? **Yes**	**CL 1**	OK
B.2.8. Criterion 5: Combined heat and power (co-generation) systems are not eligible under this category.	DR	Not applicable to the proposed POA **Applicability checklist** / **Yes/No** Criterion discussed in the POA-DD? Yes	OK	OK

			Evidence provided? Yes Compliance verified? Yes		
B.2.9. Criterion 6: In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units..	DR	This CL1 is closed as per explanations and evidence provided. **Applicability checklist** / **Yes/No** Criterion discussed in the POA-DD? Yes Evidence provided? **Yes** Compliance verified? **Yes**		**CL 1**	OK
B.2.10. Criterion 7: In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	DR	This CL1 is closed as per explanations and evidence provided. **Applicability checklist** / **Yes/No** Criterion discussed in the POA-DD? Yes Evidence provided? **Yes** Compliance verified? **Yes**		**CL 1**	OK
B.2.11. Criterion 8: In the specific case of biomass project activities the applicability of the methodology is limited to	DR	Not applicable to the proposed POA.		OK	OK

<table>
<tr><td>either project activities that use biomass residues only or biomass from dedicated plantations complying with the applicability conditions of AM0042.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>B.2.12: Criterion 9. In the specific case of biomass project activities the determination of leakage shall be done following the general guidance for leakage in small-scale biomass project activities (attachment C of appendix B of simplified modalities and procedures for small-scale clean development mechanism project activities; decision 4/CMP.1) or following the procedures included in the leakage section of AM0042.</td><td>DR</td><td>Not applicable to the proposed POA</td><td>OK</td><td>OK</td></tr>
<tr><td>B.2.13: Criterion 10: In case the project activity involves the replacement of equipment, and the leakage from the use of the replaced equipment in another activity is neglected, because the replaced equipment is scrapped, an independent monitoring of scrapping of replaced equipment needs to be implemented. The monitoring should include a check if the number of project activity equipment distributed by the project and the number of scrapped equipment correspond with each other. For this purpose scrapped equipment should be stored until such correspondence has been checked. The scrapping of replaced equipment should be documented and independently verified.</td><td>DR</td><td>This CL1 is closed as per explanations and evidence provided.
<table>
<tr><th>Applicability checklist</th><th>Yes/No</th></tr>
<tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr>
<tr><td>Evidence provided?</td><td>Yes</td></tr>
<tr><td>Compliance verified?</td><td>Yes</td></tr>
</table></td><td>OK</td><td>OK</td></tr>
<tr><td colspan="5">B.3. Description of the Programme Boundary</td></tr>
<tr><td>B.3.1 Are all the sources and gases included in the boundary of the Programme of Activities (baseline scenario, project</td><td>DR</td><td>Section E.3 of the POA-DD details the gases and sources included in the SSC-CPA boundary and they are in accordance with applied</td><td>CAR 6</td><td>OK</td></tr>
</table>

scenario and leakage) in accordance with the applied methodology?		methodology. Nevertheless, the graph is not consistent with the referred methodology since the electricity grid is not included inside the CPAs boundaries. **CAR 6 – An inconsistency regarding the description of the sources and gases included in the boundaries and the graph included in Section E.3 of the POA-DD shall be solved.** The graph has been modified in the final version of the POA-DD, the national electricity grid has been inlcuded in the boundaries in accordance with the applied methodology. **CAR 6 is closed.**		
B.3.2. Are the inclusion or exclusion of the sources of gases correctly justified?	DR	The inclusion and exclusions included in Section E.3 is in accordance with the applied methodology. In the final PPOA-DD the inclusion and exclusions of sources and gases detailed in section E.3 is considered in accordance with the applied methodology. CAR 6 is closed.	**CAR 6**	OK
B.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the POA-DD?	DR	During the on site visit the boundaries of the PoA were assessed. On the other hand, regarding the boundaries of each CPA, it is not clear the responsibility of the Transmission line of each CPA is considered. **CL 3 – Further information shall be provided regarding the description and ownership of Transmission Lines of each CPA.** Further information has been included in the generic CPA in order to advise to the CPAs to describe the transmission line ownership in each one of the CPA-DD. CL 3 is clarified.	**CAR 1** **CL 3**	OK

