

Validation Report



CDM PoA Validation Report

TEPEU WIND PROGRAMME OF ACTIVITIES

GLC Report No: 228, Rev. 14

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Organisational Unit		
Germanischer Lloyd Certification GmbH (GLC), Greenhouse Gas Services		
Name of Client	Client reference person	
Mabanaft Carbon B.V.	Patricia Rosenthal	
Summary:		
PoA Name:	Tepeu Wind Programme of Activities	
Generic CPA-DD title:	[name] Wind Power Plant – Tepeu PoA CPA #[number]	
Project Host Country(ies):	Nicaragua, Peru	
Annex I Country(ies):	The Netherlands	
Coordinating / Managing Entity (CME) and Project Participants (PP):	ÉcoRessources Carbone S.A.C. (CME) Mabanaft Carbon B.V.	
Sectoral Scope(s), Technical Area(s):	CDM Sectoral Scope 1, Technical Area 1.2	
Name of applied Methodology(ies) /versions:	ACM0002 version 12.3.0: Consolidated baseline methodology for grid-connected electricity generation from renewable sources	
Project Size (Scale):	<input checked="" type="checkbox"/> Large Scale <input type="checkbox"/> Small Scale	
ER Estimation of 1st CPA:	751,626 tCO _{2eq} total	107,375 tCO _{2eq} per year average
Start date of the PoA and the crediting period:	Start date of the GSC of the PoA: 2011-12-28 Start date of the Lifetime of the PoA/crediting period: 2012-12-20 (or on the date of registration, whichever is later)	
PoA Duration:	28 years	
CPA Crediting Period:	<input type="checkbox"/> Fixed (10 years) <input checked="" type="checkbox"/> Renewable (7years)	
Validation opinion:	<input checked="" type="checkbox"/> Positive <input type="checkbox"/> Negative	
Project Assesement Team:	Technical Review Team:	Project Approval:
Jose Emilio Moreno Fernando Rangel Villasana	Jun Wang Karunakar Avuram	Markus Weber
Date of this revision:	Revision No.	Number of pages
2012-11-27	14	168
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History of report revisions:

Rev.	Date	Person (short sign or name)	Function	Action
01	2012-07-02	Fernando Rangel Villasana José Emilio Moreno	Trainee Auditor ATL	Draft Report
02	2012-07-06	Karunakar Avuram	Trainee reviewer	Review with comments
03	2012-07-16	Fernando Rangel Villasana	Trainee Auditor	Revisions and response to TR comments
04	2012-07-23	Jun Wang	Reviewer	Review with comments
05	2012-08-10	Fernando Rangel Villasana	Trainee Auditor	Revisions and response to TR comments
06	2012-08-17	Jun Wang	Reviewer	Review with comments
07	2012-08-22	Karunakar Avuram	Trainee reviewer	Review and closing of addressed comments
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12	2012-09-12	Markus Weber	Approver	Reviewed and approved
13	2012-11-27	Fernando Rangel Villasana José Emilio Moreno	Trainee Auditor ATL	Revisions in response to notification of incompleteness
14	2012-11-27	Jun Wang Markus Weber	Final reviewer Approver	Final Review and approved

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Abbreviations

ACM	Approved Consolidated Methodology
ALBANISA	Alba de Nicaragua S.A.
AM	Approved Methodology
AMS	Approved Methodology Small scale
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board (the board)
CER	Certified Emission Reduction
CL/CR	Clarification Request
CME	Coordinating and Managing Entity
CMP	Meeting of the Parties to the Kyoto Protocol
CONAM	Consejo Nacional del Ambiente (National Environmental Council of Peru)
CO ₂	Carbon dioxide
CO ₂ eq	Carbon dioxide equivalent
COES	Comité de Operación Económica del Sistema Interconectado Nacional (Committee for the Interconnected Electricity System's Economic Operation)
COP/MOP	The Conference of the Parties to the United Nations Framework Convention on Climate Change serving as the Meeting of the Parties to the Kyoto Protocol
CPA	Component Project Activity
CPA-DD	CDM Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operation Entity
EIA	Environmental Impact Assessment
EF	Emission Factor
FAR	Forward Action Request
GSC	Global Stakeholder Consultation
GHG	Greenhouse gas
GLC	Germanischer Lloyd Certification GmbH
GWP	Global Warming Potential
INE	Instituto Nicaragüense de Electricidad (Nicaraguan Electricity Institute)
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Country
LoA	Letter of Approval
MARENA	Ministerio del Ambiente y los Recursos Naturales (Ministry of Environmental and Natural Resources of Nicaragua)
MINAM	Ministerio del Ambiente (Ministry of Environment of Peru)
NGO	Non-governmental Organisation
NIS	Nicaraguan Interconnected System (national power grid of Nicaragua)
ODA	Official development assistance
O&M	Operation and maintenance
PDD	Project Design Document
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PP	Project Participant (s)

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SEIN	Sistema Interconectado Nacional (Interconnected Electricity System – national power grid – of Peru)
SSC	Small Scale CDM
SME	Small and Medium size Enterprises
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 INTRODUCTION

Mabanaft Carbon B.V. has commissioned Germanischer Lloyd Certification GmbH (GLC) to perform the validation of the **Tepeu Wind Programme of Activities** with its first CPA in Nicaragua (hereafter called “the project”). This validation report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the subsequent decisions made by COP/MOP and the CDM Executive Board.

1.1 Objective

The purpose of a validation is to have an independent third party assessment of the project design. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria are validated by a Designated Operational Entity (DOE) in order to confirm that the project design as documented in the completed:

- PoA Design Document (PoA-DD),
- CDM Project Activity Design Document generic (CPA-DD) with generic information relevant to all CPAs
- CPA-DD specific case¹ based on the application of the PoA to one real case
- Relevant supporting documents

is sound and reasonable and that it meets the identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reductions (CERs). The executing DOE can only provide a validation/inclusion opinion but the ultimate decision whether a project is registered or not rests with the CDM Executive Board (CDM-EB).

1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the PoA-DD, generic CPA-DD and the specific case CPA-DD (together hereafter referred to as “PDDs”) and supporting documentation. The PDD^{1/} and supporting documentation are reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the Approved Baseline and Monitoring Methodology (ACM0002 version 12.3.0)^{1/}. The validation was based on the recommendations and guidance of the [Validation and Verification Manual](#), VVM version 1.2^{6/} and PoA related CDM requirements according to EB 55 Annex 38 [Procedure for registration of a programme of activities as a single project activity](#) version 4.1^{27/}.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications, corrective actions and/or forward actions may have provided input for improvement of the PoA design.

¹ A separate validation report is provided for the inclusion of the specific case CPA to the PoA

2 VALIDATION TEAM

2.1 Assessment Team

A competent team with relevant knowledge and experience in the specific scopes and sectors was appointed by GLC. The appointment of the team takes into account the required scope, technical area, knowledge of the host country and general project activity knowledge requirements for validating the PoA design and the relevant CERs that would be achieved by the CPA(s) under the PoA. The appointment of the audit team also includes a screening of everyone involved against any conflict of interest. The assessment team is composed of an Assessment Team Leader (ATL), Auditors (A) and Host Country or Technology Expert (E). Table 2-1 below shows the composition of the assessment team their qualifications and/or functions.

Table 2-1: Validation team members, qualification and knowledge

Name (Surname , first name)	Function/Qualification ²	Sectoral scope specific knowledge	Technical area specific knowledge	Local knowledge	Type of involvement				
					Desk review	On-site visit / interviews	Reporting	Supervision of work	Expert input
Fernando Rangel Villasana	TA, FE			X	X	X	X		X
Moreno, José Emilio	ATL, E	X	X		X	X	X	X	X

2.2 Technical Review and Final Approval Team

Before submission of the final Validation Report to EB of the UNFCCC, a technical review of the whole validation procedure and the draft report was carried out by Technical Reviewer(s) appointed by GLC. The appointed technical reviewer team is composed of competent GHG auditors for the sectoral scope and technical area under which this PoA falls. Each involved reviewer is not directly involved in the validation assessment up to the start of the internal technical review phase of this project.

² ATL = Assessment Team Leader, A = Auditor, TA = Trainee Auditor, E = Expert, FE = Financial Expert

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As a result of the internal technical review process, the validation opinion and the topic specific assessments as prepared by the ATL may be confirmed or revised. Further reporting improvements might be achieved during the technical review and approval processes.

Finally, the PoA-DD, CPA-DD (generic and real case), validation reports and any document to be submitted to the EB have to undergo an internal quality control and completeness check before they are approved to be uploaded to start the request for registration of the validated CDM project activity. The Technical Review team and the person responsible for approval of the report are found in the table below:

Table 2-2: Technical Review and Approval Team.

Name (Family name, given name)	Qualification / Function ³	Technical Area Knowledge	Sectoral Scope Expertise	Type of Involvement	
				Review	Approval
Avuram, Karunakar	TR			X	
Wang, Jun	R+FR	X	X	X	
Weber, Markus	FA			X	X

³ TR: Trainee Reviewer, R: Reviewer, TE: Technical Expert, FR: Final Reviewer, FA: Final Approval.

3 METHODOLOGY

The validation consists of the following three phases:

- I. Desk review of the PoA-DD, CPA-DD generic, CPA-DD Specific Case^{/1/} and other supporting documents. This includes the preliminary compliance check of the project design against the applicability conditions and with regard to baseline setting and eligible project measures and above all against the Eligibility Criteria for CPA Inclusion.
- II. On-site assessment and follow-up interviews (through email communications, telephone calls, skype, *inter alia*) with project participants and stakeholders.
- III. Resolution of outstanding issues and the issuance of the draft validation report and opinion.
- IV. Technical review of the draft validation reports and other supporting documentation in order to ensure the correctness, completeness and depth of the reporting.
- V. Finally the report and supporting documentation has to be approved by a competent person before they are submitted to CDM-EB for request for registration.

This final validation report summarizes the findings after all phases of the validation process have been completed. The following sections outline each step with more details.

3.1 Desk Review of the PDDs and Supporting Documents

The initial version of the CPA-PDD as well as other supporting background documents related to the project design and baseline submitted by the PP, were initially assessed in the context of a desk-review in order to verify the correctness, credibility and interpretation of the presented information. A further crosscheck of the information provided was done with information from other sources as available. Preliminary findings from the desk review were sent to the PPs together with the audit plan to prepare for the subsequent on-site visit.

Desk review is based on the first versions of the PoA-DD, CPA-DD generic and CPA-DD specific case of Nicaragua which were uploaded to launch the Global Stakeholder Consultation (GSC) on 2011-12-28.

A complete list of documentation reviewed during the validation process is presented as Information Reference in section 6 of this report.

3.2 On-Site Assessment and Follow-Up Interviews with Project Stakeholders

From 2012-01-30 to 2012-02-03, members of the assessment team as appointed by GLC conducted an on-site audit at the site where the CPA will be implemented. The following site(s) was / were visited:

- Local CME offices in Managua, Nicaragua
- Local office for the Ministry of Environment and Natural Resources (MARENA) in the Municipality of Rivas, Nicaragua.
- Mayor's office in the Municipality of Rivas, Nicaragua,
- La Fe Farm, in the Municipality of Rivas, Nicaragua, where the first real case CPA will be implemented;
- INE - Instituto Nicaragüense de Electricidad (Nicaraguan Electricity Institute).

In the context of such on-site visits, GLC performed visual inspection to the project site, and an assessment of project related documents provided by the project participants. The members of the

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validation team also conducted interviews with representatives of project stakeholders in order to confirm selected information and to resolve issues earlier identified during the desk review of documents. The main topics addressed during the interviews includes, inter alia:

- Project design and adopted technology
- Demonstration of baseline and additionality
- Project implementation timeline and any risk of delay
- GHG emission reduction calculations
- Application of the monitoring methodology as well as expected design and application of the monitoring and managing plan
- Local Stakeholder Consultation process
- Assessment of environmental impacts, environmental licensing and legal compliance of the project and baseline scenario with applicable regional and national legislation
- Monitoring of dispatched energy, record keeping and access to data and publications by INE and COES
- Official calibration requirements for electricity meters by INE and COES
- Letter(s) of Approval(s) by the respective countries' DNA

The names of those interviewed during the validation process are listed below in Table 3-1.

Table 3-1: Names of interviewed persons

Name	Organization / Position
Julian Gonzalez Rios	INE/Economics Specialist
Miguel A. Aleman	INE/Director of Economic Studies and Tariffs
Aura Monjarrez	INE/Director of the Wholesale Electricity Market
Bismarck Morales	Nicaraguan DNA/Technical Assisstant
Manuel Madriz Callejas	Nicaraguan DNA/Coordinator
Esperanza Nuñez Tenorio	Municipality of Rivas/Vice-Mayor
Pedro Aburto Padilla	Municipality of Rivas/Head of Financial Department
Jeronimo Ruiz	Municipality of Rivas/Head of Treasury Department
Mario Rodriguez	MARENA/Local Representative for Rivas
Isabel Málaga	Écoressources (CME)/Project Manager
Adolfo Mejía	Écoressources (CME)/Local Representative for Nicaragua
Gabriella Torres	Écoressources (CME)/Project Manager
Tomas Montesinos (*)	COES/Assisstant Director of Information Management
Salome Gonzalez (*)	COES/Energy Demand Specialist
Modesto Rojas	ALBANISA/Supervisor - Renewable Energy Department
Bismarck Rueda	ALBANISA/Environmental Technician

(*) Interview conducted over a telephone call.

3.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation was to resolve any outstanding issues which needed to be clarified prior to GLC's final conclusion on the project design as described in the Project Design Document (PDD) and supporting documentation. In order to ensure transparency, a validation questionnaire was customised for the project, according to the latest version of the applied methodology

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and [Validation and Verification Manual \(VVM\)](#) ^{/6/} PoA related CDM requirements according to EB 55 Annex 38 [Procedure for registration of a programme of activities as a single project activity](#) version 4.1^{/27/} and PoA Standard^{/31/} (EB70 Annex 5)^{/31/}. This questionnaire shows in transparent manner VVM requirements, source, means and findings of validation as well as the results from validating the identified criteria. The validation questionnaire serves the following purposes:

- It organises, details and clarifies the requirements a CDM project activity / PoA is expected to meet;
- It ensures a transparent validation process where the validators will document how a particular requirement has been validated and the result of the validation.

The validation questionnaire consists of one table with sub-sections. These sections are related to the different topics which have to be validated and checked with respect to the VVM and PoA requirements. The completed validation questionnaire for the **Tepeu Wind Programme of Activities** is enclosed in Annex A to this report. The different columns of this questionnaire are explained in Table 3-2.

Findings established during the validation can either be seen as a non-fulfilment of criteria of the applicable CDM baseline and monitoring methodology, and/or applicable criteria of the CDM or where a risk to the fulfilment of PoA objectives is identified.

Corrective action requests (CAR) are issued, where:

- i) the project participants have made mistakes that will influence the ability of the PoA to achieve real, measurable additional emission reductions; or
- ii) applicable baseline and monitoring methodology, and/or applicable criteria of the CDM have not been met; or
- iii) there is a risk that emission reductions cannot be monitored or calculated or that the project would not be accepted as CDM project activity

A clarification request (CL) may be used provided information is insufficient or not clear enough to determine whether the applicable CDM PoA requirements have been met or where additional information is needed to fully clarify a particular issue.

The validation questionnaire consists of individual frames for each Corrective action requests (CAR) and clarification request (CL) raised. The content of each frame is described in the figure below. To guarantee the transparency of the validation process, the concerns raised by GLC and the responses provided by the project participants are fully documented in Annex A of this report.

Forward Action Requests (FARs) are issued during validation to highlight issues related to PoA implementation that require review/assessment during the subsequent verification(s) of the PoA. FARs are not related to the CDM requirements for registration

The findings are separately presented in a findings list table which is also attached in Annex A. The different columns of this list are explained in Table 3-3 and table 3-4 below.

The resolution of all the 25 CARs and 18 CLs raised for the PoA-DD and 1 CAR raised for the generic CPA-DD is enclosed in Annex A of this Validation Report. The table shows the interaction between the project participants on one hand and GLC audit team on the other hand which resulted in the revision of the final PDD to version 07 of 2012-09-06. Upon successful closure of the raised CARs and CLs the assessment team confirms that there are no remaining non-conformities.

Table 3-2: Structure of the Validation Questionnaire

CHECKLIST QUESTION / VVM and PoA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION	Assessment based on POA- DD and CPA- DDs in GSP	Conclusion based on Final PoA-DD and CPA-DDs
Lists CDM requirements which the PoA should meet. The checklist is organised in several different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the checklist question or item is from.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR), Clarification request (CL), or Forward Action Request (FAR).	This is either: OK, when the Draft Conclusion is OK or raised CAR/CLs have been successfully closed out; OK, with only FAR remaining; Or: CAR/CLs

Table 3-3: Structure of the Findings List – Resolution of Corrective Action and Clarification Requests

Description of Finding (CAR, CL, FAR) <i>Describe the finding in a transparent manner i.e. state clearly what is required and why; address the context (e.g. section)</i>	Project Participants Response <i>This section shall be filled by the PP. The finding shall be addressed with suitable arguments and evidence</i>	GLC Assessment <i>The assessment shall include how the finding is closed i.e. how it is found that the response is assessed to be appropriate and meeting the specific requirement of the finding. In case the response is not satisfactory, additional response and DOE assessments (#2, #3, etc.) shall be sought.</i>	Closed Out / Not closed out?
In this column a finding is described in a clear and transparent manner. It also shall be described which further information is needed or which correction must be applied. The date of issue is also indicated.	In this column the PP shall provide a clear statement how to close the finding. This statement shall be sustained with suitable arguments and evidence. The date which the response is submitted is also indicated.	In this column GLC shall provide the conclusion of the assessment. The finding can be close here or if the argumentation and/or evidence are not suitable a new line below with the continuation of the finding will be opened. The date when the response is assessed is also indicated.	GLC indicates whether the issue raised in the finding has been closed out or not closed out.

4 VALIDATION REPORTING

4.1 Coordinating and Managing Entity, PoA Participants and Parties Approval

The project participants, as indicated in the final PoA-DD in section A.3 and in Annex 1 are:

- **ÉcoRessources Carbone S.A.C.** as the CME and,
- **Mabanaft Carbon B.V.**

No entities other than those approved as project participants are included in these sections of the PoA-DD.

Mabanaft Carbon B.V. has been approved by the DNA of The Netherlands according to the Letter of Approval with reference number 2012ANL592 ^{/32/} issued on 2012-03-26 authorizing **Mabanaft Carbon B.V.** as a project participant. The Netherlands approval has further been double checked with the List of Approved Projects published by the Ministry of Infrastructure and the Environment, International Affairs Directorate ^{/33/}.

The following Non-Annex I countries have issued Letter of Approvals authorizing **ÉcoRessources Carbone S.A.C.** as the CME of the PoA in their respective countries since according to EB 55 Annex 38 [Procedure for registration of a programme of activities as a single project activity](#) version 4.1^{/27/} “The operators of individual CPAs are not required to be project participants. CDM programme participation is only recorded at the PoA level.”

The DNA from the host country of Nicaragua, [Oficina Nacional de Desarrollo Limpio](#) (Nacional Office for Clean Development, ONDL), has issued a Letter of Approval ^{/34/} on 2012-02-01 authorizing **ÉcoRessources Carbone S.A.C.** as a project participant and also as the CME to coordinate and manage the PoA in Nicaragua. The Nicaraguan approval has been checked by the validation team through personal interviews with Mr. Manuel Madriz, ODNL coordinator, who confirmed the authorization for the CME and the **Tepeu Wind Programme of Activities** as stated in LoA with reference number DM-JAS/0092.02.12.

The DNA from the host country of Peru, [Ministerio del Ambiente](#) (Ministry of Environment, MINAM), has issued a Letter of Approval ^{/35/} on 2012-07-09 authorizing **ÉcoRessources Carbone S.A.C.** as a project participant and also as the CME to coordinate and manage the PoA in Peru. According to the confirmation via telephone interview with Ms. Regina Ortega Gordillo on 2012-07-16, the Peruvian DNA has granted the Letter of Approval #178-DGCCDRH/DVMDERN/MINAM dated 2012-07-09, to the project titled **Tepeu Wind Programme of Activities**.

The host country of the first CPA - **Nicaragua**, the annex I Party - **The Netherlands**, and the additional host country of **Peru** all fulfill the requirements to participate in CDM project activities.

GLC received these letters from the project participants directly and after double checking, considers the provided letters to be authentic according to VVM § 49(c).

Furthermore, after checking the LoAs provided, GLC is able to confirm that the letters refer to the same proposed CDM project activity titled **Tepeu Wind Programme of Activities** which is in line with the title in the PoA-DD.

The letters also indicate that each of the participating Party is a Party to the Kyoto Protocol, and that the participation in **Tepeu Wind Programme of Activities** project is voluntary. The LoAs from the Non-Annex I countries also confirm that the proposed CDM project activity contributes to the sustainable development of their countries (host countries). Based on the information given in these letters, GLC considers the approval and the participation of each of the parties as unconditional. The requirements of the VVM (§§ 45-48) are therefore considered to be complied with.

4.2 PoA and CPA Project Design Documents

GLC can confirm that the PoA-DD, CPA-DD generic and CPA-DD specific case have been completed in accordance with relevant [Form and Guidance](#) as provided by UNFCCC. The most recent versions of the PoA-DD, CPA-DD generic and CPA-DD specific case form under VVM track have been used with relevant information provided by the participants in the applicable sections. The PoA-DD, CPA-DD generic and CPA-DD specific case have all been prepared according to EB 55 Annex 38 [Procedure for registration of a programme of activities as a single project activity](#) version 4.1^{/27/} and the PoA Standard EB70 Annex 5^{/31/}. Correctness and completeness was assessed and documented through the questionnaire included in Annex A.

4.3 PoA Description - Policy/Measure/Technology or Stated Goal of the PoA

The main goal of this Programme of Activity (PoA) is to support the development of grid-connected wind power projects in the Latin America and Caribbean region. CDM Program Activities (CPAs) eligible under this PoA will comprise one or more wind power plant projects, which can be new facilities, capacity additions, replacements or retrofits.

Most Latin American countries have a high wind power capacity, particularly countries located along the Pacific coast. As of 2010 only 2,008 MW of installed wind power capacity had been installed in Latin America, of which 1,743 MW (86.8%) were concentrated in four countries: 931 MW in Brazil, 517 MW in Mexico, 172 MW in Chile and 123 MW in Costa Rica^{/8/}.

However, according to the Latin American Association of Wind Energy (*Asociación Latinoamericana de Energía Eólica*) interest in wind power generation has begun to grow in the region, with the industry growing at an average of about 13% a year until reaching an estimated installed wind power capacity of 46,000 MW in the year 2025. Under this scenario, the Tepeu Wind Programme of Activities aims to provide carbon finance stimulus for the growing wind sector in Latin America.

Thus, this PoA plans *“to develop a platform for overcoming institutional, financial and structural hurdles for the construction of a series of wind power projects or to increase the generation capacity of existing power plants”*. All projects will be grid connected facilities which will displace electricity generation from thermal power plants and, thus, reduce the combustion of fossil fuels and avoid GHG emissions.

The PoA will be managed and coordinated by ÉcoRessources Carbone S.A.C., as the CME, with support from Mabanft Carbon B.V. and the CPAs will be implemented by 'CPA implementers' in the host countries of Nicaragua and Peru.

4.4 Eligibility Criteria for CPA Inclusion under the PoA

The Coordinating and Managing Entity (CME) has outlined clear and unambiguous Eligibility Criteria for the inclusion of a CPA under this PoA. The Eligibility Criteria, listed in PoA-DD section A.4.2.2 and section B.2 of the generic CPA-DD, has been validated by GLC with regards to the applicability of the applied methodology ACM0002 version 12.3.0 ^{/2/} and the requirements for development of eligibility criteria set out in EB 70 Annex 5: PoA Standard^{/31/}. A detailed assessment of the eligibility criteria is provided in Section A.4.2 of Annex A - the validation questionnaire and resolution of corrective action and clarification requests (findings's list). The GLC validation team confirmed that the eligibility criteria listed in PoA-DD section A.4.2.2 defines minimum technological requirements for wind turbines, CPA location and boundary, start date of CPA, size and additionality of each CPA (including means for ensuring additionality of off-shore CPAs with capacity up to 15 MW, and provisions for conducting a debundling check, further explained in Section E.5.1 of the PoA-DD), monitoring requirements of each CPA, host country laws and regulations, Local Stakeholder Consultations, EIA, contracts signed between the CME, project participants and CPA implementers and avoidance of double counting.

The eligibility criteria as listed in PoA-DD section A.4.2.2 and also in section B.2 of the generic CPA-DD, which has been validated by GLC, is in agreement with the [Validation and Verification Manual](#)^{/6/} paragraph 167 which states that Eligibility Criteria should “..include inter alia the means of demonstrating the additionality of the CPA and the applicability of the applied methodology.” The CME has also followed the guidelines contained in EB 70 Annex 5: PoA Standard^{/31/}. GLC can therefore confirm that the Eligibility Criteria are sufficient, objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA. The Eligibility Criteria would be validated at the CPAs by the contracting DOE during inclusion.

4.5 The PoA Operational and Management Plan

It has been stated in section A.3 of the PoA-DD that ÉcoRessources Carbone S.A.C. is the CME which will be jointly communicating with Mabanft Carbon B.V. to the Executive Board. The operation and management of the PoA will be coordinated by ÉcoRessources Carbone S.A.C. The CME will enter into a contractual relationship with the implementers of the CPAs in Nicaragua and Peru and provide training on data monitoring and recording. This contractual arrangement will include the provisions that:

- The CPA has not been and will not be registered as a single CDM project activity or as a CPA under another PoA.
- The project implementer is aware that the CPA will be subscribed to this PoA
- The project implementer cedes its rights to claim and own emission reductions, under the Clean Development Mechanism of the UNFCCC or any voluntary scheme, to the managing entity of this PoA.
- The project implementer certifies that the CPA is not registered under the Clean Development Mechanism of the UNFCCC or any voluntary scheme.

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This arrangement will help avoid double counting - to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA.

The CME will create, manage and continuously update a record keeping system (database) for each CPA under the PoA, which contains the following information per CPA:

1. Name of the CPA and unique ID number.
2. CPA status.
3. Name of the implementing entity of the CPA.
4. Contact detail of the implementing entity, including contact person, address, telephone and e-mail.
5. Installed capacity and other relevant technical specifications of the CPA.
6. Location of the CPA (coordinates).
7. Verification status and monitoring reports.
8. Recording and storing of all relevant information of the PoA and CPAs in a minimum of two geographically distinct and secure digital locations.

A sample of the database (still under construction) as well as the training manuals contained in the Coordinating/Managing Entity Operational Manual (CME Manual) ^{/7/} has been presented to the audit team during the site visit. GLC can therefore confirm that the CME, with the structure in place, will be able to manage and coordinate the PoA as described in the PoA-DD according to the requirements of [Validation and Verification Manual](#), paragraph 166^{/6/}, since the structure is “sufficient to ensure that the coordinating/managing entity will have control of all records and information related to the implementation of individual CPAs and will be in a position to ensure each CPA is being operated in accordance with the specific requirements of the programme”.

The CME Manual^{/7/} prepared by ÉcoRessources Carbone S.A.C was reviewed and assessed by the validation team as per paragraph 17 of the PoA Standard (EB70 Annex 5) ^{/31/}.

The CME Manual includes several procedures relevant to organization and operational aspects of the PoA. A detailed assessment of these elements is provided below:

- *Definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;*

“CME/03 Procedure of organization and responsibilities” of the CME Manual includes a description of the CME organizational structure, as well as documents associated with the activities of the CME. This includes the responsibilities for ÉcoRessources Carbone S.A.C, Mabanaf Carbon B.V. and CME staff. The skills and experience required for each position within the CME are also clearly defined, thus this procedure is deemed complete and adequate to define roles, responsibilities and competencies for the CME staff.

- *Records of arrangements for training and capacity development for personnel;*

Training and training records for CME staff are included under “CME/03 Procedure of organization and responsibilities”. The PoA Manager is responsible for recruiting, replacing, development and training of CME staff. The CME Manual also includes “CME/04 procedure of training of CPA developers” which outlines the procedure for identifying and conducting specific CDM training to CPA implementers during

the CPA-DD development or inclusion process. Thus, the procedures is deemed to allow for adequate identification of responsibilities for training for both CME staff and CPA implementers, as well as identify the relevant recording requirements for training.