B.3.4. In case of grid connected electricity POAs, is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	DR	The relevant grid is correctly identified in the POA-DD. Nevertheless, the electricity grid is not included inside the Project boundaries as it is detailed in Figure 8 of the POA-DD. The relevant grid is correctly identified in the final POA-DD.	**CAR 6**	OK
B.4. Description of the baseline scenario identification				
B.4.1. Is the baseline scenario clearly described?	DR I	As per POA-DD, the baseline scenario is considered as generation of electricity in one of the grids of the host countries by its existing power plants. Thus, it is described as in the methodology AMS-I.D since it states that he baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources. Therefore, baseline emissions are the product of electrical energy baseline EGBL,y expressed in MWh of electricity produced by the renewable generating unit multiplied by an emission factor. Thus, it is considered clearly described.	OK	OK
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM Programme of Activities *(assessment and demonstration of additionality)*:				
B.5.1. Is the PoA additionality assessed according to current versions of *:*	DR I	Section A.4.3 of the proposed POA-DD demonstrates in accordance with the "Procedures for Registration of a Programme of Activities as a Single CDM Project Activity and issuance of Certified Emission Reductions for a	OK	OK

• Applicable methodology • Tool used to demonstrate the Additionality • Procedures for Registration of a Programme of Activities as a Single CDM Project Activity and issuance of Certified Emission Reductions for a Programme of Activities		Programme of Activities" version 04.1. that in the absence of the CDM either: *(i)* the proposed voluntary measure would not be implemented, or *(ii)* the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or *(iii)* that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation. As per paragraph 73 of the 47th EB meeting report "additionality is to be demonstrated either at the PoA level or at CPA level". For the proposed POA the additionality will be demonstrated at CPA level, as described in detail in section E.5.2 of this SSC-PoA-DD. The additionality has been demonstrated by Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 01.0)"		
B.5.2. Additionality of PoA				
B.5.2.1 Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM?	DR I	Yes, in accordance with the POA-DD and checked during the on site visit, there are no mandatory laws or regulations in the host countries stipulating to have resort to CDM to develop hydropower facilities. Likewise, no obligation exists for private entities to utilize or develop run-of-river hydropower projects.	OK	OK
B.5.2.2. If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is not being enforced? If it is enforced, has it	DR I	Not applicable since the programme is not implementing a mandatory policy as it was crosschecked during on site visit.	OK	OK

been demonstrated that the programme will lead to a higher level of enforcement?				
B.5.2.3. Are all assumptions stated in a transparent and conservative manner?	DR	Yes, all the assumptions are transparently stated in the POA-DD and the sources of information have been provided to the validation team.	OK	OK
B.5.2.4 Is sufficient evidence provided to support the relevance of the arguments made?	DR	**CAR 7 – The footnote 16 does not work.** The finall POA-DD has included a corrected footnote, and the evidences has been provided to the validation team. **CAR 8 – All the documented evidence shall be provided to the validation team such as reports mentioned in footnotes 1, 2, 17 of the PoA-DD version 1.** All those documents have been provided to the validation team in order to support the arguments. Then, CAR 7 and CAR8 are closed.	**CAR 7** **CAR 8**	OK
B.5.3 Additionality of the CPA				
B.5.3.1. Is the approach described for demonstrating additionality of a CPA in accordance with the using the current versions of the procedure provided?	DR I	**CAR 9 – The "*Guidelines for demonstrating additionality of microscale project activities*" considered in the PoA DD and also in the CPA-DD shall be the latest one.** Car 9 is closed as latest version of the guidelines for additionality of micro scales projects has been applied. Procedures for its application are correctly quoted in the POA and CPA generic. **CAR 10 – Regarding the Test b*)* specified in section E.5.2, the**	**CAR 9** **CL 4** **CAR 10**	OK

		investment analysis is used for demonstration of additionality at CPA level. However, the investment analysis shall be carried out taking into account the tool for demosntartion and assessment of additionality and the guidelines on the assessment on investment analysis, thus, further information shall be provided in the POA regarding options to be used for the analysis, parameters, their description, source of information… to be used in the analysis. CAR 10 is closed as all issues requested have been correctly quoted in the latest POA-DD and CPA-DD in compliance with the version of the additionality tool v 6.0.0 and guidelines on investment analysis v 5. Inputs parameters to calculate the benchmark and project IRR have been provided. Further information has been included to perform the sensitivity analysis and a clear statement has been included in the POA regarding the condition to be complied to be additional under this test b). **CL 4 – It shall be clarified in the PoA-DD based on the latest additionality tool and guidelines in investment analysis whether the guidance 12 is correctly applied since the chosen financial indicator is the project IRR and the Benchmark calculation considers the expected/required returns on equity.** CL4 is closed as guidance 12 is correctly considered in the final POA-DD.		
B.5.3.2. Does the PoA define the type of information which is to be provided for each CPA to ensure the adequate demonstration of additionality?	DR I	Yes, the information required is detailed in the POA-DD in a clearly way. The POA defines the information to demonstrate the additionality of	**CL 4** **CAR 9**	OK

		each CPA.	**CAR 10**	
B.5.3.3. Is the additionality of a typical CPA demonstrated?	DR I	Yes, key criteria are stated in the POA-DD, Yes, the additionality of a typical CPA is demonstrated as per test a*)* or b*)*.	**CL 4** **CAR 9** **CAR 10**	OK
B.5.3.4. Is sufficient evidence provided to support the relevance of the arguments made?	DR I	Sufficient evidence has been provided for arguments made.	**CAR 7** **CAR 8**	OK
B.6. Emissions reductions				
B.6.1. Explanation of methodological choices				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed Programme of Activities?	DR	Yes, the procedures determined in the methodology and tool are included in the POA-DD. Nevertheless, the version of the "*Tool to calculate the emission factor of an electricity system*" is not the most recent one. On the other hand, no spreadsheets have been provided. **CL 5 – The spreadsheets prepared for the calculation of the emission reductions of each of the CPAs shall be provided to the validation team.** Spreadsheet calculation has been provided and reproduced to obtain the same result. Latest version of the tool is applied. Then. CL5 is closed.	**CAR 4** **CL 5**	OK
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line	DR	The options proposed by the POA are: OM and BM ex-ante calculated. Nevertheless, the title of the method used for the OM calculation is not	**CAR 11**	OK

with the situation verified on-site?		clearly detailed. Furthermore, since several countries are involved in the POA, it is mandatory to justify that in all of them, the low-cost/must-run resources constitute less than 50% of total grid generation in: 1) average of the five most recent years, or 2) based on long-term averages for hydroelectricity production. **CAR 11 – The title of the method proposed to be used in the CPAs for the OM calculation shall be clearly detailed in the POA.** Final POA-DD clear states the calculation method used to calculate the OM and BM of the emission factor, then, CAR 11 is closed. In both countries, Guatemala and El Salvador the simple adjusted OM method is finally used. Then, CAR11 is closed. **CL 6 – Documented evidences regarding the low-cost/must-run resources of all the countries involved in the POA, in the five most recent years, shall be provided.** Evidence and data sources have been provided, as well as calculation that confirm that low/cost must run resources are higher than 50% of the total grid. Calculation for Panama and Nicaragua have been removed as these host countries do not participate of the proposed POA. CL6 is closed.	**CL 6**	
B.6.1.3. Are the formulae required for the determination of emissions reductions correctly presented and used? *(Open excel, trazability of data, etc)*	DR I	Formulae have been correctly addressed in the last POA-DD.	**CL 5**	OK