- *Procedures for technical review of inclusion of CPAs;*

“CME/05 Procedure for technical review of inclusion of CPAs and PoA document modifications” has the objective of controlling the development, review, approval and modification of CPAs to be included under this PoA. The procedures includes steps for CPA origination, CPA-DD development, CPA inclusion process, identification and assessment of the necessity to develop or modify the PoA documentation, development and changes to the PoA documentation, and document control. This procedure is deemed to include an adequate review process for the inclusion of CPAs with clear responsibilities assigned to relevant CME staff.

- *Procedures to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA);*

“CME/07 Procedure for double counting avoidance” includes a step-wise approach for evaluating prospective CPAs which includes assignment of an individual reference number, signature by the CME implementer of a sworn declaration, review of UNFCCC of independent CDM projects and PoAs alike during three stages: before an agreement is signed by the project participants, during the CPA-DD development and also during the CPA inclusion process (but prior to the formal inclusion). This procedure is deemed appropriate to ensure that no double counting occurs due to a prospective CPA already registered as a CDM project or as a CPA of another PoA.

- *Records and documentation control process for each CPA under the PoA;*

“CME/08 Procedure for registry control” has the objective of ensuring that records are identified, maintained and arranged to be used as evidence of compliance with the requirements and proper functioning for the PoA. This procedures includes provisions for classification and identification of the files, maintenance and access and removing. This procedure includes an Appendix I “Master List of Records” as the main document detailing the name of all the records generated as a result of the development of the PoA as well as the CME staff responsible for update and maintenance. Data storage and back up procedures are also specified under this procedure. Hence, the validation team deems that this procedure establishes an appropriate records and documentation control process for each CPA under the PoA.

- *Measures for continuous improvements of the PoA management system;*

“CME/09 Procedure of measures for continual improvements of the PoA management” includes provisions for implementing actions for continual improvement in the PoA management. The CPA Manager is responsible for processing or developing improvement proposals arising from the daily operation of the PoA, new UNFCCC rules, audit process, etc. Proposals for improvement as well as improvement actions are recorded under the “Continual Improvements Report”. Thus, the procedure is deemed to provide sufficient measure for undertaking and recording continuous improvements of the PoA management system.

- *Other relevant elements.*

The CME Manual includes other elements relevant to the operation and management of the CPAs under this PoA:

“CME/10 Procedure of internal and external communications” refers to establishing channels for conducting external communications with stakeholders and internal staff. The procedure identifies the “External Communications Report” as the document where all communications are recorded and stored. This procedure was found appropriate and correct.

“CME/11 Procedure for updating the grid emission factor” includes separate processes for updating the grid emission factor for each of the host countries (Nicaragua and Peru) as well as recording requirements under specific documentation (“Emission Factor Report”) included in the Master List of Records. This procedure is found to be complete and adequate to re-calculate the grid emission factor for each CPA and keep formal records of data and values utilized in both ex-ante and ex-post grid emission factors.

“CME/12 Procedure of origin and replacement of equipment – scrapping” contains provisions to ensure that scrapping (if needed) of equipment replaced under the PoA implementation is correctly documented. This procedure is deemed appropriate and correct.

It was confirmed during the on-site visit that ÉcoRessources Carbone S.A.C was appointed by Mabanft Carbon B.V. as the Coordinating and Managing Entity to manage this PoA. In this regard, Mabanft Carbon B.V. and ÉcoRessources Carbone S.A.C have signed a formal agreement ^{/17/} stating that ÉcoRessources will act as the CME of the proposed PoA, have direct contact with all the CPA developers, and execute all responsibilities of a CME. This agreement is valid for the entire duration of the PoA.

In addition, Mabanft Carbon B.V. will also enter into an agreement with each CPA ^{/18/} where the inclusion conditions are described, and which requires the CPA to work directly with the CME, to submit all requested information of the project and to provide support and assistance during the implementation and operation phases, in order to meet the inclusion and monitoring requirements of the PoA.

Both Mabanft Carbon B.V. and the CME have also developed a Cooperation Agreement to be signed tripartite with each CPA ^{/19/}. This agreement is a direct contractual document which details the responsibilities of the CME and CPA developer in the context of the PoA.

4.6 Monitoring Plan of a typical CPA

All parameters to be monitored for each CPA as detailed in section E.7.1 of PoA-DD will be monitored according to the Monitoring Plan outlined in E.7.2. of PoA-DD.

Primary data will be collected by CPA implementers and stored according to the procedures defined in section E.7.1. of the PoA-DD. This will include the monitoring of the following parameters as defined in ACM0002 version 12.3.0 ^{/2/}:

Data or Parameter to be Monitored		Procedure or means of Measurement
1	Quantity of net electricity supplied to the grid as a result of the implementation of	Measured continuously and recorded at least each hour or as established by the electricity sector

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	the CDM project activity in year y / Quantity of net electricity supplied to the grid by the project plant/unit in year y / 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). ($EG_{PJ,y}$ / $EG_{PJ, facility, y}$ / $EG_{PJ, Add, y}$)	requirements in Nicaragua and Peru
2	Operating margin emission factor – Peru (from Dispatch Data Analysis) ($EF_{grid, OM-DD, y}$)	Applicable for CPAs located in Peru. Official data provided by the administrator of the grid or the relevant national authority (COES) publicly available in its web site, or directly sent to the coordinating/managing entity. Raw data for generation is based on the 15 minute records of every power plant.
3	Built margin emission factor – Peru ($EF_{grid, BM, y}$)	Applicable for CPAs located in Peru. Official data provided by the administrator of the grid or the relevant national authority (COES) publicly available in its web site, or directly sent to the coordinating/managing entity.
4	Emission factor for the Peruvian interconnected grid (SEIN) – Peru ($EF_{grid, CM, y}$)	Applicable for CPAs located in Peru. Calculated based on $EF_{grid, OM-DD, y}$ and $EF_{grid, BM, y}$ as per the “Tool to calculate the emission factor for an electricity system” (version 02.2.1) based on official data provided by the administrator of the grid or the relevant national authority (COES).
5	Electricity displaced by the project activity in hour h , of year y – Peru ($EG_{PJ, h}$)	Applicable for CPAs located in Peru. Directly measured and/or based on the information provided by COES. The proportion of data to be monitored is 100% and the data will be archived electronically. The CPA will specify the value and measurements used (same value as $EG_{BL, y}$ / $EG_{PJ, facility, y}$ for new power plants and only the incremental electricity in the case on retrofitting, replacement and capacity additions).
6	Total electricity displaced by the project activity in year y – Peru ($EG_{PJ, y}$)	Applicable for CPAs located in Peru. Project records and/or data from COES. The proportion of data to be monitored is 100% and the data will be archived electronically. The CPA will specify the value and measurements used (same value as $EG_{BL, y}$ / $EG_{PJ, facility, y}$ for new power plants and only the incremental electricity in the case on retrofitting, replacement and capacity additions).

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7	CO ₂ emission factor of power unit in the top of the dispatch order in hour h, in year y – Peru ($EF_{EL,DD,h}$)	Applicable for CPAs located in Peru. Input data provided by COES. To calculate $EF_{EL,DD,h}$ the second option is chosen because for the power units data on fuel consumption and electricity generation is available. The proportion of data to be monitored is 100% and the data will be archived electronically.
8	Electricity generated and delivered to the grid by power units n, in hour h - Peru. ($EG_{n,h}$)	Applicable for CPAs located in Peru. Input data provided by COES. The proportion of data to be monitored is 100% and the data will be archived electronically.
9	CO ₂ emission factor of power unit n, in year y - Peru. ($EF_{EL,n,y}$)	Applicable for CPAs located in Peru. Input data provided by COES. The $EF_{EL,n,y}$ is determined for method the simple operating margin option A.2. The proportion of data to be monitored is 100% and the data will be archived electronically.
10	Net quantity of electricity generated and delivered to the grid by power unit m, in year y - Peru. ($EG_{m,y}$)	Applicable for CPAs located in Peru. Input data provided by COES. The proportion of data to be monitored is 100% and the data will be archived electronically.
11.	CO ₂ emission factor of power unit m, in year y - Peru. ($EF_{EL,m,y}$)	Applicable for CPAs located in Peru. Input data provided by COES. The $EF_{EL,m,y}$ is determined for method the simple operating margin option A.2. The proportion of data to be monitored is 100% and the data will be archived electronically.
12.	Average net energy conversion efficiency of power unit m, in year y (ratio) - Peru. ($\eta_{m,y}$)	Applicable for CPAs located in Peru. Data provided by COES. Each year this data will be checked with the last available annual report of COES. The proportion of data to be monitored is 100% and the data will be archived electronically.
13.	Average CO ₂ emission factor of fuel type i, used in power unit m, in year y - Peru. ($EF_{CO2,m,i,y}$)	IPCC default values at the lower limit of the uncertainty at a 95% confidence interval as provided in Table 1.4 of Chapter 1 of Vol. 2 (Energy) of the 2006 IPCC Guidelines on National GHG Inventories.
14.	The merit order in which power plants are dispatched by documented evidence Peru. (Merit Order)	Applicable for CPAs located in Peru. Input data provided by COES. For each year, the variable cost of thermal plants in the SEIN that are in effect in December will be used. The proportion of data to be monitored is 100% and the data will be archived electronically.

The assumptions and data used to determine the emission reductions are listed in the first CPA-DD Alba Rivas, Wind Power Plant – Tepeu PoA CPA # 1 ^{1/1} and all the sources have been checked and confirmed as reported in Annex A – Validation Questionnaire. The validation team confirms that the

estimates included in the CPA-DD for data and parameters that are monitored during implementation are reasonable and are available after validation as per VVM § 91 ^{/6/}.

Based on the information reviewed it can be confirmed that the sources used are correctly quoted and interpreted in the first CPA-DD^{/1/}. The values presented in the CPA-DD are considered correct based on the documentation and references reviewed as well as on the result of interviews conducted during the site visit. Thus, it is the validation team's opinion that the estimates in the CPA-DD of the parameters monitored ex-post are reasonable.

The CPA implementers will forward the monitored data to the CME. The CME will then process the primary data and record and store the processed data in an electronic database. All data collected as part of monitoring will be archived electronically and be kept for at least two years after the end of the last crediting period or the last issuance of CERs for this project activity, whatever occurs later

GLC can confirm that the parameters to be determined ex-post have been presented correctly and according to requirements of the applied methodology.

The Sampling Method that shall be applied.

No sampling method will be applied for the purpose of monitoring of the CPAs by the CME.

Through document check and interview it can be confirmed that the monitoring plan described in PoA-DD provides sufficient information and is in compliance with the methodology. All the monitoring arrangements are feasible within the CPA and therefore within the PoA project design and project participant's competence as per VVM paragraphs 122 - 124.

The monitoring plan is to be implemented to enable subsequent verification of emission reductions. The application of the monitoring methodology is transparent and GLC can confirm that the CME will be able to implement the monitoring plan and the project emission reductions would be able to be reported ex-post and verified.

4.7 PoA Duration and Crediting Period

The starting date of the PoA has been unambiguously stated in the PoA-DD section B.1 as 2012-12-20. The start date of the PoA is therefore reasonably defined. The first CPA start date is 2012-02-17^{/23/} which is after the start of validation of the PoA on 2011-12-28. The PoA duration is stated in the PoA-DD section B.2 as 28 years, which is deemed appropriate. The start of the PoA crediting period will be the registration date of the PoA, or the defined start date of the PoA, whichever is later.

4.8 Baseline and Monitoring Methodology

4.8.1 Applicability of the Selected Methodology to a typical CPA

GLC has checked the compliance with each applicability criterion as listed in the applied baseline and monitoring methodology ACM0002 version 12.3.0 ^{/2/}, and can confirm that all applicability criteria have been demonstrated. The selected baseline and monitoring methodology also refers to the following tools:

- Tool to calculate the emission factor for an electricity system (version 02.2.1)^{/9/};

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- Tool for the demonstration and assessment of additionality (version 06.0.0) ^{/4/};
- Combined tool to identify the baseline scenario and demonstrate additionality (version 4.0.0) ^{/5/};
- Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion (version 02) ^{/24/}.

The assessment was carried out for each applicability criterion in ACM0002 and applicable tools including, among others, the compliance check of the local project setting with the applicability conditions with regard to baseline setting and eligible project measures. This assessment also included the review of other sources not provided by PPs, and these sources could confirm that applicability conditions are complied with.

The Methodology specific checklist (validation questionnaire: Application of a baseline and monitoring methodology to a typical CPA) included in Annex A, documents the assessment process of the applicability check, which also includes the various steps taken in the course of the validation. The results of the compliance check, as well as the relevant evidences, are detailed in Annex A - the validation questionnaire and resolution of corrective action and clarification requests (findings's list). GLC is able to confirm that the chosen baseline and monitoring methodology ACM0002 version 12.3.0 ^{/2/} is applicable to the component project activities (CPAs) that involve installation, capacity addition, retrofit or replacement of wind power plants. The applicability of the selected methodology has been included in the list of eligibility criteria as required according to the [Validation and Verification Manual](#) ^{/6/} paragraph 167 which states that eligibility criteria should "...include inter alia the means of demonstrating ...the applicability of the applied methodology."

Moreover, as referred in ACM0002 version 12.3.0 ^{/2/}, the Tool to calculate the emission factor for an electricity system (version 02.2.1) ^{/9/} will be followed to calculate the CO₂ emission factor for the displacement of electricity generated by power plants in the electricity systems where the CPAs will be implemented. Emission sources, which are not addressed by the applied methodology, and are expected to contribute more than 1% of the overall expected annual average emission reductions, have not been identified. This project therefore fulfils all the applicability criteria of the applied methodology and the tools therein.

4.8.2 Project Boundary

This PoA is international and its boundary is defined as the geographical area within which all CDM Program Activities (CPAs) included in this PoA will be implemented. The geographical boundary of the PoA will be the national boundaries of all the CPA host countries. The boundary of each CPA includes the spatial extent of the project power plant and all power plants connected physically to the electricity system that a CPA power plant is connected to. The physical boundary (electricity system) of each CPA shall be defined in the CPA-DD and this shall be validated as an eligibility criterion by the contracted DOE during CPA inclusion.

It is also worth mentioning that PPs might extend the PoA boundary post registration by include host parties later according to [EB 60, Annex 26 April 15, 2011](#), para 6 which says „The Board clarified that the boundary of the programme can be amended postregistration to include an additional Host Party....“

4.8.3 Baseline Identification of a typical CPA

As prescribed by the methodology ACM0002 version 12.3.0 ^{/2/}, the baseline scenario for new wind power plants is identified as follows:

“Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in

the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system”.

For capacity addition to existing grid-connected renewable power plants or units, the baseline scenario is the following:

“In the absence of the CDM project activity, the existing facility would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted (DATEBaselineRetrofit). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity and no emission reductions are assumed to occur”.

For retrofit or replacement power plants, a step-wise approach must be applied to identify the baseline scenario:

“Apply Step 1 of the “Combined tool to identify the baseline scenario and demonstrate additionality”. The options considered should include:

- P1: The project activity not implemented as a CDM project;*
- P2: The continuation of the current situation, i.e. to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance. The additional power generated under the project would be generated in existing and new grid-connected power plants in the electricity system; and*
- P3: All other plausible and credible alternatives to the project activity that provide an increase in the power generated at the site, which are technically feasible to implement. This includes inter alia, different levels of replacement and/or retrofit at the power plant/unit(s). Only alternatives available to project participants should be taken into account.”*

The PoA aims to promote the construction of new grid-connected wind power plants, thus the electricity generated by a CPA will displace electricity generated by fossil-fuel power plants in the identified electricity system. This has also been specified in the eligibility criteria for inclusion of a CPA into the PoA, therefore is deemed appropriately defined.

Through document review and based on interview with the CME it has been verified that the baseline scenario is identified according to the methodology; and in regard to item 87 of VVM. GLC hereby confirms the following statements:

- a) All the assumptions and data used by the project participants are listed in the PoA-DD, including their references and sources;
- b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PoA-DD;
- c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD;

- e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

4.8.4 Algorithms and Formulae used to Determine Emission Reductions

The calculations are done as per applied methodologies ACM0002 version 12.3.0 ^{/2/} and the relevant provisions of the tools referred therein (i.e. the Tool to calculate the emission factor for an electricity system version 02.2.1 ^{/9/}). The ER_y of the project activity during the crediting period is the difference between the baseline emission (BE_y) and the sum of project emission (PE_y) and leakage (LE_y).

GLC has assessed the calculations of project emissions, baseline emissions, leakage, and emission reductions. Corresponding calculations were carried out based on the calculation spreadsheets of emission reductions ^{/14/} for the first CPA to be included under this PoA. The parameters and equations presented in the PoA-DD and CPA-DD as well as in other applicable documents have been compared with the information and requirements presented in the methodology and other applicable tools. The equation comparison has been made considering all the formulae presented in the emission reduction calculation sheet for Nicaragua ^{/14/} and in the emission factor (calculated ex-ante) for the electricity system in Nicaragua calculation sheet ^{/13/}.

Although no CPA was presented for Peru at the time of validation of the PoA, the calculation sheets for the emission factor for the electricity system in Peru ^{/15/} were also reviewed by the GLC validation team. The calculation procedures and algorithms utilized for determining the operating margin (OM) as per Dispatch Data Analysis were found to be valid and correct. This sample calculation of the emission factor for Peru ^{/15/} using the latest available data is presented by the PP, but it will be monitored and updated during each monitoring period and as required during the inclusion of CPAs in the host country of Peru. Thus the emission factor for the electricity system of Peru will be determined ex-post and was found by the validation team to be calculated as required by the Tool to calculate the emission factor for an electricity system version 02.2.1 ^{/9/}.

The assumptions and data used to determine the emission reductions are listed in the first CPA-DD and all the sources have been checked and confirmed as reported in the validation questionnaire included in the CPA Validation Report.

Based on the information reviewed it can be confirmed that the sources used are correctly quoted and interpreted in the first real case CPA-DD located in Nicaragua. The values presented in the CPA-DD are considered reasonable based on the documentation and references reviewed as well as on the result of interviews conducted during the site visit.

The baseline methodology has been correctly applied according to requirements.

The estimate of the baseline emissions can be confirmed to be the same as that which have been replicated by the audit team using the information provided.

Detailed information on the validation of the parameters used in the equations can be found in Annex A – Validation Questionnaire (Section E.6.1.5) and resolution of corrective action and clarification requests (findings's list). The algorithms for the determination of the baseline, project, and leakage emissions are discussed below in subsequent sections of this report.

Baseline Emission of a typical CPA:

As per ACM0002 version 12.3.0^{/2/}, baseline emission is calculated as quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of a CPA in year y

($EG_{pj,y}$) multiplied by the combined margin CO₂ emission factor for grid connected power generation in year y ($EF_{grid,CM,y}$).

As per “Tool to calculate the emission factor for an electricity system” (version 02.2.1), the baseline emission factor ($EF_{grid,CM,y}$) is determined as a combined margin (CM), consisting of the weighted average of operating margin (EF_{OM}) and build margin (EF_{BM}) factors. For CPAs located in Nicaragua the CM will be defined ex-ante using option (a) of Step 3 in the tool, while for CPAs located in Peru the CM will be determined ex-post and updated annually using option (c) of Step 3 in the tool.

PPs have used official electricity generation data from the Nicaraguan Electricity Institute (INE) ^{/10/} and and Committee for the Interconnected Electricity System’s Economic Operation in Peru (COES) ^{/11/} for calculating the EF_{OM} and EF_{BM} . For the first crediting period, $EF_{grid,CM,y}$ is calculated using default weighting values for the operation and built margins (w_{OM} and w_{BM}) for wind and solar power generation project activities of 0.75 and 0.25 respectively as per the “Tool to calculate the emission factor for an electricity system” (version 02.2.1).

GLC can therefore confirm that the baseline for the first CPA in Nicaragua (i.e. electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources) has been calculated correctly and according to ACM0002 version 12.3.0 ^{/2/} and as recommended in the tools referred therein. The CME has defined that, for CPAs located in Nicaragua, the CM will be determined on a yearly basis and applied ex-ante over the crediting period of each CPA. As indicated in PoA-DD Section E.6.2, for CPAs located in Nicaragua the ex-ante CM will be calculated using data for a 3-year generation-weighted average, based on the most recent data available at the time of submission of a CPA-DD to the DOE for inclusion. In the case of CPAs located in Peru, for which the ex post option is chosen, the CM will also be determined on a yearly basis but applied ex-post and updated annually for each CPA. In light of this, the CM shall be established at the CPAs and validated during inclusions by the contracted DOE. According to PoA-DD Section E.6.2, the ex-post emission factor will be determined for the year in which the project activity displaces grid electricity, requiring the emissions factor to be updated annually during monitoring, as per the requirements of the “Tool to calculate the emission factor for an electricity system” (version 02.2.1).

The GLC validation team interviewed Mr. Tomás Montesinos and Mr. Salome Gonzalez, relevant technical personnel from COES, who confirmed the procedures for data requests as indicated by the PP in the CME Manual, and also confirmed the unavailability of hourly fuel consumption data for all plants connected to the national grid, hence resulting in an incomplete set of data which would not be suitable for the purpose of determining the emission factor. Therefore, the calculation of dispatch data analysis OM emission factor ($EF_{grid,OM-DD,y}$) based on the energy efficiency of the grid power unit and the fuel type used, done as per the provisions included the “Tool to calculate the emission factor for an electricity system” (version 02.2.1) is deemed valid and correct.

Project Emission of a typical CPA:

According to the methodology ACM0002 version 12.3.0 ^{/2/}, there are no project emissions for wind farms. Based on technical expertise, the validation team can assert that typical wind farms do not have any GHG emission sources within their boundary as no equipment, machinery or other combustion sources are used as part of the regular operation and no offices or facilities are constructed.. Thus, no consumption of fossil fuel or electricity is expected.

Leakage emission of a typical CPA:

As per ACM0002 version 12.3.0 ^{/2/}, no leakage emissions are considered.

Emission Reductions of a typical CPA:

Emission reductions would be the emissions avoided by the implementation of the project activity discounted by any leakage emissions and/or project emissions caused by the project activity. The first CPA in Nicaragua is expected to achieve a total emission reductions of **751,626 tCO₂eq** in the first 7 years crediting period and an average of **107,375 tCO₂eq** per year.

In conclusion, all values used in the PoA-DD and CPA-DD to calculate emission reductions are considered reasonable in the context of the proposed CPA project activity and calculation approach is correct as per VVM version 1.2 paragraph 91^{/6/}.

4.9 Additionality of the Programme of Activity and of a typical CPA

Additionality of the **Tepeu Wind Programme of Activities** and its CPAs has been demonstrated by establishing that in the absence of CDM, none of the implemented CPA would occur.

It should be noted that the Tepeu Wind Programme of Activities will not include microscale CPAs. Additionality demonstration for CPAs will be demonstrated and assessed using the latest version of the "Tool for the demonstration and assessment of additionality" ^{/4/}, also involving criteria derived from all the relevant requirements from the "Guidelines on the Demonstration of Additionality of Small-Scale Project activities (Version 09.0) (previously known as "Attachment A of Appendix B of the Simplified modalities and procedures for small-scale CDM project activities") ^{/20/}, although this will only be applicable to off-shore CPAs with capacity up to 15MW. In addition, the PoA-DD includes eligibility criteria derived from the requirements contained in the additionality section of ACM0002 version 12.3.0 ^{/2/}, which refers to the latest version of the "Tool for the demonstration and assessment of additionality" (version 06.0.0)^{/4/}. Thus, additionality of the CPAs shall be demonstrated as follows:

Additionality demonstration for off-shore wind power projects up to 15 MW

As per ACM0002 version 12.3.0, additionality of a project activity shall be demonstrated and assessed using the latest version of the "Tool for the demonstration and assessment of additionality"^{/4/}. However, according to the "Guidelines on the Demonstration of Additionality of Small-Scale Project activities (Version 09.0) ^{/20/}, off-shore wind projects are part of a list of grid-connected renewable electricity generation technologies that are automatically defined as additional. Thus, additionality demonstration will be done at CPA level for off-shore wind power projects under 15 MW by applying Steps 1, 3 and 4 of the tool ^{/4/}. For CPAs consisting of off-shore wind power plants with capacity up to 15 MW, a confirmation that such SSC CPAs are not a debundled component of a large scale project activity will be provided by the CME through a debundling analysis as per the "Guidelines on assessment of debundling for SSC project activities" (version 03)^{/36/}. The results of this analysis will be set in a formal report developed by the CME ^{/37/}.

Additionality demonstration for off-shore wind power projects above 15 MW and all on-shore wind power projects

For these project types, additionality demonstration will be assessed using the “Tool for the demonstration and assessment of additionality” (version 06.0.0)^{/4/}. As defined by the CME, Steps 1, 2 and 4 of the tool will be applied. The investment analysis will be performed by determining a suitable benchmark for each host country in the PoA boundary, while the financial indicator for the CPAs will be the internal rate of return (IRR).

4.9.1 Prior Consideration of the Clean Development Mechanism

The starting date of validation of the PoA was on 2011-12-28, which is the date that the PoA documentation was uploaded on the UN website and made available for GSC. It should be noted that the Board agreed that the [Guidelines for the demonstration and assessment of prior consideration of the CDM](#) do not apply to PoAs, as at present it is expected that no component of the programme will commence prior to the start date of validation ([EB 60, Annex 26 April 15, 2011](#))^{/16/}. The first CPA start date is 2012-02-17^{/23/} which is after the start of validation of the PoA. Therefore the PoA is exempted from assessment of prior consideration of the CDM according to [EB 60, Annex 26 April 15, 2011](#)^{/16/}. The start date indicated for the first CPA corresponds to the date of the contract for wind turbine acquisition with Vestas^{/23/} (wind turbine manufacturer). This is defined as adequate and reasonable as per the Glossary of CDM Terms (version 07)^{/21/}.

In addition, the CME has defined an eligibility criterion for all CPAs requiring confirmation of their start date to be after the PoA GSC date 2011-12-28.

4.9.2 Identification of Alternatives to the CPAs under the PoA

As indicated in ACM0002 version 12.3.0^{/2/}, if the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is defined as:

Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system”.

If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, the baseline scenario is then defined as:

In the absence of the CDM project activity, the existing facility would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted (DATE_{BaselineRetrofit}). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity, and no emission reductions are assumed to occur.

For retrofit or replacement power plants, a step-wise approach must be applied to identify the baseline scenario:

“Apply Step 1 of the “Combined tool to identify the baseline scenario and demonstrate additionality”. The options considered should include:

P4: The project activity not implemented as a CDM project;

- P5: *The continuation of the current situation, i.e. to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance. The additional power generated under the project would be generated in existing and new grid-connected power plants in the electricity system; and*
- P6: *All other plausible and credible alternatives to the project activity that provide an increase in the power generated at the site, which are technically feasible to implement. This includes inter alia, different levels of replacement and/or retrofit at the power plant/unit(s). Only alternatives available to project participants should be taken into account."*

Thus, identification of alternatives is only required in the case of retrofits or replacement projects by using the "Combined tool to identify the baseline scenario and demonstrate additionality" (version 4.0.0) ^{/5/}. The CME has indicated that in the event of CPAs involving retrofits or replacement, other plausible and credible alternatives to the project activity will be assessed case by case and the results described in the respective CPA-DD. As confirmed by the CME, the likelihood of implementing such types of CPAs is significantly low, this provision is deemed valid and appropriate.

4.9.3 Investment Analysis

According to "Tool for the demonstration and assessment of additionality" (version 06.0.0), Step 2 Investment Analysis is chosen to demonstrate additionality for off-shore CPAs above 15 MW and all on-shore CPAs. Sub-Step 2b Option III: Benchmark Analysis is chosen as the investment analysis method. As this is an international PoA, benchmark rates will be defined separately for Nicaragua and Peru.

In the case of the host country of Nicaragua the benchmark rate will be derived from government bond rates increased by a suitable risk premium, as per "Guidelines on the assessment of investment analysis" (version 05) ^{/26/}. This benchmark rate will be updated as required (in accordance with the CPA starting date) for each CPA located within the geographical boundary of Nicaragua. The assessment of the appropriateness of the benchmark rate for Nicaragua has been applied as required and presented in the CPA validation report for the 1st CPA real case.

In the case of the host country of Peru the benchmark rate has been defined as 12% which is the real and annual post-tax discount rate established by the government in the Electric Concessions Law ^{/28/} as the reference rate to evaluate investments in the power sector. As the Electric Concessions Law ^{/28/} is applicable to all power generation projects in Peru, if the discount rate is modified in the future by the Peruvian government, the value in force at the time of inclusion of a CPA will be applied, as indicated in section E.5.2 of the PoA-DD ^{/1/}.