B.6.1.4 Are all the data and assumptions listed in the POA-DD and are appropriate and calculations result in a conservative estimate of emission reductions?	DR	Not all the data and parameters needed for the grid emission factor calculation are required to be reported in the CPA in accordance with the applied tool as it is stated in Section E.6.3 of the POA-DD. **CAR 12 – The parameters used for the emission factor calculation shall be detailed in section E.6.3 of the POA-DD.** Once, options to be applied in the calculation of emission reductions have been clearly defined, all applicable parameters have been included in section E.6.3 of the POA and CPA Generic in accordance with the applicable methodology and associated tools. Then, CAR 12 is closed.	**CAR 12**	OK
B.6.1.5. Are the formulae required for the determination of emission reductions correctly presented?	DR	No formulae regarding the emission factor calculation is detailed in the POA-DD. **CAR 13 – The formulae used by the CPAs for the emission factor calculation shall be detailed in the POA-DD.** CAR 13 is closed as formulae have been detailed in the latest POA-DD and CPA-Generic. AENOR reproduced the calculations and deems as appropriate.	**CAR 13**	OK
B.6.2. Data and parameters that are to be reported in the CDM-CPA at validation				
B.6.2.1. Is the list of parameters presented in chapter E.6.3 considered to be complete with regard to the requirements of the applied methodology?	DR	The list is not in accordance with the applied tool since the parameters used for the grid emission calculation have not been included on it. Final POA-DD states a complete list of parameters used for emission factor calculation, then CAR 12 is closed.	**CAR 12**	OK

B.6.2.2. Are all the data derived from official data sources or replicable records and have been correctly quoted?	DR	Data used are from official sources correctly quoted in the DDs. Then, CAR 12 is closed.	**CAR 12**	OK
B.6.3 Calculation of GHG Emission Reductions – Baseline Emissions *It is assessed whether the baseline emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.*				
B.6.3.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR I	Calculations are carried out in transparent and complete manner. They have been correctly documented and provided to AENOR. CAR 11 and CAR 13 are closed.	**CAR 11** **CAR 13**	OK
B.6.3.2. Have conservative assumptions been used when calculating the baseline emissions?	DR I	Once all evidence have been provided and calculation reproduced, AENOR deems that conservative assumptions have been used. CAR 11, CAR 12, CAR 13 and CL 5 are closed.	**CAR 11** **CAR 12** **CAR 13** **CL 5**	OK
B.6.3.3 Are uncertainties in the baseline emission estimates properly addressed?	DR I	No uncertainties have been detected. CAR 11, CAR 12, CAR 13 and CL 5 are closed.	**CAR 11** **CAR 12** **CAR 13** **CL 5**	OK
B.6.3.4. Is additional background information on baseline data provided in Annex 3 of the POA-DD? Is this information consistent with data presented by other sections of the POA-DD?	DR I	No baseline information has been included in Annex 3.	OK	OK

B.6.4 Calculation of GHG Emission Reductions – Project Emissions *It is assessed whether the project emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.*				
B.6.4.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR I	**Cl 7– A clarification regarding the existence of project emissions in accordance with the applied methodology is required.** No project emissions are considered due to the existence of a reservoir since one of the elegibility criteria is that the power density shall be greater than 10 W/m^2, and it is stated in accordance with the applied methodology. Project emissions from fossil fuel consumption will be determined if a CPA comprises a fuel backup engine, then, CL7 is closed. **CAR 14– Provisions for the calculation of the power density of each CPA shall be detailed in the POA-DD.** The estimation of the power density of each CPA is detailed in section E.6.1 of the PoA-DD and on section B.5.2 of the CPA-DD generic form. Moroever, evidence have been provided to reproduce the calculation of the Ixtalito CPA. CAR 14 is closed.	**CL 7** **CAR 14**	OK
B.6.4.2. Have conservative assumptions been used when calculating the project emissions?	DR I	No project emissions are considered due to the existence of a reservoir since one of the elegibility criteria is that the power density shall be greater than 10 W/m^2, and it is stated in accordance with the applied methodology. Project emissions from fossil fuel consumption will be determined if a	**CL 7** **CAR 14**	OK