The PPs will calculate the project IRR (post-tax) for each CPA as the financial indicator for comparison against the benchmark rate. The PPs have defined a list of key financial parameters in the PoA-DD that shall be used by each CPA for the calculation of the IRR and validated during each CPA inclusion. Through research and financial expertise, GLC can confirm that the financial parameters listed are considered relevant and commonly used in financial models for investment activities in wind power projects.

Furthermore, a standardized Excel worksheet^{/29/} has been developed by the CME into which data from CPA developers, as per the list of financial parameters, will be entered to calculate the project IRR. The CME has stated that the same Excel worksheet will be used for all CPAs to be included in the PoA. Thus, it is the opinion of the GLC validation team that the financial indicator for the CPAs can be adequately and transparently calculated.

4.9.4 Barrier Analysis

As indicated in Section 4.9 above, according to the “Guidelines on the Demonstration of Additionality of Small-Scale Project activities (Version 09.0)”^{/20/}, off-shore wind projects are part of a list of grid-connected renewable electricity generation technologies that are automatically defined as additional. Thus, as part of the demonstration of additionality through Barrier Analysis, and in accordance with PoA Standard^{/31/}, *“PoAs that consist of one or more small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the “Guidelines for demonstrating additionality of small-scale project activities”, all small scale off-shore CPAs will provide evidences supporting its qualification as an off-shore project with a capacity up to 15 MW. As per PoA-DD^{/1/} these evidences will include feasibility studies, turbine and execution proposal, licenses, environmental studies, among others according to the regulatory framework of the country or the technical evaluation of the project. .*

Correctness and completeness of the additonality demonstration for small scale, off-shore CPAs was assessed and documented through the questionnaire (section E.5.1) included in Annex A.

4.9.5 Common Practice Analysis

The step-wise approach for common practice analysis indicated in the “Tool for the demonstration and assessment of additionality” (version 06.0.0)^{/4/} will be applied for each CPA. Since this is an international PoA this will be validated by the contracting DOE ‘CPA by CPA’ during inclusion according to the situation in the project area. Given that renewable energy generation is one of the measures listed in paragraph 6 of the tool, the common practice analysis for all CPAs will include the procedure defined in paragraph 47.

The first CPA under this PoA to be implemented in the Municipality of Rivas, Nicaragua has been deemed not to be common practice. Detailed assessment is in the CPA report for this CPA.

4.10 Global and Local Stakeholder Consultations

Germanischer Lloyd Certification GmbH published the project documents (PoA-DD, CPA-DD generic and CPA specific case for Nicaragua) on UNFCCC’s website at (<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/RGYSWPL82UWLZC4S5YGQS5BHIPSUF/E/view.html>) on 2011-12-28 and invited comments within the period from 2011-12-28 to 2012-01-26 by Parties, stakeholders and Non-Governmental Organisations. No comments were received.

Since this is an international PoA Local Stakeholder Consultation will be conducted at CPA level and validated during inclusion. However it should be noted that on 2012-01-26 the PPs carried out a general stakeholder consultation process in Managua, Nicaragua with the purpose of gathering comments from various stakeholders ranging from government and private institutions to individuals. The GLC validation team reviewed and verified the evidences provided by the PP^{/25/} and confirms that relevant stakeholders were invited and that comments were duly addressed durant the meeting.

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4.11 Environmental Impacts Analysis (EIA)

Since this is an international PoA Environmental Impacts Analysis will be conducted at CPA level and validated during inclusion.

5 VALIDATION OPINION

Germanischer Lloyd Certification GmbH has performed a validation of the **Tepeu Wind Programme of Activities** with its first CPA in Nicaragua. The validation was performed on the basis of UNFCCC criteria and CPA host country criteria, as well as criteria given to provide consistent project operations, monitoring and reporting.

The project applies "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (ACM0002 version 12.3.0 ^{/2/}). The methodology has been correctly applied and the assumptions made for the selected baseline scenario are sound. By displacing electricity generation in fossil fuel fired power connected to the electricity system of Nicaragua, the first CPA results in reduction of **107,375 tCO₂eq** emissions per year that are real, measurable and give long-term benefits to the mitigation of climate change.

In detail the conclusions can be summarised as follows:

- The PoA is inline with all relevant host country criteria and all relevant UNFCCC requirements for CDM. The LoAs are real and appropriate.
- The eligibility criteria established for CPA inclusion are deemed appropriate and sufficient.
- The baseline has been appropriately identified as per the applied methodology.
- The PoA and the CPA additionality are sufficiently justified.
- The claimed emission reductions for the 1st CPA are real, measurable and give long-term benefits to the mitigation of climate change.
- The calculation of the emission factors and the CPA emission reductions is carried out in a transparent and conservative manner.
- The monitoring plan is transparent and adequate.
- Information on the local stakeholder consultation prior to submitting the PoA for validation is sufficient.
- No relevant negative environmental impacts are expected from the implementation of the PoA.
- All information has been also consistently applied in the generic CPA-DD form.
- A typical CPA is likely to be implemented as designed in the PoA-DD and the generic CPA-DD to achieve the estimated amount of emission reductions.

In summary, it is GLC's opinion that the **Tepeu Wind Programme of Activities** with its first CPA in Nicaragua as described in the revised project design document (PoA-DD, version 08) meets all relevant UNFCCC requirements for the CDM and all relevant host Party criteria and correctly applies ACM0002 version 12.3.0. Hence, GLC requests the registration of the **Tepeu Wind Programme of Activities** as a CDM Programme of Activities.

Hamburg, 2012-11-27

Germanischer Lloyd
Certification



Markus Weber

6 REFERENCES

The following table outlines the documentation reviewed during the validation:

Ref. No.	TITLE of DOCUMENT or EVIDENCE (Author, website link)
/1/	<p>PoA-DD "Tepeu Wind Programme of Activities" version 01, dated 2011-12-07, (uploaded for GSC), CPA-DD Specific "Alba Rivas, Wind Power Plant – Tepeu PoA CPA # 1" version 01, dated 2011-12-07 (uploaded for GSC), CPA-DD Generic "[name] Wind Power Plant – Tepeu PoA CPA #[number]", (uploaded for GSC). Files uploaded for GSC were made available at: http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/RGYSWPL82UWLZC4S5YGQS5BHIPSUFE/view.html</p> <p>PoA-DD "Tepeu Wind Programme of Activities" version 08, final version, dated 2012-11-23 CPA-DD Specific "Alba Rivas, Wind Power Plant – Tepeu PoA CPA # 1" version 08, final version, dated 2012-11-23 CPA-DD Generic "[name] Wind Power Plant – Tepeu PoA CPA #[number]", final version.</p>
/2/	<p>ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" Version 12.3.0 (EB 66, Annex 35) http://cdm.unfccc.int/methodologies/DB/UB3431UT9I5KN2MUL2FGZXZ6CV71LT/view.html</p>
/3/	<p>Clarification Regarding the Procedures for Registration of a PoA as a single CDM Project Activity and Issuance of CERs for a PoA, version 01. (EB 60, Annex 26) http://cdm.unfccc.int/Reference/Guidclarif/PoA/poa_guid06.pdf</p>
/4/	<p>"Tool for the demonstration and assessment of additionality" (version 06.0.0) http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v6.0.0.pdf</p>
/5/	<p>"Combined tool to identify the baseline scenario and demonstrate additionality" (version 4.0.0)</p>
/6/	<p>"Clean Development Mechanism Verification and Validation Manual" (version 01.2) http://cdm.unfccc.int/UserManagement/FileStorage/18Y54N6CWUV2LOESXQP3RMBAD9FHK</p>
/7/	<p>"Tepeu Wind Programme of Activities" – Coordinating/Managing Entity Operational Manual</p>
/8/	<p>Global Wind Energy Council. http://www.gwec.net/index.php?id=19 – Web link last accessed on 2011-12-20</p>
/9/	<p>"Tool to calculate the emission factor for an electricity system" (version 02.2.1) http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v2.2.1.pdf</p>
/10/	<p>Nicaraguan Electricity Institute (INE) www.ine.gob.ni/</p>
/11/	<p>Committee for the Interconnected Electricity System's Economic Operation – Peru www.coes.org.pe/</p>
/12/	<p>"Guidelines on assessment of de-bundling for SSC project activities" (version 02) http://cdm.unfccc.int/EB/047/eb47_repan32.pdf</p>
/13/	<p>Emission factor for the electricity system in Nicaragua EF nicaragua 2010 v2 09 03 2012.xls</p>
/14/	<p>Emission Reduction Calculation Sheet for the first CPA ER CPA Alba Rivas - PoA Tepeu #1 v5 06 09 2012.xls</p>
/15/	<p>Emission factor for the electricity system in Peru</p>

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	<p>Peru EF - BM 2011 V2.2.xls Peru EF - OM 2011 MACRO3.xls Peru EF - Medidores_01_Enero_2010.xls Peru EF - Medidores_02_Febrero_2010.xls Peru EF - Medidores_03_Marzo_2010.xls Peru EF - Medidores_04_Abril_2010.xls Peru EF - Medidores_05_Mayo_2010.xls Peru EF - Medidores_06_Junio_2010.xls Peru EF - Medidores_07_Julio_2010.xls Peru EF - Medidores_08_Agosto_2010.xls Peru EF - Medidores_09_Septiembre_2010.xls Peru EF - Medidores_10_Octubre_2010.xls Peru EF - Medidores_11_Noviembre_2010.xls Peru EF - Medidores_12_Diciembre_2010.xls</p>
/16/	<p>"Guidelines for the demonstration and assessment of prior consideration of the CDM". http://cdm.unfccc.int/Reference/Guidclarif/reg/reg_guid04.pdf</p>
/17/	<p>Development Agreement – Mabanft Carbon B.V. and ÉcoRessources Carbone S.A.C</p>
/18/	<p>CPA Inclusion Agreement – Mabanft Carbon B.V. and Alba de Nicaragua SA.</p>
/19/	<p>Cooperation Agreement – Mabanft Carbon B.V., ÉcoRessources Carbone S.A.C and Alba de Nicaragua SA.</p>
/20/	<p>EB 68 Annex 27 "Guidelines on the Demonstration of Additionality of Small-Scale Project activities" (previously known as Attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities) http://cdm.unfccc.int/Reference/Guidclarif/meth/methSSC_guid05.pdf</p>
/21/	<p>Glossary of CDM Terms (version 7, EB70 Annex 7) http://cdm.unfccc.int/Reference/Guidclarif/glos_CDM.pdf</p>
/22/	<p>"Guidelines on assessment of debundling for SSC project activities" (version 03) http://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid17.pdf .</p>
/23/	<p>Supply, Installation, Commissioning and Testing Contract - VESTAS (Contrato de Suministro, Instalación, Puesta en Marcha y Pruebas. Entre ALBA DE NICARAGUA S.A y Vestas Chile Turbinas Eólicas Limitada) Vestas Contract - Supply, transport and installation.pdf</p>
/24/	<p>"Tool to calculate project or leakage CO2 emissions from fossil fuel combustion" (version 02) http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-03-v2.pdf</p>
/25/	<p>Evidences – General Stakeholder Consultation in Nicaragua General Stakeholder Consultation - PPT.pdf General Stakeholder Consultation - Newspaper evidence.jpg General Stakeholder Consultation - Newspaper front page.jpg General Stakeholder Consultation - Participants GLSC Tepeu1.jpg General Stakeholder Consultation - Participants GLSC Tepeu2.jpg General Stakeholder Consultation - invitations.rar</p>
/26/	<p>"Guidelines on the assessment of investment analysis" (version 05) http://cdm.unfccc.int/Reference/Guidclarif/reg/reg_guid03.pdf</p>
/27/	<p>EB 55 Annex 38 Procedure for registration of a programme of activities as a single project activity version 4.1 http://cdm.unfccc.int/Reference/Procedures/PoA_proc01.pdf</p>
/28/	<p>Law 25844 – Electric Concessions Law. Article 79, Page 40. http://www2.osinerg.gob.pe/MarcoLegal/pdf/LEYCE-DL25844.pdf</p>

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/29/	Standardized financial analysis spreadsheet_v1_r1.xls
/30/	EXECUTIVE BOARD OF THE CLEAN DEVELOPMENT MECHANISM THIRTIETH MEETING Report http://cdm.unfccc.int/EB/030/eb30rep.pdf
/31/	"Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" ver 02.1, EB 70 Annex 5. Also referred as " PoA Standard " http://cdm.unfccc.int/Reference/Standards/meth/meth_stan04.pdf
/32/	Letter of Approval The Netherlands LoA Annex I - 2012ANL592.pdf
/33/	Confirmation of Letter of Approval – The Netherlands http://www.agentschapnl.nl/en/node/94860
/34/	Letter of Approval Nicaragua #DM-JAS/0092.02.12 dated 2012-02-01 LoA Tepeu - Nicaragua.pdf
/35/	Letter of Approval Peru ##178-DGCCDRH/DVMDERN/MINAM dated 2012-07-09 LoA Tepeu – Peru.pdf
/36/	"Guidelines on assessment of debundling for SSC project activities" (version 03) http://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid17.pdf
/37/	De-bundling Analysis Report Tepeu PoA- template v1 – Mabanft Carbon B.V. and ÉcoRessources Carbono S.A.C

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ANNEX A: VALIDATION QUESTIONNAIRE AND RESOLUTION OF CORRECTIVE ACTION AND CLARIFICATION REQUESTS (FINDINGS'S LIST)

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VALIDATION QUESTIONNAIRE

CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
A GENERAL DESCRIPTION OF PROGRAMME OF ACTIVITIES (POA)				
A.1 Title of the Programme of Activities (PoA)				
A.1.1 Are title, current version number and the date of document completion given in section A.1 of the PoA-DD?	PoA-DD EB41 Annex 12	Yes, the required information of the PoA is listed as follows in section A.1 of the PoA-DD: Title: Tepeu Wind Programmae of Activities Current version number at time of GSC: 1. Date of completion at time of GSC: 07/12/2011. Nevertheless, it is noted that the version number and date of completion may be changed at the time of request for registration submission stage.	OK	OK
A.1.2 Has the PoA-DD been prepared in accordance with the latest template and guidance from the EB? <i>Please refer also to http://cdm.unfccc.int/Reference/PDDs_Forms/PoA/index.html</i>	EB 55 Annex 1, §55	Yes, the PoA-DD has been prepared in accordance with the latest template available on the UNFCCC website, i.e. CDM-PoA-DD version 01 (EB 33 Annex 41). There is no specific guidelines for completing the PoA-DD besides the guidance indicated in the CDM-PoA-DD template and the '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 (EB 55, Annex 38)', hence the validation team has referred to the 'Guidelines for completing the Project Design Document and the Proposed new baseline and monitoring methodologies (EB 41 Annex 12)' for assessing the completeness of the PoA-DD, and can confirm that the PoA-DD has been appropriately prepared in accordance with the abovementioned template and guidance.	OK	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
A.2 PROGRAMME DESIGN DOCUMENT (PoA-DD) and DESCRIPTION of the PROGRAMME of ACTIVITY				
A.2.1 Has a sufficient description of general operating and implementing framework of the PoA been given in Section A.2 of the PoA-DD? E.g., the roles, functions and interrelations of CME, CPA implementer, project owner, end users and any other PPs or third parties directly involved in the operation or implementation of the PoA and CPAs, etc.	EB 55 Annex 38, § 6	No, the general operating and implementing framework of the PoA has not been sufficiently described in Section A.2 of PoA-DD, e.g., the roles and functions and interrelations of the CME, CPA implementer, project owner, end users and any other PPs or third parties directly involved in the operation or implementation of the PoA and CPAs have not been sufficiently explained. Hence, PoA-CL 1 is raised.	PoA-CL 4	OK
A.2.2 Has the section A.2 of the PoA-DD described the policy/measure or stated goal that the PoA seeks to promote in a transparent and sufficient manner?	EB 55 Annex 38, §6 (c)	Yes, the stated goal of the PoA has been transparently and sufficiently described in Section A.2 of the PoA-DD as 'to develop a platform for overcoming institutional, financial and structural hurdles for the construction of a series of wind power projects or to increase the generation capacity of exiting power plants'. Moreover, the Tepeu PoA 'will provide a platform for project developers (CPA developers) and facilitate the access to carbon revenues for wind energy projects in the Latin America and Caribbean region with a more proactive and cost efficient approach'. The description has reflected the goal of the PoA and has been confirmed by the validation team during onsite interviews with the CME, hence it is deemed in line with EB 55 Annex 38 para 6 (c).	OK	OK
A.2.3 Will the PoA create other environmental or social benefits than GHG emission reductions?	EB 55 Annex 1, §§ 125 – 127	Yes, as per Section A.2 the PoA-DD, the PoA creates other economic, social and technological benefits, e.g. to help the host country improve its hydrocarbon trade balance through a reduction of oil imports to be used for electricity generation, electricity access to remote populations, increase employment opportunities, support technology and know-how transfer from other regions or even other countries.	OK	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.																						
A.2.4Has information regarding the annual average emission reductions of the PoA or the 1st CPA over the first crediting period been included in the description of the PoA-DD section A.2?	PoA RfReg. Upload step 4	<p>The information regarding the annual average emission reductions of the PoA or the 1st CPA over the first crediting period has not been included in the description of the PoA-DD version 1 section A.2. However, this information is readily available in the CPA-DD version 1 for the first CPA titled 'Alba Rivas, Wind Power Plant – Tepeu PoA CPA # 1'. The expected annual amount of ERs is 109,533 tCO₂e.</p> <p>The estimated emission reductions of the 1st CPA has been included in section A.4.4 of the CPA-DD version 1 as follows:</p> <table><tr><th>Years</th><th>Annual estimation of emission reductions in tonnes of CO₂e</th></tr><tr><td>2013</td><td>109,533</td></tr><tr><td>2014</td><td>109,533</td></tr><tr><td>2015</td><td>109,533</td></tr><tr><td>2016</td><td>109,533</td></tr><tr><td>2017</td><td>109,533</td></tr><tr><td>2018</td><td>109,533</td></tr><tr><td>2019</td><td>109,533</td></tr><tr><td>Total Estimated Reductions (t CO₂e)</td><td>766,731</td></tr><tr><td>Total number of crediting years</td><td>7</td></tr><tr><td>Annual average of estimated reductions over the crediting period (t CO₂e)</td><td>109,533</td></tr></table> <p>These values are consistent with the ER calculation spreadsheet, however,</p>	Years	Annual estimation of emission reductions in tonnes of CO ₂ e	2013	109,533	2014	109,533	2015	109,533	2016	109,533	2017	109,533	2018	109,533	2019	109,533	Total Estimated Reductions (t CO ₂ e)	766,731	Total number of crediting years	7	Annual average of estimated reductions over the crediting period (t CO ₂ e)	109,533	OK	OK
Years	Annual estimation of emission reductions in tonnes of CO ₂ e																									
2013	109,533																									
2014	109,533																									
2015	109,533																									
2016	109,533																									
2017	109,533																									
2018	109,533																									
2019	109,533																									
Total Estimated Reductions (t CO ₂ e)	766,731																									
Total number of crediting years	7																									
Annual average of estimated reductions over the crediting period (t CO ₂ e)	109,533																									

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
		estimates will be confirmed by the validation team during the onsite visit.		
A.2.5 Has a confirmation been given in section A.2 of the PoA-DD that the proposed PoA is a voluntary action by the coordinating/managing entity (CME)?	EB 55 Annex 38, §6(d)	<p>Yes, the confirmation has been given in Section A.2 of the PoA-DD that the proposed PoA is a voluntary action by ÉcoRessources Carbone S.A.C., the CME. As per the PDD 'there are no mandatory laws or regulations in place in the host countries (Nicaragua and Peru that require wind power plants to seek CDM services. Likewise, no mandatory laws or regulations exist requiring the coordinating/managing entity or any other party to develop a PoA for wind power plants in the host country.'</p> <p>This information has been confirmed via interviews with governmental officials during onsite interviews and also crosschecked by the validation team's local expert via background research on local regulations.</p> <p>A review of the legal framework for the national electricity system in Nicaragua included the following legislation:</p> <ul style="list-style-type: none"> - <i>Electricity Industry Law (law No. 272). There are no provisions or clauses specifically enforcing renewable energy projects.</i> - <i>Law for promotion of electricity generation from renewable sources (law No. 532). It provides multiple incentives for proponents of renewable energy projects, however it does not enforce the use of wind or other renewables.</i> - <i>Law for promotion of the hydroelectric sub-sector (decree No. 72-2003). There are no provisions or requirements for other renewable energy sources such as wind.</i> - <i>Norm for licences and concessions (resolution No.. 017-INE-1999). There are no provisions or clauses specifically enforcing renewable energy projects.</i> 	OK	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
		<ul style="list-style-type: none"> - <i>Environmental and Natural Resources Law (law No. 217). There are no provisions or clauses specifically enforcing renewable energy projects.</i> - <i>Environmental Assessment System (decree No. 76-2006). There are no provisions or clauses specifically enforcing renewable energy projects.</i> <ul style="list-style-type: none"> - Ministry of Energy and Mining http://www.mem.gob.ni/index.php?s=2&idp=224&idt=1 - Nicaraguan Energy Institute http://www.ine.gob.ni/DGE/leyes.html - <p>A review of the legal framework for the national electricity system in Peru included the following legislation:</p> <ul style="list-style-type: none"> - <i>Updated Energy Concession Law 25844. Generation with renewable sources up to 20MW does not require the presentation of an Environmental Impact Assessment –EIA</i> - <i>Electric Concessions Law. Regulatory framework that is currently relevant for renewable energy projects in Peru.</i> 		
A.3 Coordinating/managing entity and participants of PoA				
A.3.1 Are the PPs correctly listed in a tabular form in section A.3 of the CDM-PoA-DD?	EB41 Annex 12 EB33 Annex 34	Yes, ÉcoRessources Carbone S.A.C., the PP for Peru and Nicaragua, is listed correctly in a tabular form as per EB 33 Annex 34. Mabanft Carbon B.V., the PP from The Netherlands, is also correctly listed in the same table.	OK	OK
A.3.2 Is the listed information in the table consistent with the contact details provided in Annex I of the PoA-DD?	PoA-DD	Yes, the information in the table regarding the PPs is consistent with Annex I of the PoA-DD.	OK	OK
<i>Each organisation listed in section A.3 shall include the following mandatory</i>				

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<i>fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail.</i>				
<p>A.3.3 Has the participation of each PP been approved by at least one party involved, either in a letter of approval or in a separate letter?</p> <p><i>Indicate whether a letter of approval has been received, with a clear reference to the supporting documentation. Indicate whether this letter was provided to the validation team by the project participants or directly by the DNA. Letters of approval shall be issued in accordance with the guidance provided by the CDM Executive Board (EB16, Annex 6)</i></p>	EB 55 Annex 38, §9; EB 55 Annex 1 §44, 51, 52	No, at the time of onsite visit, the letter of approval from each PP has not yet been provided to the validation team. Hence, finding PoA-CAR 1 is raised.	PoA-CAR 1	OK
A.3.4 Are the approvals issued from organisations listed as DNAs on the UNFCCC CDM website?	EB 55 Annex 1 §47	No, at the time of onsite visit, the letter of approval from each PP has not yet been provided to the validation team. Hence, finding PoA-CAR 1 is raised.	PoA-CAR 1	OK
<p>A.3.5 Does each of the written approvals confirm the following information:</p> <p>(1) that the corresponding party is a Party to the Kyoto Protocol;</p> <p>(2) that the participation is voluntary;</p> <p>(3) that the project contributes to the sustainable development in the country (only for host country approval(s));</p> <p>(4) that the project participant's information is exactly the same as in the PoA-DD;</p> <p>(5) that the PoA title referred in the approvals is consistent with the one in the POA-DD submitted for registration, or is there an additional specification of the PoA, e.g. POADD version number;</p> <p>(6) that the CME is authorized for its coordination and</p>	EB 55 Annex 1 §45 (a-d), 46, EB 55 Annex 38 §10	No, at the time of onsite visit, the letter of approval from each PP has not yet been provided to the validation team. Hence, finding PoA-CAR 1 is raised.	PoA-CAR 1	OK

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<p>implementation of the PoA from each Host Party (only for host country approval(s)); (7) that the approvals are unconditional w.r.t. the above points?</p> <p><i>CME's coordination of the PoA can be authorized in the letters of approval from each Host Party or in a separate confirmation letter from each Host Party.</i></p>				
A.3.6 Is it clearly stated in section A.3 of the PoA-DD that the coordinating or managing entity of the PoA is the entity which communicates with the Executive Board (EB)?	EB 55 Annex 38, §11	Section A.4.4.1 clearly states that the CME will be the focal point for all communications with the UNFCCC related to the PoA.	OK	OK
<p>A.3.7 As per the UNFCCC secretariat/CDM Team's request, has following points been fulfilled by the MoC before submitting request for registration:</p> <p>(1) Title of the project and names of project participants and focal points should be fully consistent with those indicated in all other project documentation submitted at the request for registration stage (e.g., PDD, LOAs, etc.); (2) Coordinating/managing entity of the PoA is either sole or joint focal point for each area of communication with the Board, and the limit of joint focal points for the programme shall be 5, or equal to the number of host Parties if greater than 5; (3) No modifications to the template/form (e.g., modifying or deleting sections of the form) should be made; (4) Each document (MOC statement including the Annex 1) should be clearly dated; (5) Focal point scopes should be clearly and correctly indicated (e.g., one focal point entity cannot be designated</p>	EB 55 Annex 38, §11 UNFCCC secretari at/CDM Team's request	No, at the stage of onsite visit, the MoC has not been submitted to the validation team. Hence, finding PoA-CAR 2 is raised.	PoA- CAR 2	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
<p>with 'sole' authority while another focal point entity is designated with 'joint' authority for the same scope);</p> <p>(6) Contact details and specimen signatures of focal point entities including those of project participants in Annex 1 should be correctly entered:</p> <p>(7) only one telephone, fax, e-mail contact should be entered per authorized signatory. In cases where additional contact details are included, only the first indicated information will be taken into account and only the official business address of the proposed entity should be provided on the F-CDM-MOC form;</p> <p>(8) the Statement of Agreement in Section 3 should be signed by one authorized signatory for each project participant;</p> <p>(9) signatures made available in Section 3 should correspond to those indicated in the related Annex 1 document;</p> <p>(10) focal point entities who are not designated as project participants should not sign Section 3.</p>				
A.3.8 Is there any Party/Country directly involved as project participant, and if yes, is that Party's contact details included in annex 1 of the PoA-DD and is the information provided internally consistent with section A.3 of the PoA-DD?	EB 55 Annex 1, § 52	No, there is no Party/Country directly involved as project participant of the PoA. This has been confirmed via interview with the CME. Hence it is not necessary to include contact details of any Party in Annex I of the PoA-DD.	OK	OK

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A.4 Technical description of the PROGRAMME of ACTIVITY (PoA)				
A.4.1 Location of the PoA				
A.4.1.1 Have all host countries been correctly listed in section A.4.1.1 of the PoA-DD?	EB 55 Annex 1, § 52	Yes, the host countries of the PoA are Niacargua and Peru, which are correctly listed in section A.4.1.1 of the PoA-DD. This section expressly states that 'other adjacent and Latin America and Caribbean region countries might be included in the PoA at a later stage.'	OK	OK
A.4.1.2 Does the information on the location of the PoA allow for a clear identification of the boundary for the PoA in terms of the geographical area, within which all CPAs included in this PoA will be implemented? e.g., maps in English and /or GSP Coordinates given in following formats: Latitude: 31.125833, Longitude: -30.125833	EB 55 Annex 38, §6(b)	Yes, section A.4.1.2 specifically defines that all CPAs included in the PoA will be implemented within the geographical area of Nicaragua and Peru, the host countries. This section also states that 'other adjacent and Latin America and Caribbean region countries might be included in the PoA at a later stage.'	OK	OK
A.4.1.3 Have all applicable national and/or sectoral policies and regulations of each host country within the boundary been considered and/or substantiated?	EB 55 Annex 38 §6(b)	Yes, all applicable national and/or sectoral policies and regulations of each host country within the boundary have been considered in the PoA-DD.	OK	OK
A.4.2 Description of a typical programme activity (CPA):				
A.4.2.1 Has it been stated in a clear, accurate and complete manner which technology or measures are to be employed by a typical CPA?	EB 55 Annex 38 § 6 (f), EB 55 Annex 1 § 58	Yes, the technologies and measures employed by a typical CPA have been described in section A.4.2.1 of the PoA-DD as 'wind energy plant/park connected to its host country national grid'. Furthermore, the PDD states that ' <i>even though the detailed technical characteristics might differ per CPA, the following general conditions will</i>	OK	OK

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		<p>apply to all CPAs.</p> <ul style="list-style-type: none"> - CPAs are wind turbine farms which use wind energy converted into electricity with the help of wind turbine generators, electricity which is then supplied to the national grid/sub-national grid. - The PoA will be open to all technology providers and projects that meet the eligibility criteria of this PoA. - A CPA under this PoA may be a single plant or a cluster of such plants employing the same technology undertaken by the same project developer or project community.' 		
A.4.2.2 Is this description in accordance with the real situation or, in case of Greenfield CPAs, is it most likely that the CPA will be implemented acc. to the description?	EB 55 Annex 1, §§63, 64	<p>Yes, the description in section A.4.2.1 of the PoA-DD is in accordance with the real situation of the 1st real case CPA, which is a Greenfield CPA, and it can be confirmed that most likely that the CPA will be implemented according to the description.</p> <p>This will be confirmed by the validation team during the onsite visit, the following documentation will be crosschecked:</p> <ul style="list-style-type: none"> - The 1st CPA project Feasibility Study Report (FSR) - Environmental Impact Assessment report (EIA) - Environmental license - Interviews with the 1st CPA implementer and with the local government officials 	OK	OK
A.4.2.3 In case the CPA involves alteration of the existing installation or process, is a clear description available regarding the differences between the proposed CPA and the pre-project situation?	EB 55 Annex 1, §§63, 64	<p>Not applicable, a typical CPA does not involve alteration of the existing installation or process. This will also be confirmed during onsite interview with the CME.</p>	OK	OK
Questions regarding Eligibility Criteria for a CPA to be included in the PoA:				

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A.4.2.4 The geographical boundary of the CPA including any time-induced boundary shall be consistent with the geographical boundary set in the PoA. Is this criteria included in the list of eligibility criteria?	EB 65 Annex 3 § 14(a)	Yes, section A.4.2.2 of the PoA-DD includes the eligibility criterion that the 'The project activity will be a wind power plant/unit located in the PoA's host country or in a host country added to the PoA after registration'. Furthermore, section A.4.2.2 states that a CPA must be 'a new wind power plant that could be on-shore or off-shore.'	OK	OK
A.4.2.5 Have Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo), and avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another PoA, as well as internal double counting within all CPAs of this PoA been described in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 14(b)	Yes, section A.4.2.2 of the PoA-DD contains the following eligibility criterion to avoid double counting and erroneous inclusion of a CPA: <ul style="list-style-type: none"> - <i>The CPA under the PoA is neither registered as an individual CDM project activity nor included as a CPA in another registered CDM PoA. The CPA proponent shall sign a formal document stating that the project is not participating and will not participate in any other carbon market mechanism.</i> - <i>To avoid double counting of emission reductions, each CPA-DD shall be uniquely identified and defined in an unambiguous manner by providing geographic information (e.g. coordinates), a unique CPA identification number, and the exact start date and end date of the crediting period.</i> 	OK	OK
A.4.2.6 Have specifications of technology/measure incl. level and type of service, performance specifications including compliance with testing/certifications been included in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 14(c)	No. Section A.4.2.2 of the PoA-DD states the following eligibility measures for a CPA, which should consist of either a) a Greenfield wind power project; b) a capacity addition over an existing wind power plant, where the existing power plant/units continue to operate after the implementation of the project activity; c) a retrofit over an existing wind power plant, or d) a replacement of one or several existing units at an existing power plant. However, there is no criteria referring to "the specifications of technology/measure including the level and type of service, performance specifications including compliance	PoA- CAR 3	OK

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		with testing/certifications" as per EB65 Annex 3. Hence, PoA-CAR 3 is raised.		