		CPA comprises a fuel backup engine, then, CL7 is closed and CAR 14, too.		
B.6.4.3 Are uncertainties in the project emission estimates properly addressed?	DR I	No uncertainities have been detected. **CL 7** and **CAR 14** are solved.	**CL 7** **CAR 14**	OK
B.6.5. Calculation of GHG Emission Reductions – Leakage *It is assessed whether leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.*				
B.6.5.1 Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	DR	No leakage emissions are considered in accordance with methodology AMS.I.D	OK	OK
B.6.5.2. Have conservative assumptions been used when calculating the leakage emissions?	DR I	No leakage emissions are considered in accordance with methodology AMS.I.D	OK	OK
B.6.5.3. Are uncertainties in the leakage emission estimates properly addressed?	DR I	No leakage emissions are considered in accordance with methodology AMS.I.D	OK	OK
B.7. Application of the monitoring methodology and description of the monitoring plan				
B.7.1. Description of the monitoring plan				
B.7.1.1 Is the monitoring plan documented according to the approved methodology and relevant tools and in a complete and transparent manner?	DR I	In accordance with the POA-DD, the Baseline and Monitoring methodology applied will be AMS.I.D, version 16. Version of the methodology has been updated to version 17.	OK	OK

B.7.1.2. Does the monitoring methodology provide a consistent approach in the context of all parameters to be monitored and further information provided in the POA-DD? Are the monitoring provisions and data parameters that a CPA has to apply correctly described?	DR	The monitoring methodology provides a consistent approach in the context of all parameters to be monitored and further information has been provided in the POA-DD as a result of the validation process. The monitoring provisions and data parameters that a CPA has to apply are correctly described. **CAR 15 – The Monitoring Plan shall state the activities of the participants. Since the DOE is an independent entity, its activities shall not be included in the POA.** **On the other hand, the list of parameters to be monitored shall be complete to gather all parameters applicable to the proposed POA.DD.** The monitoring Plan in the latest POA-DD does not include the DOE activities, and has been reinforced detailing further information regarding the CME activities. Moroever, the list of parameters to be monitored is complete pursuant with the applicable methodology and associated tools. Thus, CAR 15 is closed.	**CAR 15**	OK
B.7.1.3. Is the proposed sampling methodology used by the DOE for verification correctly described?	DR	**CAR 16 – Further information shall be provided in the monitoring plan of the POA-DD regarding sampling requirements.** The explanation included in Step 2 of section A.4.4.2 is considered appropriate as all parameters required will be monitored for each CPA under the proposed POA and each CPA will be verified independently. Then, CAR 16 is closed **CL 8 – A clarification regarding the suitability of the sampling approach**	**CAR 16** **CL 8**	OK

		given the size of the potential population is required, If applicable. This CAR 16 and CL8 have been closed as per latest POA-DD, for each project activity under a SSC-CPA all parameters in section E.7.1 will be monitored. Each CPA will be monitored and verified individually.		
B.7.1.4. In case of no sampling methodology would be used; the system used to assure that no double counting occurs and that the status of verification can be determined anytime for each CPA is transparently described?	DR	Yes, the double counting methodology is clearly detailed in the POA-DD.	OK	OK
B.7.1.5. Are the provisions made for archiving Programme of Activities emission data sufficient to enable later verification?	DR	Provisions for archiving data are consistent with the requirements of the applied methodology. A record keeping system has been prepared and it has been provided to the validation team.	OK	OK
B.7.1.6. Does the monitoring plan provide a clear description of the organization structure involved in monitoring activities and their responsibilities?	DR	Yes, the organizational structure is detailed in the POA-DD. The Operational and Management Plan is transparently detailed in the documentation.	OK	OK
B.7.1.7. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	DR	No additional information has been included in Annex 4 of the POA-DD.	OK	OK
B.7.1.8. Is the registration, monitoring, measurement and reporting procedure defined?	DR	Yes, the Monitoring Plan states provisions for registration, monitoring, measurement and reporting activities.	OK	OK
B.7.2 Compliance of the monitoring plan with the approved methodology				