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A.4.2.7 Have conditions to check the CPA start date through documentary evidence been described in the eligibility criteria for inclusion of a CPA under the PoA? <i>CPA start date not before PoA webhosting date</i>	EB 65 Annex 3 § 14(d), EB 55 Annex 38 §7(d)	No, section A.4.2.2 of the PoA-DD has included a criteria stating that 'the project activity shall not have a start date (as defined by the UNFCCC) before the Global Stakeholder Process (GSP) of the PoA' as per EB65 Annex 3; however, the documentary evidence for checking a CPA start date has not been described. Hence, PoA-CAR 4 is raised.	PoA- CAR-4	OK
A.4.2.8 Have conditions that ensure compliance with applicability and other requirements of single or multiple methodology/ies and tools applied by CPAs been described in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 14(e) and EB 55 Annex 1 §167	Yes, section A.4.2.2 clearly states that CPAs must fulfil the approved consolidated methodology ACM0002. This section also includes a reference to section E.5 for additionality demonstration, which states that the additionality of each CPA shall be demonstrated and assessed using the latest version of the "Tool for the demonstration and assessment of additionality", as required in ACM0002.	OK	OK
A.4.2.9 Have conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality been included in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 14(f)	Yes, section A.4.2.2 specifically refers to section E.5, which states that the additionality of each CPA (except off-shore projects with less than 15 MW in capacity which are subject to the "Information on additionality (Attachment A to Appendix B of 4/CMP.1 Annex II)) shall be demonstrated and assessed using the latest version of the "Tool for the demonstration and assessment of additionality", as required in ACM0002	OK	OK
A.4.2.10 Have Local stakeholder consultation prior to inclusion of the CPA been included in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 14(g)	Yes, section A.4.2.2 of the PoA-DD includes the eligibility criterion that the 'the CPA proponent shall accommodate a local stakeholder consultation process before its inclusion in the PoA'.	OK	OK
A.4.2.11 Have Environmental analysis requirement of the CPA been included in the eligibility criteria for	EB 65 Annex 3 § 14(g)	No, section A.4.2.2 of the PoA-DD has not included the eligibility criterion that the 'PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and	PoA- CAR-5	OK

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inclusion of a CPA under the PoA?		environmental impact analysis' as per EB65 Annex 3. Hence, PoA-CAR 5 is raised.		
A.4.2.12 Have Conditions to provide an affirmation that funding from Annex I parties, if any, do not result in a diversion of official development assistance been included in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 14(h)	Yes, section A.4.2.2 of the PoA-DD includes the eligibility criterion that 'the CPA proponent will sign a formal document stating that funding from Annex I parties, if any, does not result in a diversion of official development assistance.'	OK	OK
A.4.2.13 If applicable, has a target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation) been defined in the eligibility criteria?	EB 65 Annex 3 § 14(i)	No target group is applicable. No target groups are involved.	OK	OK
A.4.2.14 If applicable, have the conditions related to sampling requirements for a PoA in accordance with the approved guidelines /standard from the Board pertaining to sampling and surveys been included in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 14(j), EB65 Annex 2	This condition is not applicable. No sampling is involved.	OK	OK
A.4.2.15 If applicable, have the conditions that ensure that CPA in aggregate meets the small-scale or micro-scale threshold criteria and remain within those thresholds throughout the crediting period of the CPA?	EB 65 Annex 3 § 14(k)	This condition is not applicable; this is a Large Scale PoA.	OK	OK

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A.4.2.16 If applicable, have De-bundling criterion for the CPA been included in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 14(I)	This condition is not applicable; this is a Large Scale PoA.	OK	OK
A.4.2.17 Has it been included that the CPA shall be approved by the coordinating entity in the eligibility criteria for inclusion of a CPA under the PoA?	EB 65 Annex 3 § 17	Yes, the PoA-DD states that a CPA must be approved by the CME. Further information on the approval process was reviewed in the CME Operation Manual.	OK	OK
A.4.2.18 Are the eligibility criteria specified in the PoA-DD sufficiently objective and comprehensive to ensure that all CPAs would comply with the CDM requirements applicable to the PoA? <i>If more requirements are necessary to be included in the eligibility criteria but not covered by the abovementioned questions, please describe.</i>	EB 55 Annex 1 § 167	<p>No, the following eligibility criteria is not sufficiently objective nor comprehensive:</p> <p>There is no criteria referring to “the specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications” as per EB65 Annex 3.</p> <p>Hence, PoA-CAR 3 is raised.</p> <p>The documentary evidence for checking a CPA start date has not been described.</p> <p>Hence, PoA-CAR 4 is raised</p> <p>Section A.4.2.2 of the PoA-DD has not included the eligibility criterion that the ‘PoA-specific requirements stipulated by the CME including any conditions related to undertaking ... environmental impact analysis’ as per EB65 Annex 3.</p> <p>Hence, PoA-CAR 5 is raised</p>	<p>PoA-CAR 3</p> <p>PoA-CAR 4</p> <p>PoA-CAR 5</p>	OK

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A.4.2.19 Are all listed eligibility criteria verifiable?	EB 65 Annex 3 § 15	No, not all eligibility criteria listed in section A.4.2.2 of the PoA-DD can be verifiable. See PoA-CAR 3, PoA-CAR 4 and PoA-CAR 5.	PoA-CAR 3 PoA-CAR 4 PoA-CAR 5	OK
A.4.3 Assessment and Demonstration of Additionality:				
A.4.3.1 Has it been formally stated that the proposed PoA is a voluntary coordinated action in section A.4.3 of the PoA-DD?	EB 55 Annex 38 § 4	Yes, it has been stated in section A.4.3 that the proposed PoA is a voluntary coordinated action. As described in section A.2 of the PoA-DD, there are no mandatory laws enforcing the implementation of the PoA in the host countries of Nicaragua and Peru.	OK	OK
A.4.3.2 Has it been demonstrated that in the absence of the CDM the proposed voluntary measure would not be implemented? How?	EB 55 Annex 38 §6(e)(i) EB 65 Annex 3 §7	No, section A.4.3 does not provide sufficient demonstration that the voluntary coordinated action would not have been implemented in the absence of the PoA. Clarification is required on the following statement: 'The voluntary coordinated action would not be implemented by the CME in absence of the PoA.' Hence, PoA-CL 2 is raised.	PoA-CL 2	OK
A.4.3.3 Is the PoA assisting in the implementation of a mandatory policy or regulation that would not have been enforced otherwise and that non-compliance with those requirements is widespread in the country/region?	EB 55 Annex 38 §6(e)(ii)	Not applicable. It is stated in PoA-DD that 'there is no mandatory policy/regulation in connection with this PoA', which has been also confirmed by the validation team during onsite visit via interview with the CME and the governmental officials, as well as background research by the validation team's local expert.	OK	OK

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A.4.3.4 Has it been demonstrated that the PoA would lead to greater level of enforcement of the mandatory policy or regulation?	EB 55 Annex 38 §6(e)(iii)	Not applicable. It is stated in PoA-DD that 'there is no mandatory policy/regulation in connection with this PoA', which has been also confirmed by the validation team during onsite visit via interview with the CME and the governmental officials, as well as background research by the validation team's local expert.	OK	OK
A.4.3.5 In case additionality is demonstrated at PoA level, has it been sufficiently justified considering all applicable EB standards, guidelines and procedures?	EB 47 § 73, EB 65 Annex 3 §7	Not applicable. As per section A.4.3, the PPs chose to demonstrate additionality at CPA level for each CPA separately.	OK	OK
A.4.4 Operational, management and monitoring plan of the PoA:				
A.4.4.1 Operation and management plan				
4.8.4.1.1 Has the CME clearly defined the operational and management arrangements or a management system for the implementation of the PoA?	EB 55 Annex 38 § 6(i), EB 65 Annex 3 §17	While section A.4.4.1 provides a general outline on how the CME has defined the management arrangements and responsibilities for the implementation of the PoA, including responsibilities for the CPA implementer, the PP is requested to provide the CME Operation Manual and related documentation. Hence, PoA-CL 3 is raised.	PoA-CL 3	OK
4.8.4.1.2 Are the arrangements sufficient to ensure that there is a sound record keeping system for each CPA under the PoA, and the CME will have control of all records and	EB 55 Annex 38 § 6(i), EB 55	Yes, section A.4.4.1 defines arrangements to ensure that record keeping for each CPA will be coordinated by the CME, who will collect all the following: - Name of the CPA and unique ID number.	OK	OK

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information related to the implementation of individual CPAs and will be in a position to ensure each CPA is being operated in accordance with the specific requirements of the programme?	Annex 1 § 166 and EB65 Annex 3 17(e)	<ul style="list-style-type: none"> - CPA status: Included or Pending or Rejected. - Name of the implementing entity of the CPA. - Contact detail of the implementing entity, including contact person, address, telephone and email. - Installed capacity and other relevant technical specifications of the CPA. - Location of the CPA (GPS coordinates). - Verification status and monitoring reports. <p>The CME will also be responsible for recording and storing all relevant information of the PoA and CPAs, including all monitoring data and preparing monitoring reports.</p>		
4.8.4.1.3 Are procedures identified for data management (incl. data collection, data transfer and data archive until 2 years after the end of crediting period of each CPA, etc.)?	EB 55 Annex 1 123 (b)	Section A.4.4.1 states that CME responsibilities include 'maintain all monitoring reports of all CPAs in accordance with the record-keeping system identified in the CDM-POA-DD'. Procedures for data management, including data collection, data recording, data calibration, data reporting and data archiving are adequately included in section E.7.2. As per PoA-DD, 'data collected by the CME will be archived electronically and kept at least for 2 years after the end of the last crediting period or the last issuance of CERs, whichever occurs later.'	OK	OK
4.8.4.1.4 Has a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies made available to the DOE at time of validation of the PoA?	EB 65 Annex 3 § 17(a)	<p>Section A.4.4.1 states that the CME will 'define the roles and responsibilities of personnel involved in the process of inclusion of CPAs. The CME will have a procedure of responsibilities and organization.'</p> <p>Clarification is required on the identified roles, responsibilities and competencies of the CME personnel involved in CPA inclusion.</p>	PeA-CL 4	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
		Hence, PoA-CL 4 is raised.		
4.8.4.1.5 Have records of arrangements for training and capacity development for personnel made available to the DOE at time of validation?	EB 65 Annex 3 § 17(b)	<p>No, records of arrangements for training and capacity development for CME or CPA personnel have not been made available. Section E.7.2 mentions that <i>'the CME will provide all necessary information and training material that enables CPA developers to conduct the monitoring process as required by the PoA. The CPA developer ensures that all persons that participate in the actual monitoring process for the CPA will be suitably qualified and trained in the operation and maintenance of the CPA project activity. If required, these persons will also receive training on the application of the monitoring plan by the CME.'</i></p> <p>Clarification is required on the training procedures developed by the CME, which records of training will be made and how suitable qualification of personnel involved in monitoring aspects will be evaluated.</p> <p>Hence, PoA-CL 5 is raised.</p>	PeA-CL 5	OK
4.8.4.1.6 Have procedures for technical review of inclusion of CPAs made available to the DOE at time of validation of PoA	EB 65 Annex 3 § 17(c)	<p>Section A.4.4.1 states that the CME will 'set a framework for the implementation of the PoA and approve the CDM program activity (CPAs) to be included under the PoA'. However, no clear description on procedures for technical review of inclusion of CPAs is included in the PoA-DD.</p> <p>Hence, PoA-CL 6 is raised.</p>	PeA-CL 6	OK
4.8.4.1.7 Have procedures to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA) made	EB 65 Annex 3 § 17(d)	<p>Procedures to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA) are mentioned in section A.4.4.1 and section A.4.4.2 of the PoA-DD; however, actual procedures have not been clearly described nor made available to the validation team.</p>	PeA-CL 7	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
available to DOE at time of validation of PoA?		Hence, PoA-CL 7 is raised.		
4.8.4.1.8 Have measures for continual improvement of PoA management system made available to DOE at time of validation of PoA?	EB 65 Annex 3 § 17(f)	There has been no description on measures for continual improvement of PoA management system included in section A.4.4.1 of the PoA-DD. The PP is requested to provide the CME Operation Manual and related documentation. Hence, PoA-CL 3 is raised.	PoA-CL 3	OK
4.8.4.1.9 Are there provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA?	EB 55 Annex 38 § 6(i)	Yes, section A.4.4.1 of the PoA-DD states that 'the implementing entity of each CPA will enter into a contractual arrangement with ÉcoRessources which will stipulate that the CPA entered into the Tepeu PoA voluntarily and that they are aware of and have agreed to the rights and responsibilities that this entails'. This provision is considered sufficient to ensure awareness of voluntary participation in the PoA from CPA implementers.	OK	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
A.4.4.2 PoA monitoring plan				
<p>4.8.4.1.10 If the CME does not wish to have all CPAs verified, has a description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the CPA GHG emission reductions been provided?</p> <p><i>Please refer to latest EB guidance on sampling. The request for issuance of a PoA shall relate to all CPAs included in the PoA during the specified monitoring period. The monitoring periods shall be consecutive. A request for issuance shall relate to the certified emission reductions verified as per above.</i></p>	EB 55 Annex 38, §6(k) and §37	<p>Not applicable. Under section A.4.4.2 of the PoA-DD, the CME states that each CPA will monitor all parameters listed in section E.7.2 and that data will be verified per CPA. Verification will occur either individually or in groups. .</p> <p>Therefore no statistically sound sampling method/procedure for verification will be used.</p>	OK	OK
<p>4.8.4.1.11 Does the monitoring plan for the PoA avoid internal double accounting of emission reduction calculations in case the CME would opt for a verification method that does not use sampling but verifies each CPA; and that the status of verification for each CPA can be determined any time?</p>	EB 33 Annex 43	<p>Yes. As stated in section A.4.4.2, the CME opted for a verification method that does not use sampling but involves verification of data for each CPA. This section states that the CME will avoid double counting of emission reduction calculations through the use of a PoA monitoring database with individual CPA information and QA/QC procedures. Record keeping procedures by the CME will help ensure that the CPA records for a given monitoring period are clearly attributed to each individual CPA. Furthermore, the CME will also record the verification status of each CPA in the database.</p> <p>Thus, double counting can be avoided and the status of verification for each CPA can be determined any time.</p>	OK	OK
Public Funding of the PoA				
<p>A.4.4.3 Is there any public funding used for implementation of this PoA?</p>		<p>No, it is stated in section A.4.5 of the PoA-DD that the PoA or individual CPAs do not receive any ODA funding from Annex I parties. This has been confirmed during interviews with CME.</p>	OK	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
A.4.4.4 If public funding is granted was a written confirmation from the relevant Annex I country DNA provided with the content that such funding does not result in a diversion of official development assistance (ODA)?	EB 55 Annex 38, §6(n))	Not applicable, it is stated in section A.4.5 of the PoA-DD that the PoA or individual CPAs do not receive any ODA funding from Annex I parties. This has been confirmed during interviews with CME.	OK	OK
A.4.4.5 Is any further information provided in PoA-DD annex 2 on public funding used for the PoA? If any, is this consistent with the actual situation presented by the project participants?		No, information provided in Annex II of the PoA-DD only states that <i>'the PoA does not involve any public funding from parties included in Annex 1. This will be cross verified for individual CPAs in respective CPA-PDDs'</i> . This is consistent with section A.4.5 of the PoA-DD. No further information regarding public funding used for the PoA has been identified.	OK	OK
A.4.4.6 Has it been confirmed whether there are any bilateral or multilateral fund project participants involved in the PoA, and if yes, the following information shall be provided to the DOE: <ul style="list-style-type: none"> - Full official name of the entity fund; - Name of company managing the fund; - Party(ies) authorizing participation of the Fund; - DNA approval of voluntary participation in the PoA and confirmation that it has ratified the Kyoto Protocol; - DNA authorization of the fund to the project participant (can be combined with the approval document) <p><i>Multilateral funds do not necessarily require written approval from each participant's DNA. However those not providing a written approval may be giving up some of their rights and privileges in terms of being a Party involved in the project.</i></p>	EB 55 Annex 1, § 100 (b); Glossary of CDM terms	Not applicable, it has been confirmed via interview with the CME that there are no bilateral or multilateral fund project participants involved in the PoA. As per A.3.1, ÉcoRessources Carbone S.A.C., the PP for Peru and Nicaragua, is listed correctly in a tabular form as per EB 33 Annex 34. Mabanft Carbon B.V., the PP from The Netherlands, is also correctly listed in the same table. Both entities are privately owned companies, independent from bilateral or multilateral funds.	OK	OK

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B DURATION of the PROGRAMME of ACTIVITIES				
B.1 Starting date of the programme of activities				
B.1.1 Has the start date of the PoA been indicated using the dd/mm/yyyy?		No, the start date of the PoA has been indicated in section B.1 as ' <i>the date of registration as a CDM PoA</i> '. A reasonably defined start date is required using the format of DD/MM/YYYY. Hence, PoA-CAR 6 is raised.	PoA-CAR 6	OK
B.1.2 Is this start date reasonably defined? <i>The crediting period of the PoA should be renewed every seven years (every 20 years for A/R PoA) from the start date of the lifetime of the PoA. Life time of the PoA starts on the date specified in the PoADD section B.1 or on the date of registration, whichever is later. In case of small-scale PoA, the start date must be stated as at least 4 weeks after the estimated submission date; In case of large-scale PoA, the start date must be stated as at least 8 weeks after the estimated submission date.</i>	PoA request registration on uploading step 4 requirement	No, the start date of the PoA has been indicated in section B.1 as ' <i>the date of registration as a CDM PoA</i> '. A reasonably defined start date is required using the format of DD/MM/YYYY. Hence, PoA-CAR 6 is raised.	PoA-CAR 6	OK
B.2 Length of the programme of activities				
B.2.1 Is the indicated duration of the PoA by the coordinating and managing entity? <i>PoA duration should not exceeding 28 years (60 years for A/R)</i>	EB 55 Annex 38, §6(h)	Yes, section B.2 of the PoA-DD states the length of the PoA is 28 years, which is in line with EB55 Annex 28 §6(h).	OK	OK
C ENVIRONMENTAL IMPACT ANALYSIS (EIA)				
C.1 Definition of the level EIA as per requirements of the CDM modalities and procedures				
C.1.1 Has the level of environmental analysis been defined (at PoA or CPA level)?	EB 55 Annex 38 § 6(l)	Yes, section C.1 of the PoA-DD has defined the environmental analysis is done at CPA level.	OK	OK

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C.1.2Has any justification been provided for the choice of the level of environmental analysis?	EB 55 Annex 38 § 6(l)	Yes, justification has been provided in section C.1 of the PoA-DD that due to individual nature of each wind energy project, which are implemented in different geographical regions within Nicaragua and Peru, it would be deemed inappropriate to conduct an environmental impact assessment at the PoA level. Therefore, the choice of level at which environmental analysis will be carried out (CPA level) is considered justified.	OK	OK
C.2 Documentation on the EIA including transboundary impacts				
C.2.1Has any documentation on environmental analysis of the PoA as per requirements of the CDM modalities and procedures been described in the PoA-DD?	EB 55 Annex 38, §6(l)	Not applicable, since the environmental impacts analysis will be done at CPA level.	OK	OK
C.2.2Were transboundary environmental impacts identified in the environmental analysis and addressed?	EB 55 Annex 1, §§ 131 – 133	Not applicable, since the environmental impacts analysis will be done at CPA level.	OK	OK
C.3 EIA required by Host Country				
C.3.1Are there any Host Party laws/ regulations require an Environmental Impact Assessment (EIA) for a typical CPA under the PoA?	EB 55 Annex 1, § 136 (d)	Nicaraguan requirements for “Valoracion Ambiental” have been confirmed for wind energy projects. It was also confirmed that Peruvian legislation does not require, under Energy Concession Law 25844, a submission for an Environmental Impact assessment in the case of wind energy projects.	OK	OK
D Local Stakeholders’ consultation and comments				
D.1 Level of Local Stakeholder Consultation				
D.1.1Is it indicated whether the Local Stakeholder Comments will be invited at PoA or CPA level?	EB 55 Annex 1,	Yes, it is indicated in section D.1 of the PoA-DD that the Local Stakeholder Consultation is done at CPA level.	OK	OK

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	§§ 127–129)			
D.1.2Has any justification been provided for the choice of the level of Local Stakeholder Comments being invited?	EB 55 Annex 38 § 6(m)	Yes, justification has been provided for the choice of conducting the local stakeholder consultation at CPA level. Since the impact on the surrounding communities of the wind power plants will depend on its location, size and local environmental impacts, a local stakeholder consultation at CPA level is deemed more appropriate.	OK	OK
D.2 Description how comments have been invited				
D.2.1If the stakeholder comments will be invited at PoA level, has it been indicated how local stakeholders' comments were invited prior to the publication of the PoA-DD?	EB 55 Annex 38, §6(m); EB 55 Annex 1, §§128–130)	Not applicable, since the local stakeholder consultation will be done at CPA level.	OK	OK
D.2.2If the stakeholder comments will be invited at PoA level, can the local stakeholder consultation process be deemed as adequate?	EB 55 Annex 1, §130)	Not applicable, since the local stakeholder consultation will be done at CPA level.	OK	OK
D.3 Summary of comments				
D.3.1If the stakeholder comments will be invited at PoA level, has any summary of the contents been sufficiently provided?	EB 55 Annex 1, §§ 128–130)	Not applicable, since the local stakeholder consultation will be done at CPA level.	OK	OK
D.4 Report on how due account was taken of any comments received				
D.4.1If the stakeholder comments will be invited at PoA level,	EB 55 Annex 1,	Not applicable, since the local stakeholder consultation will be done at CPA level.	OK	OK

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has it been indicated how due account was taken of any comments received?	§§ 128–130)			
E APPLICATION OF A BASELINE AND MONITORING METHODOLOGY TO A TYPICAL CPA				
E.1 Title and reference of the approved SSC Baseline and Monitoring Methodology applied to SSC-CPA included in the PoA				
E.1.1 Has the PoA-DD correctly quoted the methodology(ies)? Is a valid version of the methodology(ies) applied?	EB 55 Annex 1 § 70, 71	Yes, the section E.1 of the PoA-DD has correctly quoted the applied methodology: ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version: 12.2.0 The methodology is active and it is valid from 17 Sep 2010 onwards. The information has been confirmed as correct by the validation team via comparing the actual text of the applicable version of the methodology available on the UNFCCC CDM website.	OK	OK
E.1.2 Has the methodology or the combination of multiple methodologies applied been approved by the EB for use of a PoA?	EB 47 Annex 31 EB 61 Annex 21 § 11a)	Yes, the applied methodology ACM0002 has been approved for use under a PoA at EB 35 paragraph 15 (http://cdm.unfccc.int/EB/035/eb35rep.pdf) There is no combination of multiple methodologies applied by this PoA.	OK	OK
E.1.3 Does the PoA-DD correctly quote the tools/guidelines referred in the methodology(ies)? Is the list of tools/guidelines complete? Are the valid versions of the tool(s) /guidelines applied? Has a reference been indicated in the PoA-DD?	EB 55 Annex 1 § 68	No, section E.1 of the PoA-DD does not quote all the tools referenced in ACM0002. A complete list of the tools/guidelines referred to in the methodologies is required in section E.1 Hence, PoA-CAR 7 is raised	PoA-CAR 7	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.									
E.2 Justification of the choice of the Methodology and why it is applicable to a CPA													
E.2.1 Have all applicability criteria in the applied methodology(ies) been sufficiently justified for a typical CPA? Have the justifications refer to corresponding eligibility criteria for inclusion of a CPA under the PoA? <i>Describe for <u>each</u> applicability criterion listed in the selected approved methodology the steps taken to assess the information contained in the POA-DD.</i>	EB 55 Annex 1, §§66 (a)(b), 68, 70, 75; EB 65 Annex 3 § 14(e); AMS.I.D ver. 17 (EB61 Annex 17 §1-8);	Assessment of applicability conditions is included in the table below: <table><tr><th>Applicability conditions of ACM0002 (version 12.3.0)</th><th>GLC Assessment</th><th>Req. met</th></tr><tr><td>The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.</td><td>As confirmed by the validation team, CPAs will be grid-connected wind power plants (new, capacity additions, retrofits or replacements). This requirement is met.</td><td>YES</td></tr><tr><td>In the case of capacity additions, retrofits or replacements (except for capacity addition projects for which the electricity generation of the existing power plant(s) or unit(s) is not affected: the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.</td><td>As indicated in the PDD, the CPAs that involve capacity addition, retrofits or replacements will have a minimum of 5 years of historical operational data with no capacity addition or retrofit of the plant having been undertaken between the start of this minimum historical reference period and the implementation of the project activity. The PP will provide means for verification of the historical operation data through official reports from relevant electricity institutions (e.g. annual statistics and/reports) .</td><td>CAR 8</td></tr></table>	Applicability conditions of ACM0002 (version 12.3.0)	GLC Assessment	Req. met	The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	As confirmed by the validation team, CPAs will be grid-connected wind power plants (new, capacity additions, retrofits or replacements). This requirement is met.	YES	In the case of capacity additions, retrofits or replacements (except for capacity addition projects for which the electricity generation of the existing power plant(s) or unit(s) is not affected: the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	As indicated in the PDD, the CPAs that involve capacity addition, retrofits or replacements will have a minimum of 5 years of historical operational data with no capacity addition or retrofit of the plant having been undertaken between the start of this minimum historical reference period and the implementation of the project activity. The PP will provide means for verification of the historical operation data through official reports from relevant electricity institutions (e.g. annual statistics and/reports) .	CAR 8	PeA- CAR 8 PeA- CAR 9	OK
Applicability conditions of ACM0002 (version 12.3.0)	GLC Assessment	Req. met											
The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.	As confirmed by the validation team, CPAs will be grid-connected wind power plants (new, capacity additions, retrofits or replacements). This requirement is met.	YES											
In the case of capacity additions, retrofits or replacements (except for capacity addition projects for which the electricity generation of the existing power plant(s) or unit(s) is not affected: the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.	As indicated in the PDD, the CPAs that involve capacity addition, retrofits or replacements will have a minimum of 5 years of historical operational data with no capacity addition or retrofit of the plant having been undertaken between the start of this minimum historical reference period and the implementation of the project activity. The PP will provide means for verification of the historical operation data through official reports from relevant electricity institutions (e.g. annual statistics and/reports) .	CAR 8											

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			However, PP is required to correct unrecognized text in Table 1 of section E.1 of PoA-DD. Hence PoA-CAR 8 is raised.			
		In case of hydro power plants: • At least one of the following conditions must apply: - The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or - The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of the reservoirs is increased and the power density of each reservoir, as per the definitions given in the Project Emissions section, is greater than 4 W/m ² after the implementation of the project activity; or - The project activity results in new single or multiple reservoirs and the power density of each reservoir, as per the definitions given in the Project Emissions section, is greater than 4 W/m ² after the implementation of the project activity.	This condition is not applicable since the CPAs will be grid-connected wind power plants.	YES		
		In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m ² after the implementation of the project activity, all the following conditions must apply: • The power density calculated for the entire project activity using equation 5 is greater than 4 W/m ² ; • All reservoirs and hydro power plants are located at the same river and where they are designed together to function as an integrated project that collectively constitutes the generation capacity of the combined power plant; • The water flow between the multiple reservoirs	This condition is not applicable since the CPAs will be grid-connected wind power plants.	YES		

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		<p>is not used by any other hydropower unit which is not a part of the project activity;</p> <ul style="list-style-type: none"> • The total installed capacity of the power units, which are driven using water from the reservoirs with power density lower than 4 W/m², is lower than 15MW; • The total installed capacity of the power units, which are driven using water from reservoirs with power density lower than 4 W/m², is less than 10% of the total installed capacity of the project activity from multiple reservoirs. 				
		<p>The methodology is not applicable to the following:</p> <ul style="list-style-type: none"> • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; • Biomass fired power plants; • A hydro power plant that results in the creation of a new single reservoir or in the increase in an existing single reservoir where the power density of the power plant is less than 4 W/m². 	<p>This condition is not applicable. The CPAs under this PoA are wind power projects and do not involve fossil fuel switching or biomass combustion.</p>	YES		
		<p>In the case of retrofits, replacements, or capacity additions, the methodology is only applicable if the most plausible baseline scenario is P2: "The continuation of the current situation, i.e. to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance."</p>	<p>A provision defined in section E.4 (identification of the baseline scenario) of the PoA-DD states that only if a CPA that retrofits or replaces power plants defines scenario P2, then this CPA can be included in the PoA.</p> <p>It should be noted that, as per ACM0002, this applicability condition should also be assessed for capacity additions.</p>	CAR 9		

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		<div><div></div><div>Moreover, PP is required to clarify whether provision in E.4 is also an eligibility criterion for CPAs and provide, further information including measures/procedures by CME to evaluate baseline scenario for CPA inclusion in the case of retrofit, replacement or capacity addition projects. Hence, PoA-CAR 9 is raised.</div></div>					
E.2.2Have all applicability criteria in the applied tools/guidelines referred to therein been sufficiently justified in the PoA-DD for a typical CPA? <i>Describe for each applicability criterion listed in the selected approved tool(s) the steps taken to assess the information contained in the POA-DD.</i>		No, fulfilment of applicability criteria by a typical CPA for the tools referenced in ACM0002 have not been sufficiently justified in the PoA-DD. Hence, PoA-CAR 10 is raised.				PoA-CAR 10	OK
E.3 DESCRIPTION OF THE SOURCES AND GASES INCLUDED IN THE SSC-CPA BOUNDARY							
E.3.1Has the spatial boundary (physical) of a typical CPA clearly defined?	EB 55 Annex 1 § 67a, 78ff; AMS.I.D version 17 §9	Yes, the spatial boundary (physical) boundary has been clearly defined in Section E.3 of the PoA-DD as per ACM0002 as follows: “the spatial extent of the project boundary includes the project activity and all power plants connected physically to the national/regional grid to which the proposed projects (CPAs) are also connected.” The description in the section E.3 of the PoA-DD is in line with the methodology.				OK	OK
E.3.2Are all sources and gases within the CPA boundary	AMS-I.D	Yes, sources and gases within the CPA boundary has been described in a				OK	OK

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described in a clear manner in the PoA-DD in accordance with the applied methodology(ies)?	ver. 17 §10-21	<p>clear manner in section E.3 of the PoA-DD in accordance with the applied methodology. No project emissions for wind power generation projects are expected, as confirmed by the validation team during on-site visit. As per section E.3 of the PoA-DD, following sources and gases are described:</p> <table border="1"> <thead> <tr> <th colspan="2">Source</th><th>Gas</th><th>Included?</th><th>Justification / Explanation</th></tr> </thead> <tbody> <tr> <td rowspan="3">Baseline</td><td rowspan="3">CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity</td><td>CO2</td><td>Yes</td><td>Main emission source</td></tr> <tr> <td>CH4</td><td>No</td><td>Minor emission source</td></tr> <tr> <td>N2O</td><td>No</td><td>Minor emission source</td></tr> <tr> <td rowspan="3">Project Activities</td><td rowspan="3">Wind energy projects under the PoA</td><td>CO2</td><td>No</td><td>Minor emission source. As a zero emission grid connected wind power project no emissions will result.</td></tr> <tr> <td>CH4</td><td>No</td><td>As a zero emission grid connected wind power project no emissions will result</td></tr> <tr> <td>N2O</td><td>No</td><td>As a zero emission grid connected wind power project no emissions will result.</td></tr> </tbody> </table>	Source		Gas	Included?	Justification / Explanation	Baseline	CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity	CO2	Yes	Main emission source	CH4	No	Minor emission source	N2O	No	Minor emission source	Project Activities	Wind energy projects under the PoA	CO2	No	Minor emission source. As a zero emission grid connected wind power project no emissions will result.	CH4	No	As a zero emission grid connected wind power project no emissions will result	N2O	No	As a zero emission grid connected wind power project no emissions will result.		
Source		Gas	Included?	Justification / Explanation																											
Baseline	CO2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity	CO2	Yes	Main emission source																											
		CH4	No	Minor emission source																											
		N2O	No	Minor emission source																											
Project Activities	Wind energy projects under the PoA	CO2	No	Minor emission source. As a zero emission grid connected wind power project no emissions will result.																											
		CH4	No	As a zero emission grid connected wind power project no emissions will result																											
		N2O	No	As a zero emission grid connected wind power project no emissions will result.																											
E.3.3 Can other GHG emissions expected to contribute more than 1% of the overall expected annual emission reductions and which are not addressed by the applied methodology, <u>be identified</u> within the proposed CDM	EB 55 Annex 1, §77	No, no GHG emissions, other than the ones addressed by the methodology, have been identified by the validation team. No project emissions are expected as a result of the implementation of the proposed CPAs.	OK	OK																											

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project activity boundary as a result of the implementation of the proposed CDM project activity? If so, has the PP provided sufficient information regarding sources and activity levels to correctly quantify them?										
E.4 IDENTIFICATION AND DECSRPTION OF THE BASELINE SCENARIO										
E.4.1 Are there any procedures in the methodology to identify the most reasonable baseline scenario? Does this include a description of the technology that would be employed in the absence of the CDM project activity? <i>(Please list them and review whether they were applied correctly)</i>	EB 55 Annex 1 § 81, 85 AMS I.D ver.17 §10	<div>Yes, ACM0002 includes a procedure for identification of the baseline scenario.</div> <div>This procedure covers the baseline scenarios for different project activities as follows:</div> <table><tr><th>Procedure for identification of the baseline scenario as per ACM0002 ver. 12.3.0</th><th>GLC Assessment</th></tr><tr><td>If the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following:<ul style="list-style-type: none">• Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the Tool to calculate the emission factor for an electricity system.</td><td>Section E.4 of the PoA-DD describes the baseline scenario as per procedures in ACM0002 ver.12.3.0 for the case of 'new wind power plants' and correctly references the Tool to calculate the emission factor for an electricity system. Thus, this procedure has been applied correctly.</td></tr><tr><td>If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, the baseline scenario is the following:<ul style="list-style-type: none">• In the absence of the CDM project activity, the existing facility would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted (DATEBaselineRetrofit). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity, and no emission reductions are assumed to occur.</td><td>Section E.4 of the PoA-DD describes the baseline scenario as per procedures in ACM0002 ver.12.3.0 for the case of 'capacity addition powerplants'. Thus, this procedure has been applied correctly.</td></tr></table>	Procedure for identification of the baseline scenario as per ACM0002 ver. 12.3.0	GLC Assessment	If the project activity is the installation of a new grid-connected renewable power plant/unit , the baseline scenario is the following: <ul style="list-style-type: none">• Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the Tool to calculate the emission factor for an electricity system.	Section E.4 of the PoA-DD describes the baseline scenario as per procedures in ACM0002 ver.12.3.0 for the case of 'new wind power plants' and correctly references the Tool to calculate the emission factor for an electricity system. Thus, this procedure has been applied correctly.	If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, the baseline scenario is the following: <ul style="list-style-type: none">• In the absence of the CDM project activity, the existing facility would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted (DATEBaselineRetrofit). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity, and no emission reductions are assumed to occur.	Section E.4 of the PoA-DD describes the baseline scenario as per procedures in ACM0002 ver.12.3.0 for the case of 'capacity addition powerplants'. Thus, this procedure has been applied correctly.	PoA-CAR-9	OK
Procedure for identification of the baseline scenario as per ACM0002 ver. 12.3.0	GLC Assessment									
If the project activity is the installation of a new grid-connected renewable power plant/unit , the baseline scenario is the following: <ul style="list-style-type: none">• Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the Tool to calculate the emission factor for an electricity system.	Section E.4 of the PoA-DD describes the baseline scenario as per procedures in ACM0002 ver.12.3.0 for the case of 'new wind power plants' and correctly references the Tool to calculate the emission factor for an electricity system. Thus, this procedure has been applied correctly.									
If the project activity is a capacity addition to existing grid-connected renewable power plant/unit, the baseline scenario is the following: <ul style="list-style-type: none">• In the absence of the CDM project activity, the existing facility would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted (DATEBaselineRetrofit). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity, and no emission reductions are assumed to occur.	Section E.4 of the PoA-DD describes the baseline scenario as per procedures in ACM0002 ver.12.3.0 for the case of 'capacity addition powerplants'. Thus, this procedure has been applied correctly.									

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		<p>If the project activity is the retrofit or replacement of existing grid-connected renewable power plant/unit(s) at the project site, the following step-wise procedure to identify the baseline scenario shall be applied: <i>Step 1: Identify realistic and credible alternative baseline scenarios for power generation</i></p> <p>Apply Step 1 of the Combined tool to identify the baseline scenario and demonstrate additionality. The options considered should include:</p> <p>P1: The project activity not implemented as a CDM project;</p> <p>P2: The continuation of the current situation, i.e. to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance. The additional power generated under the project would be generated in existing and new grid-connected power plants in the electricity system; and P3: All other plausible and credible alternatives to the project activity that provide an increase in the power generated at the site, which are technically feasible to implement. This includes, <i>inter alia</i>, different levels of replacement and/or retrofit at the power plant/unit(s). Only alternatives available to project participants should be taken into account.</p> <p>Section E.4 of the PoA-DD describes the baseline scenario as per procedures in ACM0002 ver.12.2.0 for the case of 'retrofit or replacement power plants', up until Step 1 of the Combined tool to identify the baseline scenario and demonstrate additionality. Section E.4 correctly includes the options for baseline scenario as per ACM0002 ver.12.2.0.</p> <p>However, a provision defined in section E.4 (identification of the baseline scenario) of the PoA-DD states that 'only if the CPA defines option P2 as the baseline scenario, the project can be included in the present PoA'.</p> <p>PP is required to clarify whether provision in E.4 is also an eligibility criterion for CPAs and provide, further information including measures/procedures by CME to evaluate baseline scenario for CPA inclusion in the case of retrofit, replacement or capacity addition projects.</p> <p>Hence, PoA-CAR 9 is raised.</p>		
E.4.2 Is the list of alternatives to a typical CPA complete? e.g., has it included the status-quo situation, the CPA not undertaken as a CDM project as well as other viable means of supplying the outputs or services that are	EB 55 Annex 1, §§ 67 (b), 82, §§ 104 –	Yes, for each type of CPA eligible under the PoA, section E.4 of the PoA-DD has correctly applied the procedure defined in ACM0002 for identification of the baseline scenario.	OK	OK

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to be supplied by the proposed CPA?	106; AMS I.D ver.17 §10			
E.4.3 Does the PoA-DD identify correctly and exclude those options not in line with host country regulatory or legal requirements?	EB55 Annex 1, §§ 85, 87(d); EB55 Annex 38, § 6(b)	Yes, section E.4 of the PoA-DD has correctly identified options for the baseline scenarios as per the procedure defined in ACM0002. No other options were identified and excluded due to host country regulatory or legal requirements.	OK	OK
E.4.4 What is the the most likely baseline scenario in absence of the project activity as indicated in the PoA-DD?	EB 55 Annex 1, §§80-91)	<p>Section E.4 of the PoA-DD has correctly identified options for the baseline scenarios as per the procedure defined in ACM0002. Baseline scenarios indicated in the PoA-DD are the following:</p> <p>New wind power plants The baseline scenario is the following:</p> <ul style="list-style-type: none"> • Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system”. <p>Capacity addition power plants For capacity addition to existing grid-connected renewable power plants or units, the baseline scenario is the following:</p> <ul style="list-style-type: none"> • In the absence of the CDM project activity, the existing facility would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted (DATEBaselineRetrofit). From that point 	OK	OK

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		<p>of time onwards, the baseline scenario is assumed to correspond to the project activity, and no emission reductions are assumed to occur.</p> <p>Retrofit or replacement power plants The following step-wise procedure shall be applied by the CPA in order to identify the baseline scenario: Step 1: Identify realistic and credible alternative baseline scenarios for power generation Apply Step 1 of the “Combined tool to identify the baseline scenario and demonstrate additionality”. The options considered should include: P1: The project activity not implemented as a CDM project; P2: The continuation of the current situation, i.e. to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance. The additional power generated under the project would be generated in existing and new grid-connected power plants in the electricity system; and P3: All other plausible and credible alternatives to the project activity that provide an increase in the power generated at the site, which are technically feasible to implement. This includes, inter alia, different levels of replacement and/or retrofit at the power plant/unit(s). Only alternatives available to project participants should be taken into account.</p>		
E.4.5 Is additional background information on baseline data provided in PoA-DD annex 3? Is this information consistent with data presented by other sections of the PoA-DD and verifiable?	EB 33 Annex 43	No, there is no additional background information on baseline data provided in PoA-DD annex 3	OK	OK
E.4.6 Are the provisions for the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	EB 55 Annex 1, § 92(a)	Not applicable, there is no additional background information on baseline data provided in PoA-DD annex 3. Section E.4 correctly references the “Tool to calculate the emission factor for an electricity system” and the “Combined tool to identify the baseline scenario and demonstrate additionality”.	OK	OK

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E.5 CPA ADDITIONALITY				
E.5.1 Assessment and Demonstration of ADDITIONALITY for a typical SSC-CPA				
E.5.1.1 If required by methodology, are all steps of the latest version of the additionality tool correctly applied?	EB 55 Annex 1, §96	Yes, ACM0002 requires that <i>'the additionality of the project activity shall be demonstrated and assessed using the latest version of the Tool for the demonstration and assessment of additionality.'</i> Section E.5.1 correctly applies all steps of the latest available version (06.0.0) of the Tool for the demonstration and assessment of additionality.	OK	OK
E.5.1.2 Does the PoA-DD include provision that a typical CPA starting date will be defined in accordance with the glossary of CDM terms and substantiated with reliable evidences?	EB 55 Annex 1, §101	Yes, it can be confirmed that the start date of the project activity, reported in the PDD, is in accordance with the "Glossary of CDM terms".	OK	OK
E.5.1.3 Does the PoA-DD include provision that a typical CPA starting date will be after the commencement of validation of the PoA, i.e., the date on which the PDDs are first published for global stakeholder consultations? <i>Otherwise please refer to EB 47 meeting report §72.</i>	EB 55 Annex 38 §7(d); EB47 §72	Yes, Section A.4.2.2 of PoA-DD states as one of the eligibility criteria that <i>'The project activity shall not have a start date (as defined by the UNFCCC) before the Global Stakeholder Process (GSP) of the PoA.'</i>	OK	OK
E.5.1.4 Is additionality demonstrated on PoA or CPA level? <i>Please describe how the reliability and credibility of all data, rationales, assumptions, justifications and documentation provided by the PP to support the demonstration of additionality is assessed and validated, e.g. using local knowledge, sectoral and financial expertise and considering other sources of information for cross checks.</i>	EB 47 §73; EB 55 Annex 1 § 95	As per section A.4.3 of the PoA-DD, the additionality is demonstrated at CPA level as per EB47 EB meeting report §73. Demonstration of additionality for a typical CPA will follow the "Tool for the demonstration and assessment of Additionality" as required by the selected methodology ACM0002. Additionality demonstration for typical CPAs is as follows:	PeA-CL & PeA-CL & PeA- CAR 14	OK

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		<p><u>For off-shore projects up to 15 MW:</u></p> <p>The validation team has confirmed that according to “Information on additionality (Attachment A to Appendix B of 4/CMP.1 Annex II)”, off-shore wind technologies are automatically defined as additional, without further documentation of barriers, as part of a list of grid-connected renewable electricity generation technologies. Thus, only Steps 1, 3 and 4 of the additionality tool will be applied.</p> <p><u>For off-shore projects over 15 MW and all on-shore projects</u></p> <p>As per PoA-DD additionality demonstration for off-shore projects over 15 MW and all on-shore projects will follow the requirements of ACM0002 and the related tools, at CPA level.</p> <p>In accordance with the selected methodology, application of the latest version of the additionality tool was demonstrated by following its stepwise approach, which is described and assessed below:</p> <p><i>Step 1 - Identification of alternatives to the project activity consistent with current laws and regulations</i></p> <p>As referenced in PoA-DD, for new grid-connected renewable power plants and capacity additions to existing power plants the baseline scenario is defined by ACM0002. For a CPA comprising retrofits or replacement projects the credible alternative scenarios will be listed and include the scenarios mentioned in section E.4 of the PoA-DD.</p> <p>A review of the applicable legislation by the validation team confirmed that</p>		

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		<p>baseline scenarios comply with relevant mandatory laws and regulations in both host countries (Nicaragua and Peru). There are no restrictions to continuing the current scenarios or the most likely baseline scenario, e.g.:</p> <p>New wind power plants</p> <ul style="list-style-type: none"> - Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants; <p>Capacity addition power plants</p> <ul style="list-style-type: none"> - Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants; <p>Retrofit or replacement power plants</p> <ul style="list-style-type: none"> - to use all power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance. <p><i>Step 2: Investment analysis</i></p> <p>Selection of appropriate analysis method</p> <p>The option III Benchmark Analysis was chosen as suitable for a private electricity generation facility. This choice of appropriate analysis method for a typical CPA has been sufficiently justified and the PoA-DD correctly references the 'Guidelines on the assessment of investment analysis. The financial indicator for benchmark analysis is the Internal Rate of Return, which was also found to be suitable for the project type.</p> <p>Benchmark Rate for Nicaragua:</p>		

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		<p>Clarification is requested on the use of total risk premium versus country risk premium. Mr. Damodaran states that the country risk premium for Nicaragua (as obtained from Moody's rating agency) is 9% while the total risk premium used in determining the compounded benchmark rate is 14%. While the Tool for the demonstration and assessment of additionality indicates that benchmarks can be derived from <i>'Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data'</i>, the PP is requested to sufficiently justify that the use of a total risk premium as determined by Mr. Damodaran for Nicaragua is conservative.</p> <p>Hence, PoA-CL 8 is raised.</p> <p>Calculation of compounded Government bond rate for Nicaragua</p> <p>Clarification is requested on the procedure applied to calculate the country risk premium from the difference between the 7-year maturity bonds.</p> <p>Also, the PP is required to demonstrate that the linear interpolation used to estimate the Nicaraguan interest rate for a 20-year maturity bond is a valid and conservative approach.</p> <p>PP is required to provide relevant all references and documentation related to this calculation.</p> <p>Hence, PoA-CL 9 is raised.</p>		

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		<p>Benchmark Rate for Peru:</p> <p>The validation team confirmed the selected benchmark for evaluating the economic viability of grid-connected wind power generation projects in Peru corresponds to a discount rate (Updating Rate) of 12%, which is established by the Ministry of Energy and Mines (MEM). As per PoA-DD this benchmark will be compared against the financial indicator selected (IRR).</p> <p>The validation team reviewed the national legislation referenced, specifically the Law 25844 – Electric Concessions Law // Article 79, Page 40.</p> <p>Article 79 states that:</p> <p><i>‘The Updating Rate to be used under the present Law shall be 12% annually, in real terms. This rate can only be modified by the Ministry of Energy and Mines, after a study commissioned by the Electrical Tariffs Commission from specialized consultants, in which it is determined that the rate set is different from the Risk Free Rate plus the country risk premium. In any case, the new Updating Rate set by the Ministry of Energy and Mines cannot differ by more than two percentage points from the current rate.’</i></p> <p>http://www.minem.gob.pe/minem/archivos/file/institucional/publicaciones/biblioteca/mineria/peru/01_Law_Electrical%20Concession%20Law.pdf</p> <p>Furthermore, the validation team reviewed the Supreme Decree No. 012-2011-EM ‘Rules for Electricity Generation from Renewable Energies’, officially published on 23/03/2011 // (which effectively replaces Legislative Decree N° 1002 (“DL 1002”), 02/05/2008, and updated on 13/09/2010).</p>		

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		<p>The validation team confirmed that Article 19 from Supreme Decree 012-2011-EM makes reference to the 'Updating Rate' established in Article 79 from Law 25844.</p> <p>Hence it was found that the benchmark rate (Updating/Discount Rate) determined by the MEM is applicable to renewable energy generation projects in the host country of Peru.</p> <p><i>Sub-step 2c: Calculation and comparison of financial indicators:</i></p> <p>The PoA-DD states that analysis for the financial indicator (IRR) will be undertaken at each CPA level. This is consistent with section A.4.3 of the PoA-DD, as per EB47 EB meeting report §73.</p> <p><i>Sub-step 2d: Sensitivity analysis</i></p> <p>The PoA-DD correctly references the "Guidelines on the assessment of investment analysis", which states that 'variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation.' Thus, the PoA-DD list the following variables to be considered in the sensitivity analysis:</p> <ol style="list-style-type: none"> 1. Total investment cost of the CPA. 2. Income from energy prices or other related variables linked to main income (e.g. capacity and energy sales, feed-in-tariffs, sales of renewable energy certificates (RECs)). 3. Power generation output 		

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		<p>These parameters will be subjected to both negative and positive variations by at least 10%. This approach is in accordance with the latest version of the 'Tool for the demonstration and assessment of additionality' and available guidance. The validation team has confirmed that each of the variables defined in the PoA-DD for the purpose of sensitivity analysis are likely to represent 20% of either total project costs or total project revenues.</p> <p><i>Step 3: Barrier analysis</i></p> <p>As per PoA-DD this Step will not be applied. Only Step 2 Investment Analysis will be utilized in the PoA.</p> <p>Hence, suitable means, other than barrier analysis, are provided to show that the PoA/CPA would not have occurred anyway in the absence of CDM.</p> <p><i>Step 4: Common Practice Analysis</i></p> <p>As per PoA-DD the Common Practice Analysis will include the following:</p> <ul style="list-style-type: none"> - Analysis of the extent to which the proposed project type (technology) has already diffused in the relevant sector and region - Analysis of other activities that are operational and that are similar to the proposed project activity. The following criteria will be assessed: <ul style="list-style-type: none"> a) Relevant sector and region: power plants to be considered on the common practice analysis will be those connected to the national electricity system. b) Project type: as all the CPAs to be included in this PoA will be 		

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		<p>wind power plants, all operational wind power plants connected to the national electricity system at the moment of the CPA inclusion will be considered on the common practice analysis.</p> <p>c) Information source: the last available yearbook of the Nicaraguan or Peruvian Energy Institute - INE. The information to be presented for each wind power plant is: Name of the power plant, commissioning year and installed capacity.</p> <p>d) CDM projects: registered project activities and project activities which have been published on the UNFCCC website for global stakeholder consultation as part of the validation process will be excluded.</p> <p>e) Scale: A range of $\pm 50\%$ of the CPA's installed capacity will be considered.</p> <p>However, provisions for undertaking the Step 4 Common Practice Analysis should follow the Stepwise approach for Common Practice contained in the 'Guidelines for Common Practice' (EB 63 Annex 12).</p> <p>Hence, PoA-CAR 11 is raised.</p>		

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E.5.1.5 If a typical CPA applies for the latest 'Guidelines for demonstrating addtionality of microscale project activities', how have the addtionality criteria been established and justified?	EB 63 Annex 23	Not applicable. A typical CPA will apply the latest 'Tool for the demonstration and assessment of addtionality' (version 6.0.0).	OK	OK
If Attachment A of Appendix B of the Modalities and Procedures was applied proceed to answer the following:				

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<p>E.5.1.6 Does the PoA-DD provide explanation to show that the PoA/CPA would not have occurred anyway due to at least one of the following barriers, but these barriers do not prevent the implementation of at least one of the alternatives?</p> <p>(a) Investment barrier;</p> <p>(b) Technological barrier;</p> <p>(c) Barrier due to prevailing practice;</p> <p>(d) Other barriers.</p>	EB 63 Annex 24 §1	<p><u>For off-shore projects up to 15 MW:</u></p> <p>Explanation to show that the PoA/CPA would have occurred anyway due to barriers is not required. Section E.5 of the PoA-DD correctly states that grid-connected off-shore wind power CDM project activities up to 15 MW to be included in the PoA are automatically defined as additional without further documentation of barriers, as part of a list of grid-connected renewable electricity generation technologies. This in accordance with "Information on additionality (Attachment A to Appendix B of 4/CMP.1 Annex II)".</p> <p><u>For off-shore projects over 15 MW and all on-shore projects</u></p> <p>As per PoA-DD additionality demonstration for off-shore projects over 15 MW and all on-shore projects will follow the requirements of ACM0002 and the related tools, at CPA level.</p> <p>In accordance with the selected methodology, application of the latest version of the additionality tool will be demonstrated by following Step 2 Investment Analysis approach, using option III Benchmark Analysis. See E.5.1.5.</p> <p>Hence, suitable means, other than barrier analysis, are provided to show that the PoA/CPA would not have occurred anyway in the absence of CDM.</p>	OK	OK
E.5.1.7 Does the barrier analysis take into account relevant national and/or sectoral policies / laws?	EB 55 Annex 1 §117	Not applicable, see E.5.1.6	OK	OK
E.5.1.8 Does the CPA employ at least one of the	EB 63	Yes, the PoA-DD defines that grid-connected off-shore wind power CDM	OK	OK