B.7.2.1 Is the list of parameters considered to be complete with regard to the requirements of the applied methodology? Are all of them clearly described in the monitoring plan and in accordance with the methodology and tools?	DR	The list is complete in compliance with the applied methodology.	OK	OK
B.7.2.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	DR	Yes, the monitoring plan of the POA for a CPA provides for collection of the data of electricity generation needed for the estimating of the emission reductions.	OK	OK
B.7.3 Implementation of the Monitoring Plan				
B.7.3.1 Do the means of monitoring of each of the parameters included in the plan complies with the requirements of the methodology?	DR	The means of monitoring of each parameter are included in the POA-DD.	OK	OK
B.7.3.2. Is the measurement equipment described and deemed appropriate?	DR	Yes, the measurement equipment will be high precision electricity meters, and it is considered appropriate.	OK	OK
B.7.3.3. Are procedures identified for maintenance of monitoring equipment and installations? Are provisions regarding the calibration intervals included in the monitoring plan?	DR I	**CAR 17 – The frequency of the calibration activities of the metering equipment shall be detailed in accordance with "*General Guidelines to SSC CDM methodologies*".** Further information has been included in the POA-DD and CPA-DD regarding calibration requirements. According to the monitoring plan the meters should be certified to national or IEC standards and calibrated according to the national standards and reference points or	**CAR 17**	OK

		IEC standards and recalibrated at appropriate intervals according to manufacturer specifications, but at least once every three years. Then, CAR 17 is closed as information requested is appropriate in accordance with "General Guidelines to SSC CDM methodologies" v.17		
B.7.3.4. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements or lack of data?	DR I	The measurement accuracy addressed is considered approrpaite.	OK	OK
B.7.3.5. A record keeping system for each CPA under the POA is forecasted?	DR I	A record keeping system has been prepared, however **CL 9 - The methodology for the keeping the data of each of the CPA involved in the emission reduction calculation shall be clarified.** The record keeping system has been modified in order to allow the monitoring of all requested parameters. Therefore, CL 9 is clarified.	**CL 9**	OK
B.7.3.6. Is the monitoring Plan sufficient to ensure the verification of a proper implementation of the monitoring plan?	DR I	Yes, the monitoring plan is sufficient to ensure the verification of a proper implementation of the monitoring plan. CL9 is closed.	**CL 9**	OK
B.7.3.7. Are procedures identified to ensure that those operating the CPAs are aware and have agreed that their activity is being subscribed to the POA?	DR I	Yes, procedures to assure that the operators of the CPAs are aware and have agreed that their activity will be subscribed to the POA are forecasted. As it is stated in the POA-DD, the project implementer of a SSC-CPA shall enter into a contractual arrangement with the coordinating entity including provisions regarding this issue. The form of the Contractual Agreement has been provided to the	OK	OK

		validation team, and the required provisions are detailed in it.		
B.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)				
B.8.1. Is there any indication of a date when the baseline and monitoring was determined?	DR I	No indication of the date of the baseline and monitoring settling is detailed in the POA-DD. **CAR 18 – Section E.8 of the POA-DD is not complete since the date of the baseline and monitoring settling is not detailed.** Section E.8 has been completed in the final POA-DD and there is detailed the date when the baseline has been determined. The date included in the POA-DD is consistent with the timeline of the POA. CAR 18 is closed.	**CAR 18**	OK
B.8.2. Is this consistent with the time line of the POA-DD history?	DR I	The date is consistent with the timeline of the Programme of Activities. CAR 18 is closed.	**CAR 18**	OK
B.8.3. Is the information on the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	DR I	Yes, The baseline and monitoring sections have been prepared by South Pole Carbon Asset Management Ltd..	OK	OK
B.8.4. Is information provided whether this person / entity is also considered a project participant?	DR I	South Pole Carbon Asset Management Ltd. Is considered as PP in the latest POA-DD.	OK	OK
C. DURATION OF THE PROGRAMME OF ACTIVITIES / CREDITING PERIOD				