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<p>following grid-connected renewable electricity generation technologies of installed capacity up to 15 MW that are automatically defined as additional?</p> <p>(a) Solar technologies (photovoltaic and solar thermal electricity generation);</p> <p>(b) Off-shore wind technologies;</p> <p>(c) Marine technologies (wave, tidal).</p>	Annex 24 §2	<p>project activities up to 15 MW are eligible to be included under the PoA. Section E.5 of the PoA-DD correctly states that these technologies are automatically defined as additional without further documentation of barriers, as part of a list of grid-connected renewable electricity generation technologies. This in accordance with "Information on additionality (Attachment A to Appendix B of 4/CMP.1 Annex II)".</p> <p><u>GLC on 2012-12-11</u></p> <p>The "Guidelines on the Demonstration of Additionality of Small-Scale Project activities" (Version 09.0) (previously known as Attachment A of Appendix B of the Modalities and Procedures) were applied as per provisions in EB70. ,</p>		
If Investment Analysis was applied proceed to answer the following:				

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<p>E.5.1.9 Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or benchmark analysis)?</p> <p><i>Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available benchmark values</i></p>	EB 55 Annex 1, §109	<p>Yes, as per Step 2: Investment analysis of the 'Tool for the demonstration and assessment of additionality', the benchmark analysis was chosen to demonstrate additionality on CPA level.</p> <p>The option III Benchmark Analysis was chosen as suitable for a private electricity generation facility. This choice of appropriate analysis method for a typical CPA has been sufficiently justified and the PoA-DD correctly references the 'Guidelines on the assessment of investment analysis'. This Guidelines state that If the alternative to the project activity is the supply of electricity from a grid this is not to be considered an investment and a benchmark approach is considered appropriate.</p> <p>The financial indicator for benchmark analysis is the Internal Rate of Return (IRR), which was also found to be suitable for the project type.</p>	OK	OK
<p>E.5.1.10 Is a clear, viewable and unprotected excel spreadsheet template available for the investment calculation, if applicable?</p> <p><i>Describe the steps taken to validate this issue</i></p>	EB 55 Annex 1, §110	As stated in section A.4.3 of the PoA-DD, additionality will be assessed at CPA level. The PP has provided an unprotected electronic spreadsheet for the calculation of IRR for the first CPA.	OK	OK
<p>E.5.1.11 If applicable, were the input values used in the investment analysis valid and applicable at the time of the investment decision with sufficient evidences?</p> <p><i>In case the basis for input values is a Feasibility Study Report (FSR) describe how it shall be ensured that the period in time between the finalisation of the FSR and the investment decision is sufficiently short so that it is unlikely that input values would have materially changed.</i></p>	EB 55 Annex 1, §113; EB 62 Annex 5	<p>As stated in section A.4.3 of the PoA-DD, additionality will be assessed at CPA level.</p> <p>Investment analysis of the first CPA is assessed by the validation team in the corresponding CDM-CPA-DD Validation Questionnaire.</p>	OK	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
<p>E.5.1.12 If applicable, does the period chosen for the investment analysis, reflect the technical lifetime of the proposed CPA or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included?</p> <p><i>Describe how the technical lifetime/ period chosen for calculating financial parameter(s) is reviewed and which documents shall be utilised.</i></p>	EB 55 Annex 1, §111; EB 62 Annex 5	<p>As stated in section A.4.3 of the PoA-DD, additionality will be assessed at CPA level.</p> <p>Investment analysis of the first CPA is assessed by the validation team in the corresponding CDM-CPA-DD Validation Questionnaire.</p>	OK	OK
E.5.1.13 If applicable, has the fair value calculation included book value and expected potential profit or loss, and in accordance with local accounting regulations (where available) or international best practice?	EB 55 Annex 1, §111; EB 62 Annex 5	<p>As stated in section A.4.3 of the PoA-DD, additionality will be assessed at CPA level.</p> <p>Investment analysis of the first CPA is assessed by the validation team in the corresponding CDM-CPA-DD Validation Questionnaire.</p>	OK	OK
E.5.1.14 If applicable, are depreciation and other non-cash related items added back to net profits for the purpose to calculate the financial indicator?	EB 55 Annex 1, §111; EB 62 Annex 5)	<p>As stated in section A.4.3 of the PoA-DD, additionality will be assessed at CPA level.</p> <p>Investment analysis of the first CPA is assessed by the validation team in the corresponding CDM-CPA-DD Validation Questionnaire.</p>	OK	OK
E.5.1.15 If applicable, is taxation excluded in the investment analysis or is the benchmark intended for post tax comparisons?	EB 55 Annex 1, §111; EB 62 Annex 5	<p>As stated in section A.4.3 of the PoA-DD, additionality will be assessed at CPA level.</p> <p>Investment analysis of the first CPA is assessed by the validation team in the corresponding CDM-CPA-DD Validation Questionnaire.</p>	OK	OK
E.5.1.16 In case of project IRR: Are the costs of financing	EB 55 Annex 1,	As stated in section A.4.3 of the PoA-DD, additionality will be assessed at CPA level.	OK	OK

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expenditures (loan repayments and interests) excluded from the calculation of project IRR?	§111; EB 62 Annex 5	Investment analysis of the first CPA is assessed by the validation team in the corresponding CDM-CPA-DD Validation Questionnaire.		
E.5.1.17 In case of equity IRR: Is the part of the investment costs, which is financed by equity considered as net cash outflow and is the part financed by debt excluded in net cash outflow?	EB 55 Annex 1, §111; EB 62 Annex 5	As stated in section A.4.3 of the PoA-DD, additionality will be assessed at CPA level. Investment analysis of the first CPA is assessed by the validation team in the corresponding CDM-CPA-DD Validation Questionnaire.	OK	OK
If Benchmark Analysis was applied proceed to answer the following:				

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<p>E.5.1.18 If applicable, is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)?</p> <p><i>In case risk premiums are applied describe its suitability to reflect the risks associated with the project activity.</i></p>	<p>EB 55 Annex 1, §111; EB 62 Annex 5</p>	<p>The PoA-DD defines the following benchmark rates:</p> <p>Nicaragua: total risk premium, compounded by linear extrapolation of a 7-year government bond rate to a 20-year theoretical government bond rate plus a customized risk premium.</p> <p>Peru: An official discount rate ('Updating Rate') applicable to all electricity generation projects, which is approved by the Ministry of Energy and Mines.</p> <p>Benchmark Rate for Nicaragua:</p> <p>Clarification is requested on the use of total risk premium versus country risk premium. Mr. Damodaran states that the country risk premium for Nicaragua (as obtained from Moody's rating agency) is 9% while the total risk premium used in determining the compounded benchmark rate is 14%. While the Tool for the demonstration and assessment of additionality indicates that benchmarks can be derived from '<i>Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data</i>', the PP is requested to sufficiently justify that the use of a total risk premium as determined by Mr. Damodaran for Nicaragua is conservative.</p> <p>Hence, PoA-CL 8 is raised.</p> <p>Calculation of compounded Government bond rate for Nicaragua</p> <p>Clarification is requested on the procedure applied to calculate the country risk premium from the difference between the 7-year maturity bonds.</p>	<p>PeA-CL 8</p> <p>PeA-CL 9</p>	<p>OK</p>

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		<p>Also, the PP is required to demonstrate that the linear interpolation used to estimate the Nicaraguan interest rate for a 20-year maturity bond is a valid and conservative approach.</p> <p>PP is required to provide relevant all references and documentation related to this calculation.</p> <p>Hence, PoA-CL 9 is raised.</p> <p>Benchmark Rate for Peru:</p> <p>The validation team confirmed the selected benchmark for evaluating the economic viability of grid-connected wind power generation projects in Peru corresponds to a discount rate (Updating Rate) of 12%, which is established by the Ministry of Energy and Mines (MEM). As per PoA-DD this benchmark will be compared against the financial indicator selected (IRR).</p> <p>The validation team reviewed the national legislation referenced, specifically the Law 25844 – Electric Concessions Law // Article 79, Page 40.</p> <p>Article 79 states that:</p> <p><i>‘The Updating Rate to be used under the present Law shall be 12% annually, in real terms. This rate can only be modified by the Ministry of Energy and Mines, after a study commissioned by the Electrical Tariffs Commission from specialized consultants, in which it is determined that the rate set is different from the Risk Free Rate plus the country risk premium. In any case, the new Updating Rate set by the Ministry of Energy and Mines cannot differ by more</i></p>		

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		<p><i>than two percentage points from the current rate.'</i></p> <p>http://www.minem.gob.pe/minem/archivos/file/institucional/publicaciones/biblioteca/mineria/peru/01_Law_Electrical%20Concession%20Law.pdf</p> <p>Furthermore, the validation team reviewed the Supreme Decree No. 012-2011-EM 'Rules for Electricity Generation from Renewable Energies', officially published on 23/03/2011 // (which effectively replaces Legislative Decree N° 1002 ("DL 1002"), 02/05/2008, and updated on 13/09/2010).</p> <p>The validation team confirmed that Article 19 from Supreme Decree 012-2011-EM makes reference to the 'Updating Rate' established in Article 79 from Law 25844.</p> <p>Hence it was found that the benchmark rate (Updating/Discount Rate) determined by the MEM is applicable to renewable energy generation projects in the host country of Peru.</p>		

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<p>E.5.1.19 If applicable, is the benchmark value suitable for the project activity, e.g., it has been consistently used in the past for similar projects with similar risks, and is it reasonable to assume that no investment would be made at a rate of a lower return than the benchmark?</p> <p><i>Describe whether it is reasonable to assume that a lower rate of return would consequently result in the baseline scenario.</i></p>	EB 55 Annex 1, §111- 112; EB 62 Annex 5	<p>For Nicaragua:</p> <p>The selected benchmark is suitable as per 'Guidelines on the assessment of investment analysis'. However, PP is required to clarify calculation of the benchmark rate. Please refer to E.5.1.18</p> <p>PoA-CL 8 PoA-CL 9</p> <p>For Peru:</p> <p>The benchmark is suitable for renewable electricity generation projects located in the host country. The official benchmark rate is 12% and was established by the Ministry of Energy and Mines. Moreover, it has been consistently applied by other renewable energy generation projects including multiple hydroelectric CDM projects in Peru. Therefore, it can be reasonably assumed that no investment would be made at a lower rate of return than the identified benchmark.</p>	PeA-CL 8 PeA-CL 9	OK
<p>E.5.1.20 If applicable, is it ensured that the project cannot be developed by other developers than the PP?</p>	EB 62 Annex 5, §12-18	<p>Not applicable, each CPA under this PoA is a privately coordinated initiative. The alternative to each CPA is the supply of electricity from a grid.</p>	OK	OK
<p>E.5.1.21 In case of financial additionality justification; has a sensitivity analysis been considered and does the same contain variation of parameters that constitute more than 20% of either total project costs or total project revenues and may vary throughout the project lifetime?</p> <p><i>Describe relevance of parameters used in the sensitivity analysis as well as their</i></p>	EB 55 Annex 1, §§110, 111 (e); EB 62 Annex 5 §§20-21	<p>Yes, the PoA-DD includes the following sub-steps of Step 2 Investment analysis as per the 'Tool for the demonstration and assessment of additionality'.</p> <p><i>Sub-step 2c: Calculation and comparison of financial indicators:</i></p> <p>The PoA-DD states that analysis for the financial indicator (IRR) will be</p>	OK	OK

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likeliness to vary during the project's lifetime. Parameters which are fixed on the basis of contracts, PPAs etc. may not be subject to variation and not adequate.		<p>undertaken at each CPA level. This is consistent with section A.4.3 of the PoA-DD, as per EB47 EB meeting report §73.</p> <p><i>Sub-step 2d: Sensitivity analysis</i></p> <p>The PoA-DD correctly references the "Guidelines on the assessment of investment analysis", which states that '<i>variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation.</i>' Thus, the PoA-DD list the following variables to be considered in the sensitivity analysis:</p> <ol style="list-style-type: none"> 1. Total investment cost of the CPA. 2. Income from energy prices or other related variables linked to main income (e.g. capacity and energy sales, feed-in-tariffs, sales of renewable energy certificates (RECs)). 3. Power generation output <p>These parameters will be subjected to both negative and positive variations by at least 10%. This approach is in accordance with the latest version of the 'Tool for the demonstration and assessment of additionality' and available guidance. The validation team has confirmed that each of the variables defined in the PoA-DD for the purpose of sensitivity analysis are likely to represent 20% of either total project costs or total project revenues.</p>		

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<p>E.5.1.22 If applicable, have sensitivity analysis considered parameters constituting less than 20% of total project costs or revenues, which may have potential material impact on the financial parameter?</p> <p><i>Describe whether those parameters are considered in the sensitivity analysis. The initial objective of a sensitivity analysis is to determine in which scenarios the project activity would pass the benchmark or become more favourable than the alternative.</i></p>	EB 55 Annex 1, §110; EB 62 Annex 5 §§20- 21	Yes, please refer to E.5.1.21	OK	OK
<p>E.5.1.23 Has the sensitivity analysis at least covered a range of +10% and -10%, unless this is not deemed appropriate in the context of the specific project circumstances?</p> <p><i>In cases where a scenario will result in the project activity passing the benchmark or becoming the most financially attractive alternative the DOE shall provide an assessment of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy context of the project activity.</i></p>	EB 55 Annex 1, §110; EB 62 Annex 5 §§20- 21	Yes, please refer to E.5.1.21	OK	OK
<p>E.5.1.24 If applicable, is the range of variation reasonable in the specific context of the project activity, taking into consideration historic trends in the business sector?</p> <p><i>Describe whether the range of variation is appropriate with focus on historic developments, e.g. price of oil / labour etc., energy potential in the region in question.</i></p>	EB 55 Annex 1, §110; EB 62 Annex 5	<p>Yes, the sensitivity analysis has covered a range of +10% and -10% for each of the following parameters:</p> <ol style="list-style-type: none"> 1. Total investment cost of the CPA. 2. Income from energy prices or other related variables linked to main income (e.g. capacity and energy sales, feed-in-tariffs, sales of renewable energy certificates (RECs)). 3. Power generation output <p>This approach is in accordance with the latest version of the 'Tool for the</p>	OK	OK

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		<p>demonstration and assessment of additionality' and available guidance. The validation team has confirmed that each of the variables defined in the PoA-DD for the purpose of sensitivity analysis are likely to represent 20% of either total project costs or total project revenues.</p> <p>The range of variation is deemed reasonable in the specific context of the PoA, taking into consideration historic trends in the business sector. Nevertheless, detailed assessment will be done at CPA level.</p>		

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<p>E.5.1.25 If applicable, are there any barriers given which have a clear and direct impact on the financial returns of the project?</p> <p><i>Those issues cannot be considered as barriers and shall be assessed in the investment analysis.</i></p>	EB 55 Annex 1, §§ 115, 137)	<p>Not applicable. As per PoA-DD Step 3 Barrier Analysis of the 'Tool for the demonstration and assessment of additionality' will not be applied. Only Step 2 Investment Analysis will be utilized in the PoA.</p> <p>Hence, suitable means, other than barrier analysis, are provided to show that the PoA/CPA would not have occurred anyway in the absence of CDM.</p>	OK	OK
<p>E.5.1.26 If applicable, are the barriers described risk related (e.g technology failure, other performance related risks) or has the availability of sources of finance for the project been described and adequately substantiated?</p> <p><i>Identified barriers shall be in accordance with the attachment A to appendix B (4/CMP.1, Annex II, paragraph 28) and Guidelines for objective demonstration and assessment of barriers (EB50 Annex 13)</i></p>	EB 55 Annex 1, §§ 115, 137; EB50 Annex 13	Not applicable, please refer to E.5.1.25.	OK	OK
<p>E.5.1.27 Is the defined region for the common practice analysis appropriate for the technology/industry type?</p> <p><i>This question is only applicable for Large Scale project activities. Describe the why the project activity is not common practice in a transparent and unambiguous manner.</i></p>	EB 55 Annex 1, § 120	<p>Yes, the relevant sector and region for the Common Practice Analysis is appropriate for wind power projects. The power plants to be considered correspond to those connected to the national electricity system.</p> <p>However, provisions for undertaking the Step 4 Common Practice Analysis should follow the Stepwise approach for Common Practice contained in the 'Guidelines for Common Practice' (EB 63 Annex 12).</p> <p>Hence, PoA-CAR 11 is raised.</p>	PoA- CAR 11	OK
E.5.2 KEY CRITERIA and data for assessing additionality of a SSC-CPA				
E.5.2.1 Has section E.5.2 of the PoA-DD provided	EB 55 Annex 1,	No, section E.5.2 of the PoA-DD has not provided unambiguous criteria and data to assess a typical CPA's additionality as demonstrated in section E.5.1	PoA- CAR 12	OK

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<p>unambiguous criteria and data to assess a typical CPA's additionality as demonstrated in section E.5.1 of the PoA-DD? Are these criteria described as verifiable at the time of CPA inclusion?</p> <p><i>Discuss the appropriateness of the criteria established. Please consider also the eligibility criteria as discussed above. Assess whether the PP has demonstrated how these criteria would be applied to assess the additionality of a typical CPA at the time of CPA inclusion.</i></p>	§108	<p>of the PoA-DD.</p> <p>PP is required to provide general parameters for calculating the financial indicator (IRR) of a typical CPA, calculation procedures (e.g. standardized electronic spreadsheet) and acceptable information sources and for input values.</p> <p>Hence, PoA-CAR 12 is raised.</p>		
<p>E.5.2.2 Are there any other key criteria and data for assessing additionality of a CPA which are necessary besides the ones mentioned above not included in the PoA-DD?</p>	EB 55 Annex 1, § 167	<p>No, section E.5.2 of the PoA-DD has not provided unambiguous criteria and data to assess a typical CPA's additionality as demonstrated in section E.5.1 of the PoA-DD.</p> <p>Hence, PoA-CAR 12 is raised.</p>	PeA- CAR 12	OK
E.6 ALGORITHMS and/or FORMULAE used to Estimate EMISSION REDUCTIONS and PARAMETERS to be reported in the CPA-DD				
<i>Methodological approach provided in the approved baseline and monitoring methodology applied in a typical CPA</i>				
<p>E.6.1.1 In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification) and are they in line with the actual situation verified on-site?</p> <p><i>Assess the correct selection and application of methodological choices. Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of a typical CPA and other evidences provided) and whether the correct equations have been used reflecting the relevant methodological choices.</i></p>	EB 55 Annex 1 §§ 90, 91	<p>No, sections E.6.1 and E.6.2 have not sufficiently justified the methodological choices and equations reflecting the other methodological choices for a typical CPA applying ACM0002 and the tools referred therein.</p> <p>Hence, PoA-CAR 13 is raised.</p>	PeA- CAR 13	OK

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<p>E.6.1.2 In case the implementation of a typical CPA leads to GHG emissions within the CPA boundary which are expected to contribute more than 1% of the overall expected average annual emission reductions, which are not addressed by the methodology, has this parameter been included in the calculation of the emission reductions?</p> <p><i>Please describe the extra parameters defined and Calculated.</i></p>	EB 55 Annex 1, §77	No, no GHG emissions, other than the ones addressed by the methodology, have been identified by the validation team. Moreover, implementation of a typical CPA is not expected to lead to GHG emissions in the CPA boundary which contribute to more than 1% of the overall expected average annual emission reductions. As per the methodology, for most renewable power generation project activities, wind in particular, PEy = 0.	OK	OK
EQUATIONS, incl. fixed parametric values, to be used for calculation of ER of a SSC-CPA:				

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E.6.1.3 Are the equations for calculating emission reductions applied correctly according to the applied approved methodology?	EB 55 Annex 1 §§67 (c), 89, 90, 91	No, sections E.6.1 and E.6.2 have not sufficiently justified the methodological choices and equations reflecting the other methodological choices for a typical CPA applying ACM0002 ver. and the tools referred therein. Hence, PoA-CAR 13 is raised.	PeA- CAR 13	OK
E.6.1.4 Have parameters with fixed values for the whole PoA been listed in section E.6.2 of the PoA-DD? <i>Only those parameters which can be determined at the stage of PoA validation and will be applied consistently for each CPA shall be included in section E.6.2 of the PoA-DD. Ex-ante estimation of monitoring parameters or parameters to be reported only at CPA inclusion stage shall not be included.</i>	EB 33 Annex 43	No, there are no parameters in section E.6.2 that can have fixed values for the whole PoA, each parameter will be defined at CPA level. Hence, this checklist question is not applicable for the PoA.	OK	OK
E.6.1.5 Have conservative approaches been used for determining fixed parametric values when calculating the baseline emissions, project emissions and leakage?	EB 55 Annex 1 §§ 90, 91	The adequateness of assumptions used by the PP when calculating the baseline, project and leakage emissions was assessed by the validation team as follows: PROJECT EMISSIONS (PEy) ACM0002 indicates that for most renewable power generation project activities, PEy = 0. A per PoA-DD PEy is considered zero since the CPAs will not involve fossil fuel combustion, release of non-condensable gases or methane emissions from water reservoirs. This is considered a credible and conservative assumption in light of the technology (wind turbines) to be employed by typical CPAs. BASELINE EMISSIONS (BEy)	PeA-CL 10 PeA-CL 11 PeA-CL 12 PeA-CL 13 PeA-CL 14	OK

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		<p>The validation team confirmed that section E.6.2 of the PoA-DD includes a procedure for estimating baseline emissions which is based on ACM0002. Baseline emissions correspond to the CO₂ emissions from grid electricity that is displaced as a result of the project activity.</p> <p>The procedure for estimating BE_y is as follows:</p> <p>A. DETERMINATION OF EGPJ_y</p> <p>A calculation of EGPJ_y is provided for the following eligible project activities:</p> <ul style="list-style-type: none"> - Greenfield renewable energy power plants - Retrofit or replacement of an existing renewable energy power plant - Capacity addition to an existing renewable energy power plant <p>Calculation of EGPJ_y for each eligible project activity was found to be line with ACM0002 requirements.</p> <p>B. GRID EMISSION FACTOR</p> <p><u>Choice of emission factor calculation method</u></p> <p>As per PoA-DD, option (a) of ACM0002 will be used for all CPAs under this PoA when calculating the grid emission factor.</p> <p>(a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the "Tool to calculate the Emission Factor for an electricity system" (version 02.2.1).</p>	<p>PeA-CL 15</p> <p>PeA-CL 16</p> <p>PeA-CL 17</p>	

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		<p>Section E.6.2 in PoA-DD states that the grid emission factor will be provided only for Nicaragua and Peru, while the PP has stated that other Latin American countries might be included in the PoA at a later stage.</p> <p>The PP is requested to confirm if the choice of emission factor calculation method (option a) will be defined ex-ante and applied to all countries included in the PoA in the future.</p> <p>Hence, PoA-CL 10 is raised.</p> <p><u>Grid Emission Factor: case Nicaragua.</u></p> <p>Step 1: Identify the relevant electric power system</p> <p>The PoA-DD correctly identifies the relevant electricity system which is the Nicaraguan National Interconnected System (NIS).</p> <p>Step 2: Choose whether to include off-grid power plants in the project electricity system (optional).</p> <p>The PP selected option I – only grid power plants are included in the calculation - of the Tool, based on the assumption that the NIS represents 99% of the national electricity generation in Nicaragua.</p> <p>PP is requested to substantiate electricity generation by NIS and provide relevant references.</p> <p>Hence, PoA-CL 11 is raised.</p>		

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		<p>Step 3: Select a method to determine the operating margin (OM);</p> <p>For Nicaragua, the PP has chosen method (a):</p> <p>(a) Simple OM; In Nicaragua,</p> <p>As per the Tool for grid emission factor, method (a) is only applicable if low-cost/must run resources constitute less than 50% of the total grid generation in: 1) average of the five most recent years, or 2) based on long-term averages for hydroelectricity production.</p> <p>As per the "Tool to calculate the Emission Factor for an electricity system", low-cost/must-run resources are defined as <i>'power plants with low marginal generation costs or power plants that are dispatched independently of the daily or seasonal load of the grid. They typically include hydro, geothermal, wind, low-cost biomass, nuclear and solar generation. If coal is obviously used as must-run, it should also be included in this list, i.e. excluded from the set of plants.'</i></p> <p>PP is requested to substantiate electricity generation by NIS and provide relevant references to information provided in Figure 5, including the calculation of the share of low-cost/must-run power plants.</p> <p>Hence, PoA-CL 11 is raised.</p> <p>The PoA-DD states that the data vintage chosen for the estimation of the simple OM is the ex-ante option. However, the PP has clarified that the CME plans to update the OM emission factor every year during the PoA crediting</p>		

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		<p>period and that CPAs will use the applicable emission factor as a fixed value during their particular crediting period.</p> <p>Thus, the PP/CME is requested to clarify the procedure for updating the OM emission factor and for assigning such factor to the CPAs included during the PoA crediting period.</p> <p>Hence, PoA-CL 12 is raised.</p> <p>Step 4. Calculate the operating margin emission factor according to the selected method.</p> <p>The PoA-DD states that the simple OM will be calculated following '<i>Option A: Based on the net electricity generation and a CO2 emission factor of each power unit</i>', since the information required is available for the Nicaraguan case. Under this option, the simple OM emission factor is calculated based on the net electricity generation of each power unit and an emission factor for each power unit. As per the Tool, a c, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation, is to be used.</p> <p>The PP has defined the 3-year generation-weighted average for 2008, 2009 and 2010.</p> <p>According to the PoA-DD, data on fuel consumption and electricity generation is publicly available for calculating the emission factor for each power unit m in Nicaragua. Thus, Option A1 of the Tool is used.</p> <p>Step 5. Calculate the build margin (BM) emission factor</p>		

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		<p>The PoA-DD states that for the estimation of the build margin (BM) the ex-ante option (Option 1) was chosen.</p> <p>However, as per the PoA-DD, the CME plans to update the BM emission factor every year during the PoA crediting period and that CPAs will use the applicable emission factor as a fixed value during their particular crediting period.</p> <p>Thus, the PP/CME is requested to clarify the procedure for updating the BM emission factor and for assigning such factor to the CPAs included during the PoA crediting period.</p> <p>Hence, PoA-CL 12 is raised.</p> <p>The Tool requires that the most recent historical year for which electricity generation data is available be used for calculating the BM emission factor.</p> <p>As per section E.6.2 of the PoA-DD, the PP has defined the 3-year generation-weighted average for 2008, 2009 and 2010 in calculating the BM. The PP is requested to clarify the choice of a '<i>most recent historical period for which power generation data is available (in our case, 2008, 2009, 2010)</i>' when calculating $EF_{grid,BM,y}$</p> <p>Hence, PoA-CL 13 is raised.</p> <p>Step 6: Calculate the combined margin (CM) emission factor</p> <p>The PoA-DD defines that the combined margin emissions factor</p>		

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
		<p>(EFgrid,CM,y) will be calculated as a weighted average (option a). As per the Tool, 'Wind and solar power generation project activities: wOM = 0.75 and wBM = 0.25 (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods'.</p> <p>The validation team confirmed that the default values for wind projects (wOM = 0.75 and wBM = 0.25) will be applied for calculating the Grid Emission Factor used in CPAs located within the NIS, as per PoA-DD.</p> <p><u>Grid Emission Factor: case Peru.</u></p> <p>Step 1: Identify the relevant electric power system</p> <p>The PoA-DD correctly identifies the relevant electricity system which is the Peruvian National Interconnected System (SEIN).</p> <p>Step 2: Choose whether to include off-grid power plants in the project electricity system (optional).</p> <p>The PP selected option I – only grid power plants are included in the calculation - of the Tool.</p> <p>PP is requested to substantiate electricity generation by SEIN and provide relevant references.</p> <p>Hence, PoA-CL 14 is raised.</p> <p>Step 3: Select a method to determine the operating margin (OM);</p>		

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		<p>For all CPAs located in Peru, the PP has chosen method (c): Dispatch data analysis OM.</p> <p>As per the “Tool to calculate the Emission Factor for an electricity system”, method (c) is determined based on the grid power units that are actually dispatched at the margin during each hour h where the project is displacing grid electricity. This approach is not applicable to historical data and, thus, requires annual monitoring of EF_{grid,OM-DD,y}.</p> <p>PP has not sought to utilize Simple OM method since low-cost/must-run resources constitute more than 50% of total grid generation in Peru. The validation team has confirmed that fossil fuel power plants account for less than 50% of the total electricity generation in the SEIN. Thus, the selected method for determining the operating margin from dispatch data analysis (OM-DD) is deemed appropriate.</p> <p>Step 4. Calculate the operating margin emission factor according to the selected method.</p> <p>As per Annex 1 of the ‘Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM), the PP is required to utilize the symbols and standard variables following the “Tool to calculate the Emission Factor for an electricity system” [grid power units n (EF_{EL,n,y})].</p> <p>PP is required to clarify the procedures and information sources for dispatch data gathering for estimating the OM-DD for typical CPAs located in Peru over the PoA crediting period.</p>		

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		<p>Hence, PoA-CL 15 is raised.</p> <p>Step 5. Calculate the build margin (BM) emission factor</p> <p>As per PoA-DD '<i>In terms of vintage data, to calculate the build margin Option 1 shall be chosen for the proposed Project</i>'. Thus, the BM will be determined ex-ante.</p> <p>The PP/CME is requested to clarify how the ex-ante BM will be applied to CPAs located in Peru during the PoA crediting period.</p> <p>(e.g. if there'll be a procedure for updating the BM emission factor and for assigning such factor to the CPAs included during the PoA crediting period)</p> <p>Hence, PoA-CL 16 is raised.</p> <p>Step 6: Calculate the combined margin (CM) emission factor</p> <p>The PoA-DD defines that the combined margin emissions factor (EF_{grid,CM,y}) will be calculated as a weighted average (option a). As per the Tool, '<i>Wind and solar power generation project activities: wOM = 0.75 and wBM = 0.25 (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods</i>'.</p> <p>The validation team confirmed that the default values for wind projects (wOM = 0.75 and wBM = 0.25) will be applied for calculating the Grid Emission Factor used in CPAs located within the NIS, as per PoA-DD.</p> <p>However, the PP is required to clarify how the choice of option 1 in Step 5 is</p>		

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
		consistent with the following statement in Step 6 ' <i>Notice that the emission factor will be use the ex post option for CPAs in Peru</i> '. Hence, PoA-CL 17 is raised.		
Data and parameters that are to be reported in CPA-DD form:				
E.6.1.6 Have all parameters that are to be reported in the CPA-DD form for each individual CPA completely listed in section E.6.3 of the PoA-DD as per applied methodology and tools? <i>These parameters are either determined for the whole PoA nor listed as monitoring parameters.</i>	EB 33 Annex 43	No, Section E.6.3 contains only those parameters utilized in calculating the Grid Emission Factor for Nicaragua. As the project boundary includes the host country of Peru, the relevant parameters as per the options selected from the 'Tool to calculate the Emission Factor for an electricity system' are to be included. Hence, PoA-CAR 14 is raised.	PoA- CAR 14	OK
E.6.1.7 Are all parameters sufficiently described as per applied methodologies and tools?	EB 33 Annex 43	No, Section E.6.3 contains only those parameters utilized in calculating the Grid Emission Factor for Nicaragua. As the project boundary includes the host country of Peru, the relevant parameters as per the options selected from the 'Tool to calculate the Emission Factor for an electricity system' are to be included. Hence, PoA-CAR 14 is raised.	PoA- CAR 14	OK
E.7 DESCRIPTION of the MONITORING PLAN and PARAMETERS to be MONITORED in each SSC-CPA				
<i>Data and parameters to be monitored by each CPA</i>				

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<p>E.7.1.1 Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology?</p> <p><i>Assess whether the provided information for all parameters w.r.t.</i></p> <ul style="list-style-type: none"> a) label (name of the data / parameter) b) data unit c) description d) source of data e) value applied for ex-ante ER calculation f) measurement equipment / method / procedure g) QA/QC procedures h) Any comment if necessary <p><i>are appropriately described and in compliance with the requirements of the methodology.</i></p>	<p>EB 55 Annex 1, § 123 (a), 123 (b), 124</p>	<p>Yes, in general the information provided for each parameter is appropriate and in accordance with the methodology (ACM0002).</p> <p>However, PP has not clarified the procedures and information sources for dispatch data gathering for estimating the OM-DD for typical CPAs located in Peru over the PoA crediting period.</p> <p>Hence, PoA-CL 15 is raised</p>	<p>PeA-CL 15</p>	<p>OK</p>
<p>E.7.1.2 Are all monitoring parameters as required by the applied methodology contained in the monitoring plan?</p> <p><i>Assess whether all applicable parameters listed in the methodology are included in the monitoring plan. Please check further whether the selection of parameters not to be monitored is appropriate and in line with the applied methodology. In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.</i></p>	<p>EB 51 Annex 1, §§ 67 (e), 122, 123 (a) , 124</p>	<p>Section E.6.3 contains only those parameters utilized in calculating the Grid Emission Factor for Nicaragua. The project boundary also includes the host country of Peru; however, the relevant parameters as per the options selected from the 'Tool to calculate the Emission Factor for an electricity system' for Peru have not been included.</p> <p>Hence, PoA-CAR 14 is raised</p>	<p>PeA- CAR 14</p>	<p>OK</p>
<p>E.7.1.3 If applicable, does the PoA-DD mention</p>		<p>Yes, default values are mentioned in the PoA-DD. The GLC assessment</p>	<p>OK</p>	<p>OK</p>

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
<p>reasonable values for all ex-ante calculation / monitoring parameters?</p> <p><i>Describe clearly the steps taken to assess whether the values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity</i></p>		<p>team confirmed that these default values are reasonable, applicable and conservative by means of assessing the default values indicated in the methodology and tools referred to in the PoA-DD, as well as checking the references made to IPCC values when applicable.</p>		
Description of the MONITORING PLAN for a CPA				
<p>E.7.1.4 Is it likely that the monitoring plan described in the PoA-DD can be properly implemented in the context of a typical CPA? E.g. Does the CME have trained personnel who are capable of the monitoring tasks? Does the management plan make provisions for meeting training and maintenance needs of the implementation of the CPA?</p>	<p>EB 55 Annex 1 123 (b)</p>	<p>The PP is requested to provide the CME Operation Manual and related documentation.</p> <p>Hence, PoA-CL 3 is raised.</p> <p>Clarification is required on the training procedures developed by the CME, which records of training will be made and how suitable qualification of personnel involved in monitoring aspects will be evaluated.</p> <p>Hence, PoA-CL 5 is raised.</p>	<p>PoA-CL 3 PoA-CL 5</p>	OK
<p>E.7.1.5 Are the QA/QC procedures appropriate and sufficient to ensure the emission reductions achieved from a typical CPA can be reported ex-post and verified?</p>	<p>EB 55 Annex 1 123 (b)</p>	<p>The PP is requested to provide the CME Operation Manual and related documentation.</p> <p>Hence, PoA-CL 3 is raised.</p>	<p>PoA-CL 3</p>	OK
<p>E.7.1.6 Have all means of implementing the monitoring plan, e.g. procedures for data management, emergency preparedness, been described clearly and in line with the methodology?</p>	<p>EB 55 Annex 1 123 (b), 124</p>	<p>The PP is requested to provide the CME Operation Manual and related documentation.</p> <p>Hence, PoA-CL 3 is raised.</p>	<p>PoA-CL 3</p>	OK

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E.7.1.7 Is it mentioned in the PoA-DD whether the PoA involves the replacement of equipment, and if so, how to verify this process to discount leakage?	AMS-I.D	No, leakage emissions due to equipment replacement have not been clearly addressed in the PoA-DD. The PP is requested to address this and provide an explanation on how this process shall be verified to account for leakage. Hence, PoA-CAR 15 is raised.	PoA- CAR 15	OK
E.7.1.8 If yes is there an independent monitoring plan in place to monitor the scrapping of replaced equipment?	AMS-I.D	No, leakage emissions due to equipment replacement have not been clearly addressed in the PoA-DD. The PP is requested to address this and provide an explanation on how this process shall be verified to account for leakage. Hence, PoA-CAR 15 is raised.	PoA- CAR 15	OK
E.7.1.9 If yes does this plan indicate that the scrapped equipment should be stored until such correspondence has been checked and that the scrapping of replaced equipment should be documented and independently verified.	AMS-I.D	No, leakage emissions due to equipment replacement have not been clearly addressed in the PoA-DD. The PP is requested to address this and provide an explanation on how this process shall be verified to account for leakage. Hence, PoA-CAR 15 is raised.	PoA- CAR 15	OK
E.7.1.10 Is additional background information on monitoring provided in PoA-DD annex 4? Is this information consistent with data presented in other sections of the PoA-DD and verifiable?	EB 33 Annex 43	No, there is no additional background information included in Annex 4 of PoA-DD on monitoring.	OK	OK
E.8 DATE OF COMPLETION OF THE APPLICATION OF THE BASELINE STUDY AND MONITORING METHODOLOGY AND THE NAME OF THE RESPONSIBLE PERSON(S)/ENTITY(IES)				
E.8.1 Is the date of completion of the application of the baseline study and monitoring methodology correctly indicated in PoA-DD section E.8 and is this date consistent with the project timeline?	PoA-DD section E.8	Yes, the date completion of the application of the baseline study and monitoring methodology of the PoA is correctly indicated in section E.8 of the PoA-DD as '06/09/2012'.	OK	OK
E.8.2 Who is/are the person(s) / entity (ies) responsible for	PoA-DD section	Yes, the contact details have been confirmed for the entity responsible for completing the application of the baseline study and monitoring	OK	OK

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CHECKLIST QUESTION / VVM AND POA REQUIREMENTS	SOURCE	MEANS AND FINDINGS OF VALIDATION (BASED ON GSC VERSION OF THE POA-DD)	ASSESS MENT	FINAL CON.
completing the application of the baseline study and monitoring methodology? Can the contact details be confirmed as correct?	E.8	<p>methodology.</p> <p>The contact details are provided as follows:</p> <p>Contact Person : Luis Salgado – Director for Latin America Company name: ÉcoRessources Carbone S.A.C. Address: Avenida República de Panamá 6084, Oficina 302, San Antonio - Miraflores Lima (18). Perú Telephone number: +51 (1) 446-6531 E-mail: luis.salgado@ecoressources.com</p>		

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TABLE 2 RESOLUTION OF CORRECTIVE ACTION REQUESTS (CAR), CLARIFICATION REQUESTS (CR) AND FORWARD ACTION REQUESTS (FAR)

Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
PoA-CAR 1 (16/01/2012): At the time of onsite visit, the letter of approval from each PP has not yet been provided to the validation team.	09/03/2012 (1st round): The Letter of Approval from the Nicaraguan DNA has been submitted to the PPs on February 1 st , 2012 to the PPs. A copy of the LoA is submitted to the audit team. LoA Tepeu – Nicaragua (pdf) The Peruvian LoA is still in progress.	16/03/2012 (1st round): A Letter of Approval from the Nicaraguan DNA has been received. The validation team has confirmed that the letter is valid and correctly referring to the project activity in question. However, no Letter of Approval from the host country of Peru or The Netherlands has been provided. Hence PoA-CAR 1 is still open.	OK
	20/04/2012 (2nd round): The LoA from Peru has not been issued yet by the Peruvian DNA.	13/07/2012 (2nd round): The LoA from the host country of Peru has been received. The validation team has confirmed that the letter is valid and correctly referring to the project activity in question. Hence PoA-CAR 1 is closed.	
PoA-CAR 2 (16/01/2012): At the stage of onsite visit, the MoC has not been submitted to the validation	09/03/2012 (1st round): The MoC will be submitted to the audit team as soon as	16/03/2012 (1st round): No MoC's has been provided by the PP	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
team.	it is signed.	Hence PoA-CAR 2 is still open.	
	<p>20/04/2012 (2nd round):</p> <p>The MoC is send to the audit team.</p> <p>MoC – Tepeu (PDF)</p>	<p>10/05/2012 (2nd round):</p> <p>The MoC form duly signed by both identified project participants have been received.</p> <p>(1) Title of the project and names of project participants and focal points are consistent with those indicated in project documentation submitted to the validation team</p> <p>(2) EcoRessources Carbone is a joint focal point for each area of communication with the Board, along with Mabanft B.V..</p> <p>(3) No modifications to the template/form were made;</p> <p>(4) MoC statement and its Annex 1) are clearly dated;</p> <p>(5) Focal point scopes are clearly and correctly indicated</p> <p>(6) Contact details and specimen signatures of focal point entities including those of project participants in Annex 1 are correctly entered:</p> <p>(7) Only one telephone, one fax, and one e-mail contact were entered per authorized signatory.</p>	

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
		<p>(8) the Statement of Agreement in Section 3 was signed by one authorized signatory for each project participant;</p> <p>(9) signatures made available in Section 3 correspond to those indicated in the related Annex 1 document;</p> <p>(10) there are no focal point entities who are not designated as project participants</p> <p>Hence, PoA-CAR 2 is closed</p>	
<p>PoA-CAR 3 (16/01/2012): In section A.4.2.2 of the PoA-DD, there is no criteria referring to “the specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications” as per EB65 Annex 3.</p>	<p>09/03/2012 (1st round): The new version of the PoA –DD considers a new eligibility criteria referring to the specifications of technology/measure.</p>	<p>16/03/2012 (1st round): The validation team has reviewed eligibility criteria, adding criterion #13 in section A.4.2.2 of the PoA-DD version 2. This criterion is deemed to cover the referred requisite from EB65 Annex 3.</p> <p>Hence, PoA-CAR 3 is closed.</p>	OK
<p>PoA-CAR 4 (16/01/2012) Section A.4.2.2 of the PoA-DD has included a criteria stating that ‘the project activity shall not have a start date (as defined by the UNFCCC)</p>	<p>09/03/2012 (1st round): The new version of the PoA-DD has introduced how to assess the start date in a CPA. Examples of the documentary evidence that a CPA has to submit to the</p>	<p>16/03/2012 (1st round): Eligibility criterion 7 in Section A.4.2.2 of PDD version 2 now defines documentary evidence that a CPA must present to the CME for evaluating its start date.</p>	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
before the Global Stakeholder Process (GSP) of the PoA' as per EB65 Annex 3; however, the documentary evidence for checking a CPA start date has not been described.	<p>CME/DOE are listed, but consider that the start date of the CPA can be evidenced with other formal documentation if applicable. In case the CPA has not developed activates that imply the start date of the project, the CME will document and corroborate this situation by having a sworn declaration of the project developer.</p> <p>Required changes are made in the new versions of the CPA-DD Real Case and CPA- DD Generic.</p> <p>Document model: CME - Sworn declaration - start date of the project activity (DOC) – signed version pending</p>	<p>The sample template for “Sworn declaration – start date of the project activity” was also reviewed.</p> <p>Changes in generic and first CPA-DDs were also reviewed by the validation team and found to be consistent with the new definition of the eligibility criterion.</p> <p>However, no evidence to assess compliance of this eligibility criterion was provided for the first CPA (Alba Rivas).</p> <p>Hence PoA-CAR 4 is still open.</p>	
	<p>20/04/2012 (2nd round):</p> <p>The first CPA did not have a CDM start date at the start of the validation; therefore, as evidence, the formal sworn declaration was sign.</p> <p>Document: ALBANISA - Sworn declaration - start date of the project activity (PDF)</p> <p>The project developer signed the turbine supply, transport, installation and commissioning contract with manufacturer Vestas on March 24th, 2012.</p>	<p>10/05/2012 (2nd round):</p> <p>Ok, the evidence provided confirms the compliance of the eligibility criterion 7 by the first CPA (Alba Rivas).</p> <p>The validation team has confirmed that the commissioning contract between Alba Rivas and Vestas (wind turbine manufacturer) took place on March 24th, 2012.</p> <p>Hence, PoA-CAR 4 is closed.</p>	

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
	<p>An extract of the main parts are submitted to the audit team.</p> <p>Document: Vestas Contract - Supply, transport and installation (PDF)</p>		
<p>PoA-CAR 5 (16/01/2012) No, section A.4.2.2 of the PoA-DD has not included the eligibility criterion that the 'PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and <u>environmental impact analysis</u>' as per EB65 Annex 3.</p>	<p>09/03/2012 (1st round):</p> <p>The new version of the PoA-DD considers the eligibility criteria for local stakeholder consultation and environmental analysis as per EB 65 Annex 3 and then introduces more detailed requirements and conditions for the implementation of the consultation process and the condition to have the applicable environmental licences approved.</p> <p>As a result of these modifications, sections C and D of the PoA-DD have been updated accordingly.</p> <p>Required changes are made in the new versions of the CPA-DD Real Case and CPA- DD Generic.</p>	<p>16/03/2012 (1st round):</p> <p>Revised PoA-DD version 2 includes a revised eligibility criterion for local stakeholder consultation. Changes in generic and first CPA-DDs were also reviewed by the validation team and found to be consistent with the new definition of the eligibility criterion.</p> <p>While revised criterion #10 provides more details about the stakeholder consultation, the PP is asked to assess and clarify whether this proposed criterion satisfies the requirements for local stakeholder consultations in both host countries.</p> <p>Moreover, the PP is asked to clarify the acronym for DIA in criterion #11 of the revised PoA-DD version 2.</p> <p>Hence, PoA-CAR 5 is still open</p>	OK
	<p>20/04/2012 (2nd round):</p>	<p>10/05/2012 (2nd round):</p>	

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
	<p>Peru and Nicaragua do not have special requirements for the Local Stakeholder Consultation of future CPAs, but for the first CPA (and model to the following ones) the Local Stakeholder Consultation shall be done in the project location after a period of public invitation. The PoA DD conditions met the requirements in both countries at the moment of the PoA-DD submission. In order to also comply with any future DNA requirements, the PoA-DD eligibility criteria # 10 and section D has been modified to consider DNA regulations into account.</p> <p>The acronym for DIA has been clarified in the criterion #11 of the new version of the PoA – DD. DIA is the acronym of the Environmental Impact Declaration in Spanish (“Declaracion de Impacto Ambiental”), which content allows the authorized institutions to evaluate if the environmental impact of the power plant would fulfill the standards and norms of the country in projects with impacts considered not significant according to the existing regulation.</p> <p>The energy environmental regulation of Nicaragua is in Ref Doc 10 - Decree 76-2006 Environmental Evaluation System (PDF) and the one of Peru in Peru - DL25844 ley de concesiones electricas a mayo 2010 (traduction) (PDF).</p>	<p>Ok, as per the response provided by the PP, revised eligibility criterion 10 in revised PoA-DD version 3 adequately addresses future changes in requirements for local stakeholder consultations by local DNAs in the host countries of Nicaragua and Peru.</p> <p>Hence, PoA-CAR 5 is closed.</p>	

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
PoA-CAR 6 (16/01/2012) The start date of the PoA has been indicated in section B.1 as ' <i>the date of registration as a CDM PoA</i> '. However, a reasonably defined start date using the format of DD/MM/YYYY is not provided.	09/03/2012 (1st round): The new version of the PoA-DD now considers the date using the applicable format in section B.1.	16/03/2012 (1st round): Ok, the date format has been revised in PoA-DD version 2. Hence, PoA-CAR 6 is closed	OK
PoA-CAR 7 (16/01/2012) Section E.1 of the PoA-DD does not quote all the tools referenced in ACM0002 version 12.2.. A complete list of the tools/guidelines referred to in the methodologies is required in section E.1	09/03/2012 (1st round): The new version of the PoA-DD now considers the "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (version 12.3.0) and "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion" (version 2) in the tool list.	16/03/2012 (1st round): Section E.1 does not quote correctly the tools referenced in CDM consolidated methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" version 12.3.0 (Reference to ACM0002 itself). Hence, PoA-CAR 7 is still open.	OK
	20/04/2012 (2nd round): The new version of the PoA –DD has amended section E.1 by deleting the reference to ACM0002 in the list of methodology tools.	10/05/2012 (2nd round): Section E.1 in revised PoA-DD version 3 was correctly revised. Hence, PoA-CAR 7 is closed.	

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
PoA-CAR 8 (16/01/2012) PP is required to correct unrecognized text in Table 1 of section E.1 of PoA-DD.	09/03/2012 (1st round): The new version of the PoA-DD has corrected the text in table 1.	16/03/2012 (1st round): Ok, unrecognized text in revised PoA-DD version 2 has been corrected. Hence, PoA-CAR 8 is closed.	OK
PoA-CAR 9 (16/01/2012) A provision defined in section E.4 (identification of the baseline scenario) of the PoA-DD states that 'only if the CPA defines option P2 as the baseline scenario, the project can be included in the present PoA'. PP is required to clarify whether provision in E.4 is also an eligibility criterion for CPAs and provide, further information including measures/procedures by CME to evaluate baseline scenario for CPA inclusion in the case of retrofit, replacement or capacity addition projects.	09/03/2012 (1st round): This condition is set in the ACM0002 v 12.3.0. To clarify the PoA –DD, eligibility criteria # 8 in section A.4.2.2. has been improved to consider the baseline alternatives listed I section E.4. The determination of the baseline scenario in case of retrofit or replacement projects will be done using PoA and methodology requirements set in section E.4. By doing this the total fulfilment of the methodology will be set in the eligibility criteria section. Required changes are made in the new versions of the CPA-DD Real Case and CPA- DD Generic. The CME manual will consider measures to evaluate the baseline scenario results in case of retrofit or replacement projects in the inclusion procedure (Procedure #05). In case of retrofit/replacement projects, if the assessment of the baseline scenario determination does not result in option P2 as per the applicable	16/03/2012 (1st round): Ok. Revised eligibility criterion #8 in PoA-DD version 2 provides conditions that ensure compliance with methodology applicability and refers to eligible baseline alternatives in Section E.4. However, the procedure develop by the CME (#05) in the CME Manual does not address the measures that will be undertaken to evaluate baseline scenario determination for CPAs that involve retrofit, replacement or capacity additions. Hence, PoA-CAR 9 is still open.	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
	methodology the CME shall inform the PP and do not submit the CPA for inclusion to a DOE until the problem is solved (if is the case) and/or store the CPA and do not include it in the PoA.		
	20/04/2012 (2nd round): The CME Manual has been updated and then, procedure # 5 considers more detailed measures to evaluate the baseline scenario determination in retrofit, replacement or capacity additions for future projects. As a resume, this assessment will be done using the ACM0002 version 12.3.0 and its tools during the CPA development (when the project developer submits all the project information) and the CME will only submit the CPA-DD to a DOE if all the methodological and PoA criteria are met after a revision of the CME members.	10/05/2012 (2nd round): Ok, the revised procedure #5 in CME Manual has been reviewed and deemed adequate to address the measures that will be undertaken to evaluate baseline scenario determination for CPAs that involve retrofit, replacement or capacity additions. Hence, PoA-CAR 9 is closed.	
PoA-CAR 10 (16/01/2012) Fulfilment of applicability criteria by a typical CPA for the tools referenced in ACM0002 (ver 12.2.0) have not been sufficiently justified in the PoA-DD.	09/03/2012 (1st round): The new version of the PoA-DD has included a more detailed justification of the applicability of the four tools in the PoA framework (section E.2).	16/03/2012 (1st round): Ok, Section E.2 of revised PoA-DD version 2 has been revised adequately. Hence, PoA-CAR 10 is closed.	OK

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PoA-CAR 11 (16/01/2012) Provisions for undertaking the Step 4 Common Practice Analysis should follow the Stepwise approach for Common Practice contained in the latest version of the “Tool for the demonstration and assessment of additionality” (EB 65 Annex 3).	09/03/2012 (1st round): The new version of the PoA-DD considers that CPAs has to develop the common practice analysis according to the ‘Guidelines for Common Practice’ in section E.5.2. Required changes are made in the new versions of the CPA-DD Real Case and CPA- DD Generic.	16/03/2012 (1st round): Ok, Section E.5.2 of the revised PoA-DD version 2 includes the Stepwise approach for Common Practice as per the Guidelines for Common Practice. Changes in generic and first CPA-DDs were also reviewed by the validation team and found to be consistent with the updated Section E.5.2. Hence, PoA-DD CAR 11 is closed.	
PoA-CAR 12 (16/01/2012) Section E.5.2 of the PoA-DD has not provided unambiguous criteria and data to assess a typical CPA’s additionality as demonstrated in section E.5.1 of the PoA-DD. PP is requested to provide general parameters for calculating the financial indicator (IRR) of a typical CPA, calculation procedures (e.g. standardized electronic spreadsheet) and acceptable information sources and	09/03/2012 (1st round): The new version of the PoA-DD has re organized section E.5.2 and E.5.1 to make it clearer. Section E.5.1 describes now the general additionality framework all potential CPAs and section E.5.2 has a detailed description of the key criteria, data and rationale that has to be implemented by the CPAs in order to properly demonstrate additionality according to the ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” (version 12.3.0), the “Tool for the demonstration and assessment of additionality” (version 06.0.0) and the “Combined tool	16/03/2012 (1st round): The file “Standardized financial analysis spreadsheet_v1_r1 (xls)” was revised and deemed acceptable to evaluate additionality of a CPA as per the selected financial analysis. However, changes made in the revised PoA-DD version 2 do not comply with the PoA-DD template: the information provided under E.5.1 and E.5.2 does not correspond to the template requirements for each section.	OK

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for input values.	<p>to identify the baseline scenario and demonstrate additionality" (version 4.0.0).</p> <p>The new PoA-DD has also introduced a list of parameters that have to be used as inputs in the financial analysis and considerations about its use in the CPA evaluations in table 3 (including acceptable information sources).</p> <p>An standardized electronic spreadsheet has been made for the PoA:</p> <p>Standardized financial analysis spreadsheet_v1_r1 (xls).</p> <p>Finally some minor changes were added in section E.5.2 in order to improve the considerations in case of retrofit or replacement projects.</p>	Hence, PoA-CAR 12 is still open.	
	<p>20/04/2012 (2nd round):</p> <p>The new version of the PoA-DD has been updated in order to fully comply with the PoA-DD template requirements. Off shore projects up to 15 MW are additional by default and according to the methodology, the additionality of the other type of project activities (off shore over 15 MW and all the on shore projects) shall be demonstrated and assessed using the latest version of the "Tool for the demonstration and assessment of</p>	<p>10/05/2012 (2nd round):</p> <p>Revised PoA-DD version 3 has been reviewed. Revisions made to Sections E.5.1 and E.5.2 meet the PoA-DD template requirements.</p> <p>Hence, PoA-CAR 12 is closed.</p>	

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	<p>additionality" agreed by the Board, which is available on the UNFCCC CDM website; therefore the steps and procedure are generally described in section E.5.1 and the more detailed description of the criteria and data to be used is set in section E.5.2.</p>		
<p>PoA-CAR 13 (16/01/2012) Sections E.6.1 and E.6.2 have not sufficiently justified the methodological choices and equations reflecting the other methodological choices for a typical CPA applying ACM0002 ver. 12.2.0 and the tools referred therein.</p>	<p>09/03/2012 (1st round): The new version of the PoA-DD has been modified in order to explain more the methodological choices in section E.6.1. Section E.6.2 has introduced the explanation of the choice of the listed formula of $EG_{PJ,y}$ for capacity addition projects.</p>	<p>16/03/2012 (1st round): OK, Sections E.6.1 and E.6.2 of revised PDD version 02 include a complete justification of methodological choices as per ACM0002 ver 12.3.0 and the Tool to calculate the emission factor for an electricity system version 2.2.1. Hence, PoA-DD CAR 13 is closed.</p>	OK

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<p>PoA-CAR 14 (16/01/2012) Section E.6.3 contains only those parameters utilized in calculating the Grid Emission Factor for Nicaragua. The project boundary also includes the host country of Peru; however, the relevant parameters as per the options selected from the 'Tool to calculate the Emission Factor for an electricity system' for Peru have not been included.</p> <p>For the sake of transparency, the generic CPA-DD should be revised accordingly.</p>	<p>09/03/2012 (1st round):</p> <p>The grid emission factor for Nicaragua will be set in an ex ante basis in the Nicaraguan CPAs and then the parameters are only listed in section E.6.3.</p> <p>The grid emission factor for Peru will be set in an ex post basis in Peruvian CPAs and then the parameters are listed in section E.6.3 and E.7.1</p> <p>Clarifications have been included in section E.6.3 in order to reflect the implementation of the previous two paragraphs.</p> <p>The CPA-DD Real Case and Generic are updated in the respective sections.</p>	<p>19/03/2012 (1st round):</p> <p>Ok, Section E.6.3 from revised PDD version 02 now lists the parameters from the 'Tool to calculate the Emission Factor for an electricity system' applicable for Peru.</p> <p>Hence, PoA-DD CAR 14 is closed.</p>	OK