C.1. Duration of the Programme of Activities				
C.1.1. Are the POA starting date and operational lifetime clearly defined and reasonable?	DR I	Yes, the starting date of the Programme is stated as 04/05/2011, the date of the publication of the documentation in the UNFCCC website. Thus, it is considered clearly indicated. The length stated in the POA-DD is 28 year, which is reasonable taking into account the provisions of the procedure from EB55, annex 38. nevertheless, the duration of the Contractual Agreements is 26 years. The inconsistency is needed to be clarified. **CL 10 – The duration of 26 years of the Contractual Agreement shall be clarified.** The contract is signed between the CPAs developers and the Coordinating Entity. Taking into account that the crediting period of each CPA will be as maximum 21 years, the duration of the contract is considered adequate. CL 10 is closed.	**CL 10**	OK
D. ENVIRONMENTAL IMPACTS				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
D.1.1. Is the environment analysis undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM-POA-DD?	DR I	The environmental impacts analysis will be done at CPA level as it is clearly indicated in the POA-DD.	OK	OK
D.1.2. Has the analysis of the environmental impacts of the	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A

Programme of Activities been sufficiently described in the POA-DD?				
D.1.3. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.1.4. Will the Programme create any adverse environmental effects? Have they identified as significant?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.1.5. Are transboundary environmental impacts identified in the analysis?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.				
D.2.1. Have the identified environmental impacts been addressed in the programme design sufficiently?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.2.2. Does the programme comply with any other environmental legislation in the host country?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
E. STAKEHOLDERS' COMMENTS				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Is the stakeholders consultation process undertaken at POA level? In negative case, is this issue correctly described	DR	The stakeholders consultation process will be done at CPA level as it is clearly indicated in the POA-DD.	OK	OK

and reflected in the CDM-POA-DD?	I			
E.1.2. Have relevant stakeholders been consulted? Is the exact date of the consultation process included in the POA-DD	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.1.3. Have appropriate media been used to invite comments by local stakeholders?	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.1.4. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.1.5. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.2. Summary of the comments received				
E.2.1. Is a summary of the stakeholder comments received provided?	DR	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.3. Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?	DR	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A

*MoVRef: Means of Validation and references of background documents.

CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "Hydro Alliance Programme of Activities"

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039.07, and in relation with the validation process of the above mentioned project activity:

Name: **Jose Luis Fuentes Perez**
CDM Chief Validator: Yes
CDM Validator: Yes
CDM Chief Verifier: N/A
CDM Verifier: N/A
Technical Expert: Yes
Technical areas related with the project activity:

TA1.2: Energy generation from renewable energy sources.

José Luis TEJERA OLIVER
CDM Operational Director

CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "Hydro Alliance Programme of Activities"

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Name: **Freddy Garro**
CDM Chief Validator: No
CDM Validator: Yes
CDM Chief Verifier: N/A
CDM Verifier: N/A
Technical Expert: Yes
Technical areas related with the project activity:

TA1.2: Energy generation from renewable energy sources.

José Luis TEJERA OLIVER
CDM Operational Director

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Subject: Validation and Technical Review Team for "Hydro Alliance Programme of Activities"

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Name: **Luis Javier Arribas Alonso**
CDM Chief Validator: Yes
CDM Validator: Yes
CDM Chief Verifier: N/A
CDM Verifier: N/A
Technical Expert: Yes
Technical areas related with the project activity:

TA1.2: Energy generation from renewable energy sources.

José Luis TEJERA OLIVER
CDM Operational Director

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Name: **José Antonio Gesto Vilacoba**
CDM Chief Validator: Yes
CDM Validator: Yes
CDM Chief Verifier: N/A
CDM Verifier: N/A
Technical Expert: Yes
Technical areas related with the project activity:

TA1.2: Energy generation from renewable energy sources.

José Luis TEJERA OLIVER
CDM Operational Director

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Name: **MªCarmen González Galán**
CDM Chief Validator: Yes
CDM Validator: Yes
CDM Chief Verifier: N/A
CDM Verifier: N/A
Technical Expert: Yes
Technical areas related with the project activity:
TA1.2: Energy generation from renewable energy sources.

José Luis TEJERA OLIVER
CDM Operational Director