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PoA-CAR 15 (16/01/2012) Leakage emissions due to equipment replacement and an explanation on how this process shall be verified to account for leakage have not been clearly addressed in the PoA-DD.	09/03/2012 (1st round): The new version of the PoA-DD has introduced (section E.7.2) the reference to a scrapping process in case of replacement projects. This procedure is part of the CME Manual.	19/03/2012 (1st round): Ok, the validation team has reviewed Section E.7.2 of the revised PDD version 02, the CME Manual and the Scrapping Process Report - template. These documents outline a procedure for documenting scrapping of equipment which allows for verification and accounting for leakage. Hence, PoA-DD CAR 15 is closed.	OK
PoA-CAR 16 (08/02/2012) A clear explanation is missing on the contractual agreements established by the CME that support operation and management arrangements for the implementation of the PoA and monitoring of the CPAs. Supporting relevant documentation is also required.	09/03/2012 (1st round): The new version of the PoA-DD has now included a description of the contractual agreements established by the project participants (Mabanaft and EcoRessources as CME) that support the operation and management arrangements for the implementation of the PoA and monitoring of the CPAs. It is mentioned the agreements between the PP where the responsibilities of both companies is described as well as the specific CME duties of EcoRessources. It is also mentioned the specific agreements between the CPAs and Mabanaft, and that this formal document commits the CPA developer to comply with all the	19/03/2012 (1st round): The explanations added in Sections A.2 and A.4.4.1 were reviewed by the validation team as well as the signed agreement between EcoRessources (CME) and Mabanaft (PoA owner) and the draft agreement between Mabanaft and Albanisa (1 st CPA). However, further clarification is required on the contractual arrangements planned between the CME and a CPA owner. Hence, PoA-CAR 16 is still open.	OK

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	<p>requirements of the CME (project information, support and assistance when required).</p> <p>Both agreements are submitted to the audit team:</p> <p>Agreement Mabanraft – EcoRessources (PDF) Agreement Mabanraft – Albanisa draft</p>		
	<p>20/04/2012 (2nd round):</p> <p>Both project participants (Mabanraft and ÉcoRessources), have signed a formal agreement where all the responsibilities of both companies are set. In this agreement is clearly stated that ÉcoRessources will function as the CME of the proposed PoA and shall have direct contact with all the CPA developers in order to implement all the responsibilities of a CME. This agreement is operative for all the duration of the PoA. There is an agreement that each CPA will sign with Mabanraft Carbon B.V where the inclusion conditions are described, including the requirement to work directly with the CME, submitting all requested information of the project and giving support and assistance during the implementation and operation phases, in order to meet the inclusion and monitoring requirements of the PoA.</p> <p>As an additional formal documentation to ensure the PoA management, the PPs have developed a Cooperation Agreement to be signed between the CME,</p>	<p>10/05/2012 (2nd round):</p> <p>Ok. The documentation provided to demonstrate the contractual arrangements planned between the CME, the PP (Mabanraft) and CPA owners have been reviewed and deemed correct and acceptable. Changes in the revised PoA-DD and CPA-DD have also been reviewed. The three separate agreements will support operation and management arrangements for the implementation of the PoA and monitoring of the CPAs.</p> <p>Hence, PoA-CAR 16 is closed.</p>	

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	<p>the CPA developer and the other project participant of the PoA (Mabanaft). This agreement is a direct contractual document, where the CME and CPA developer responsibilities in the PoA context are detailed, therefore giving the CME more tools to properly manage the PoA in the long term and in both countries.</p> <p>As a conclusion the proper operation of the PoA is supported by three different formal agreements and all CPAS will be included in the PoA only after a formal recognition that they are aware of and have agreed to the rights and responsibilities that this participation entails.</p> <p>The PoA-DD and CME Manual has been updated accordingly.</p> <p>Agreement Albanisa-EcoRessources (DOC)</p>		

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PoA-CAR 17 (08/02/2012) PP has not provided detailed information on experience relevant to acting as CME or implementing a PoA.	09/03/2012 (1st round): <p>The CME is a Canada based environmental company operative since 2004 with offices or representatives in Canada, Peru, Panama, Venezuela, Argentina and Guatemala. More than 20 professionals work in the company and a special part of the company (described as EcoRessources Carbone) works in developing Carbon Asset or Carbon Finance Projects, GHG inventories and Management and Advisory intelligence. At the moment of submitting the present responses, EcoRessources has active participation in 4 PoAs under validation. In 3 of them (Tepeu, Tunki and Ometepe is the CME). The list of PoAs is:</p> <ul style="list-style-type: none"> - The proposed PoA: Tepeu Wind Programme of Activities - Tunki Small Scale Hydropower Program of Activities, (http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/D1W68MA7FK8E5CH1BG05BNM8R8V36Y/view.html) - Ometepe Biogas Programme, http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/U4DUPQZ8BNKWFSB10VHMXA8PKLNR/view.html - Guacamaya Small Scale Hydropower Programme of Activities, http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/A6IFE8OJZ2RMVMK89LH8VMWVLFNDF/view.html 	19/03/2012 (1st round): <p>Ok, the validation team reviewed the evidences provided which support EcoRessources experience relevant to PoAs.</p> <p>Hence, PoA-CAR 17 is closed.</p>	OK

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	<p>The Curriculum vitae of the professionals that are at the moment related to the Tepeu PoA and other PoAs is submitted as evidence of the experience of the team (See PDF named CV [name] (PDF). A resume of the experience of the company is also attached.</p> <p>CV EcoRessources – Resume (PDF).</p>		

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PoA-CAR 18 (08/02/2012) Calculation of the grid emission factor for Nicaragua does not take into account the guidelines on electricity imports included in the Tool to calculate the emission factor for an electricity system. A correct grid emission factor calculation for Nicaragua is required.	09/03/2012 (1st round): Using the same sources as the other electricity generation of the NIS, the imports have been added to the spread sheet calculation. The new grid emission factor has been used to update the PoA-DD and CPA-DD in the applicable sections.	19/03/2012 (1st round): Ok, the validation team has reviewed data from the National Energy Institute of Nicaragua (INE) and the revised Emission Factor Calculation spreadsheet version 02 dated 09-03-2012. The updated grid EF was correctly calculated as 0.6886 tCO ₂ /MWh based on 3-year generation-weighted average data from the relevant years 2008, 209 and 2010. Relevant changes in the PoA-DD were also reviewed and deemed correct. Hence, PoA-CAR 18 is closed.	OK
PoA-CAR 19 (08/02/2012) PP is asked to provide information and supporting evidence for the PoA implementation/expansion plan for the host countries defined in the PoA-DD.	09/03/2012 (1st round): A report of the implementation/expansion is submitted to the audit team. CAR 19 (PDF)	19/03/2012 (1st round): Ok, information regarding PoA implementation/expansion plan for the host countries of Nicaragua and Peru has been reviewed by the validation team. Hence, PoA-CAR 19 is closed	OK

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PoA-CAR 20 (08/02/2012) The Stakeholder Consultation Process to be undertaken by CPAs, as indicated in Section D.1 of the PoA-DD, has not been provided.	09/03/2012 (1st round): There is no reference of a consultation process undertaken by CPAs, the last paragraph of section D.1 makes reference to a general stakeholder consultation process to assess the comments of different stakeholders within the country (from governmental or private institutions to individuals) since CPAs could be developed in any part of the country. See: General Stakeholder Consultation - invitations (RAR) General Stakeholder Consultation - Participants GLSC Tepeu1 (JPEG) General Stakeholder Consultation - Participants GLSC Tepeu2 (JPEG) General Stakeholder Consultation - Newspaper evidence (JPEG) General Stakeholder Consultation - Newspaper front page (JPEG) General Stakeholder Consultation – PPT (PDF)	19/03/2012 (1st round): While Section D.1 of PoA-DD version 01, states that “the project participants will also develop a general stakeholder consultation process”, the PP has clarified that this <i>process</i> was an actual event that took place on January 26 2012, as per the evidence provided. However, Sections D.2, D.3 and D.4 of the PoA-DD do not include a description of the results for this consultation with stakeholders within the country of Nicaragua. Hence, PoA-CAR 20 is still open.	OK
	20/04/2012 (2nd round): The new version of the PoA-DD has completed sections D.2, D.3 and D.4 with the description of the general stakeholder consultation developed in Managua based on the evidences previously submitted.	10/05/2012 (2nd round): Ok, Sections D.2, D.3 and D.4 in revised PoA-DD version 3 have been reviewed by the validation team. The added information regarding the general stakeholder consultation developed in Managua, Nicaragua is	

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		deemed to be complete. Hence, PoA-CAR 20 is closed.	
PoA-CAR 21 (25/07/2012) Start date as stated in Section B.1 of the PoA-DD is not correct.	08/08/2012 (3rd round): The new version of the PoA –DD considers a tentative date related to the PoA registration. Therefore the starting date of the PoA is now the expected date of the PoA registration which is the date when the PoA begins its operations,	2012-08-08 (3rd round): Ok, the revised PoA-DD was reviewed. The validation team confirms that the start date of the PoA is now 2012-12-20, which is also indicated as the expected start date of registration. Hence, PoA-CAR 21 is closed.	OK
PoA-CAR 22 (25/07/2012) Monitoring parameters EGPJ,y / EGPJ, facility, y are found mentioned as ex-ante parameters in section E.6.3 of the PoA-DD. Ex-post parameters related to EFgrid were also found as ex-ante parameters in section E.6.3.	08/08/2012 (3rd round): Tables in the sections E.6.3 and E.7.1 were updated to a better reflection of the grid emission factor calculation process. As Peruvian grid emission factor is set in ex post basis, therefore all the parameters are in e.7.1 and the Nicaraguan grid emission factor is set ex ante in section e.6.3. In addition the OM and BM weighted average (0.25 and 0.75) are clearly set as fixed parameters in section e.6.3 since they are fixed according to the tool. There are two EGPJ,y in section b.7.1 but because one is from the methodology and the other is from the tool for the grid emission factor.	2012-08-08 (3rd round): Ok, corrections made in sections E.6.3 and E.7.1 of the revised PoA-DD were found correct and acceptable. The parameters related to the Peruvian grid emission factor are now correctly identified as ex-post basis. Hence, PoA CAR 22 is closed.	OK

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	There will be no confusion for future CPA development since there are now specific sections and subsections to detail the parameters to be use in the case of Nicaragua (ex-ante) and Peru (ex-post).		
PoA-CAR 23 (25/07/2012) Steps of the additionality tool provided in Section E.5.1 are not applied consistently to off-shore projects.	08/08/2012 (3rd round): The new version of the PoA-DD has been updated to clarify that off-shore projects will also apply the additionality tool but, since Attachment A to Appendix B of 4/CMP.1 Annex II states that off-shore wind projects up to 15 MW are part of a list of grid-connected renewable electricity generation technologies that are automatically defined as additional, Step 2 will not be applied, and the project description and fulfillment of these Attachment A to Appendix conditions will be detailed as part of Step 3. The CPA-DDs have been updated accordingly.	2012-08-08 (3rd round): Ok, corrections made to section E.5.1 of the revised PoA-DD were reviewed by the validation team and deemes correct and acceptable. Section E.5.1 now correctly applies all relevant steps of the additionality tool are required by the selected methodology ACM0002 version 12.3.0. Hence, PoA-CAR 23 is closed.	OK
PoA-CAR 24 (25/07/2012) Clarification is required on the benchmark rates for Peru and Nicaragua with regards to its ex-post determination and whether the rates expressed are real or nominal.	08/08/2012 (3rd round): <u>Nicaragua:</u> The Benchmark is post tax and nominal. In the context of Damodaran, a real rate can be obtained from an inflation-indexed source, and historical data is	2012-08-08 (3rd round): Ok, the validation team has reviewed the response provided by the PP and acknowledges that the benchmark rate for Nicaragua corresponds to a nominal, post tax rate since each of its components (Risk-Free Government Bond Rate, Nicaragua Total Risk Premium, Nicaragua Electricity Sector Premium) is sourced from	OK

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	<p>considered to be nominal internationally, unless, as mentioned, it is indexed by the inflation (http://people.stern.nyu.edu/adamodar/pdfiles/eqnotes/packet1pg2.pdf). To be inflation-indexed is to subtract the inflation from the historical series (according to the fisher equation, http://www.econ.ucsd.edu/~yisun/fisher.pdf).</p> <p>Given that all the components of the Benchmark are historical and not inflation-indexed, the Benchmark is considered to be in nominal terms. A detailed explanation for every component of the Benchmark is given as follows:</p> <p>The total risk premium is obtained from Damodaran's calculations of country default spreads and Risk Premiums ("Country Default Spreads and Risk Premiums" pdf reference document), and is estimated using traded country bonds (Nicaragua's non-indexed bonds) and US historical data (by definition, nominal). Therefore, this component is considered to be in nominal terms.</p> <p>The risk free rate is estimated using historical US Government bonds. Therefore, by definition, these bonds are non-indexed and considered to be in nominal terms (there are, in fact, indexed US treasury bonds that discount the inflation rate and, therefore, are expressed in real terms. http://money.sulekha.com/inflation-deflation-and-investing_10_2010_postedby_aswath-damodaran).</p> <p>The electric sector risk (Ref Doc 21 - Renewable Energy Market Analysis for Nicaragua) is obtained by using</p>	<p>historical, non-indexed data (e.g. no inflation is considered) so that the resulting benchmark can be duly compared against the project IRR resulting from nominal cashflows as presented in the investment model.</p> <p>In the case of the benchmark rate of Peru, the validation team has confirmed through review of the Electric Concessions Law (Article 79) that the discount rate for power generation projects is determined by the Peruvian government as a real, annual rate.</p> <p>The revisions made to the PoA-DD regarding future modifications or updates to this benchmark and its applicability to future CPAs in Peru were found reasonable and correct.</p> <p>Hence, PoA-CAR 24 is closed.</p>	

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	<p>twice the profitability's normal standard deviation of an electric central, financed with 100% equity. This is historical data and, by definition, considered to be in nominal terms.</p> <p><u>Peru:</u></p> <p>The Benchmark is post tax and real. Article 79 of the Electric Concessions Law states this condition.</p> <p>The benchmark is referenced in the law as 12% at the moment of submitting the PoA, but if the law changes, the value in force shall be used for the CPA evaluation.</p> <p>The PoA-DD and CPA-DD have been updated to consider these clarifications on the benchmarks.</p>		
<p>PoA-CAR 25 (25/07/2012) Clarification is required on the following issues regarding the financial analysis::</p> <ul style="list-style-type: none"> - Calculation of Municipal taxes - Justification for static time line for the electricity tariff - Depreciation of civil works - Justification for land rent costs - Technical lifetime of wind turbines (25 years) - Calculations for the 	<p>08/08/2012 (3rd round): <u>Municipal tax</u></p> <p>The calculation of the municipal tax is described properly and according to law but the year one had a mistake in the formula used in the IRR spreadsheet. The excel document has been updated in order to clarify the Municipal taxes (Input sheet) and the formula has been corrected for the year one (Calculation sheet).</p> <p>Table 3 of the specific CPA-DD has been also updated to clarify the tax conditions.</p>	<p>2012-08-08 (3rd round):</p> <p>Ok, the municipal tax calculation in revised investment analysis was reviewed. The calculation of municipal taxes belonging to year 1 was corrected as per Decree 455 - Municipal Taxes Plan and Exonerations of the payment: Law 532. The PP has also revised the "Inputs" workbook to further clarify the values utilized in the calculation.</p> <p>Ok, the clarification provided by the PP with regards to</p>	OK

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benchmark rate for Nicaragua	<p><u>Electricity tariff</u></p> <p>The project does not consider an increase in electric tariff because of the following:</p> <ul style="list-style-type: none"> There are no other factors, beside related inflation indexes, that could increase the electric tariff. The project will sign a PPA contract that sets a fixed tariff for the project electricity (same modality as the other wind power plants in Nicaragua – does not sell to the wholesale market). There is no information of the potential and real escalation rates to be applied for all the other parameter of the IRR spread sheets. In general, the cash flow submitted is made in nominal terms to be consistent with the benchmark, therefore it is not proper to implement an inflation rate in the cash flow and convert it in a real cash flow. <p><u>Depreciation</u></p> <p>Depreciation of civil works is set in the legal accountability framework of Nicaragua, as well as in the other countries, to consider the reduction of the lifetime and service potential of an investment (facilities,</p>	<p>application of potential increases in the electricity tariff as part of the investment analysis is deemed credible and acceptable. As confirmed by the validation team, the values and rates utilized in the investment analysis calculation are expressed in nominal basis, hence adjusting the electricity tariff for inflation is not appropriate. Furthermore, the “self-supply” schemes for independent producers in Nicaragua is usually based on a fixed-term power purchase agreements (PPA) which establishes a fixed tariff for off-taking the electricity generated by the project activity. Based on the argumentation provided by the PP, the validation team deems the use of a fixed electricity tariff valid and acceptable for the investment analysis.</p> <p>Ok, depreciation of civil works is applied to the value of related items specified in Vestas Supply Turnkey Proposal. The value of civil works corresponds to concrete foundations for the wind turbines, platforms, trenches, supply and installation of underground transmission cables, grounding, supply and installation of optic fiber for controlling/communication, substation, buildings and control boards, transformers and capacitors. The total value includes materials, machinery and labor. As per Rulebook Law 453, depreciation of civil works is possible under Nicaraguan legislation. Based on local expertise, the validation team can confirm that the approach for depreciation of civil works is in accordance with current standard accounting practices in</p>	

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	<p>equipment, among others). The application of the depreciation over civil works is appropriate and is calculated according to law, therefore is ok. See Ref Doc 06 - Rulebook Law 453, page 18 submitted in round one.</p> <p><u>Land rent</u></p> <p>The latest wind project in operation (registered as a CDM project Amayo II) considers in its IRR spreadsheet that the land rent tariff is 0.75% (IRR spreadsheet: Royalties to landowners 0.75% of annual revenues) but as explained and seen on the site visit, Rivas has many projects in evaluation and the householders have seen the rent potential of their lands. As a result of the previous market condition, the latest land rent contract sign by a wind project in evaluation is now up to 3% of the incomes. The contract displayed in the on-site visit to the audit team is confidential as is not of the project developer.</p> <p>Considering that at the moment no other formal evidence can be found, since the project land contract is not in development yet, a conservative assumption is applied in the CPA evaluation: consider that the land rent could be as low as the one achieved by Amayo II, years before this CPA implementation.</p> <p><u>Lifetime turbines</u></p>	<p>Nicaragua and, in general, in Latin American countries.</p> <p>Ok, the revised investment analysis spreadsheet has been reviewed. The value applied for the estimation of costs related to Land Rent is now 0.75%. This value has been crosschecked against registered CDM project 5305 (Amayo Phase II Wind Power Project), which is located in the same region and same province of Rivas, as the first CPA Alba Rivas, in Nicaragua. The justification provided by the PP for the choice of using the revised value of 0.75% of annual electricity revenues is deemed reasonable and valid. The costs estimated for Land Rent in the investment analysis have been correctly revised and the impact on the project IRR has been duly updated in the project documentation.</p> <p>Ok, Der Norske Veritas Type Certificate for Wind Turbines (DNV Type Certificate.pdf) has been reviewed by the validation team. According to this certificate, the design lifetime for the selected project equipment "Vestas V100 1.8 MW 50/60 Hz VCS Mk 7" is 20 years. In accordance with guidance from the "Tool to determine the remaining lifetime of equipment" version 01, project participants can use the option of referring to manufacturer's information on the technical lifetime and compare to the date of first commissioning. Thus, the validation team can confirm that this value, which is the basis of the investment horizon in the project investment analysis, is correct and acceptable.</p>	

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	<p>According to the Tool to determine the remaining lifetime of equipment (Version 01), the first option to determine the lifetime of equipment is (a) Use manufacturer's information on the technical lifetime of equipment. As can be seen in Ref doc 20 - DNV type certificate – vida útil de las turbinas (PDF), a certification process has been applied to the project turbine type (Vestas V100 – 1.8 MW, following the guidelines of IEC WT 01:2011 and in compliance of IEC 61400-1 ed:2005 and IEC WT 01 concerning the design and manufacture. The certificate states that the turbine design life time is 20 years. This formal documentation is specific for the project turbines and therefore, is deemed more appropriate than the general default values of the Tool.</p> <p><u>Benchmark Calculation</u></p> <p>The calculation of the benchmark is set in the new version of IRR spreadsheet. The regression used as input is still in a separate sheet as submitted in round one (see Regressions (XLS)).</p> <p><u>Eligibility criteria</u></p> <p>The eligibility criteria was modified in the PoA DD and CPA DDs in order to clarify that CPAs will only be located in one of the PoA host countries.</p> <p>The PoA –DD, CPA-DD and related documents have</p>	<p>Ok, the revised investment analysis submitted by the PP includes the calculation of the benchmark rate for Nicaragua. The validation team confirmed the values presented by using the formulae presented and found that the benchmark value is correct and acceptable.</p> <p>Ok, in order to clarify the eligibility criteria and avoid any potential confusion in the monitoring of emission reductions, the PP has modified the eligibility criteria to state that CPAs under this PoA shall not have components in more than one host country. This is deemed reasonable and correct.</p> <p>Hence, PoA-CAR 25 is closed.</p>	

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	been updated to reflect the previous changes or clarifications.		
Generic CPA-CAR 1 (25/07/2012) The generic CPA-DD is not fully consistent with the final PoA-DD.	08/08/2012 (3rd round): The new version of the generic CPA-DD has been updated to consider all the new modifications in the PoA-DD.	2012-08-08 (3rd round): Ok, the validation team has reviewed the revised generic CPA-DD and found that all revisions are in accordance with the corrections made to the latest version of the PoA-DD. Hence, Generic CPA-CAR 1 is closed.	OK
PoA-CL 1 (16/01/2012): The general operating and implementing framework of the PoA has not been sufficiently described in Section A.2 of PoA-DD.	09/03/2012 (1st round): The new version of the PoA-DD considers a more detailed description of the operating and implementing framework of the PoA in section A.2.	19/03/2012 (1st round): Ok. Section A.2 of the revised PoA-DD version 02 includes an adequate and more complete description of the general operating and implementing framework of the PoA in the context of the relationship between the two identified project participants. Hence, PoA-CL 1 is closed.	OK

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PoA-CL 2 (16/01/2012): Section A.4.3 does not provide sufficient demonstration that the voluntary coordinated action would not have been implemented in the absence of the PoA.	09/03/2012 (1st round): The new version of the PoA-DD has included this information.	19/03/2012 (1st round): Ok, revisions made under Section A.4.3 were reviewed and deemed to correctly demonstrate that the voluntary coordinated action is not mandated by any national laws nor it would have been implemented in the absence of the PoA. Hence, PoA-CL 2 is closed.	OK
PoA-CL 3 (16/01/2012): While section A.4.4.1 provides a general outline on how the CME has defined the management arrangements and responsibilities for the implementation of the PoA, including responsibilities for the CPA implementer, the PP is requested to provide the CME Operation Manual and related documentation.	09/03/2012 (1st round): The CME Operation Manual is submitted to the audit team, including all the related formats: CME_Operational_Manual_Tepeu_V1 February (DOC) CME - Annex I funding - template v1 (DOC) CME - Continual Improvements Report - template v1 (DOC) CME - Emission Factor Report - template v1 (DOC) CME - External Communications Report - template v1 (DOC) CME - MABANAFT Termsheet Model (DOC) CME - Master Registry List - template v1 (DOC) CME - Model Report for Termsheet _ Tepeu (XLS) CME - Responsibilities in the Tepeu PoA - template v1 (DOC)	19/03/2012 (1st round): Ok, the validation team has reviewed the CME Operation Manual (version 01), Annexes and other supporting documents. The CME Operation Manual (version 01) defines several relevant procedures and reporting templates, all of which are mentioned in Section A.4.4.1, including a record keeping system for each CPA and a procedure for avoidance of double counting. However, clarification is requested on the document titled "CME - Tepeu Report Resume v1 (DOC)", referenced in "CME/06 PROCEDURE OF MONITORING CPAs DEVELOPMENT" but which addresses the "Tunki Small Scale Hydropower Program of Activities".	OK

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	<p>CME - Sworn declaration - carbon mechanism (DOC) CME - Sworn declaration - start date of the project activity (DOC) CME - Sworn declaration - voluntary participation (DOC) CME - Tepeu Report Resume v1 (DOC) CME - Tepeu Report v1 (XLS) CME - Training assistance list - template v1 (DOC) CDM - Scrapping Process Report - template v1 (DOC)</p> <p>Section a.4.4.1 of the PoA DD has been improved to be according to the latest version of the CME Manual.</p>	Hence, PoA-CL 3 is still open	
	<p>20/04/2012 (2nd round):</p> <p>The report was an example of the template of an internal report between the project participants. A new version of the format is sent with the Tepeu PoA characteristics.</p> <p>CME - Tepeu Report Resume v1 (DOC)</p>	<p>10/05/2012 (2nd round):</p> <p>Ok. The new template specific to the Tepeu Wind PoA has been reviewed by the validation team and deemed correct.</p> <p>Hence, PoA-CL 3 is closed.</p>	

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<p>PoA-CL 4 (16/01/2012) Section A.4.4.1 states that the CME will <i>'define the roles and responsibilities of personnel involved in the process of inclusion of CPAs. The CME will have a procedure of responsibilities and organization.'</i></p> <p>Clarification is required on the identified roles, responsibilities and competencies of the CME personnel involved in CPA inclusion.</p>	<p>09/03/2012 (1st round):</p> <p>The roles and responsibilities are listed in procedure #03 of the CME Manual submitted to the audit team.</p>	<p>19/03/2012 (1st round):</p> <p>Ok, procedure #03 of the CME Operation Manual (version 01) has been reviewed along with the resumés of the CME staff involved as provided by the PP. Roles and responsibilities for Mabanaf and EcoRessources staff involved in the process of inclusion of CPAs have been clearly defined in the referenced document.</p> <p>Hence, PoA-CL 4 is closed.</p>	OK
<p>PoA-CL 5 (16/01/2012) Records of arrangements for training and capacity development for CME or CPA personnel have not been made available. Section E.7.2 mentions that <i>'the CME will provide all necessary information and training material that enables CPA developers to conduct the monitoring process as required by the PoA. The CPA developer ensures that all persons that participate in the actual monitoring process for the CPA will be</i></p>	<p>09/03/2012 (1st round):</p> <p>A training procedure for CPA personnel is part of the CME Manual submitted to the audit team (procedure # 04 for CPA developers and part of the #03 for CME personnel).</p>	<p>19/03/2012 (1st round):</p> <p>Ok, procedure #03 of the CME Operation Manual (version 01) states the expected competency requirements of key CME roles. This procedure also defines the identification of training requirements by the PoA Manager and how records of such training will be kept.</p> <p>It was confirmed that procedure #04 defines the steps to be undertaken by the CME with regards to training and training records for CPA developers.</p>	OK

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<p><i>suitably qualified and trained in the operation and maintenance of the CPA project activity. If required, these persons will also receive training on the application of the monitoring plan by the CME.'</i></p> <p>Clarification is required on the training procedures developed by the CME, which records of training will be made and how suitable qualification of personnel involved in monitoring aspects will be evaluated.</p>		Hence, PoA-CL 5 is closed.	
<p>PoA-CL 6 (16/01/2012)</p> <p>Section A.4.4.1 states that the CME will 'set a framework for the implementation of the PoA and approve the CDM program activity (CPAs) to be included under the PoA'. However, no clear description on procedures for technical review on inclusion of CPAs is included in the PoA-DD.</p>	<p>09/03/2012 (1st round):</p> <p>An inclusion procedure for CPAs to be part of the PoA is in the CME Manual submitted to the audit team (procedure # 05).</p>	<p>19/03/2012 (1st round):</p> <p>The validation team has reviewed the procedure titled "CME/05 PROCEDURE FOR TECHNICAL REVIEW OF INCLUSION OF CPAs AND POA DOCUMENT MODIFICATIONS". This procedure includes provisions for origination, development and inclusion of CPAs under the PoA.</p> <p>However, further clarification is required on the technical review of and approval for inclusion of CPAs.</p> <p>Hence, PoA-CL 6 is still open</p>	OK

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	<p>20/04/2012 (2nd round):</p> <p>The CME Manual procedure # 5 has been updated to give a more detail explanation of the CME approval process for CPA inclusion. A new registry, for internal revisions of CPA has been developed.</p> <p>CME - CPA DD technical revision registry (DOC)</p>	<p>10/05/2012 (2nd round):</p> <p>Ok. The revised procedure #5 included in the CME Manual has been reviewed. The explanation added on the technical review and approval for inclusion of CPAs is deemed complete and correct.</p> <p>Hence, PoA-CL 6 is closed.</p>	
<p>PoA-CL 7 (16/01/2012)</p> <p>Procedures to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA) are mentioned in section A.4.4.1 and section A.4.4.2 of the PoA-DD; however, actual procedures have not been clearly described nor made available to the validation team.</p>	<p>09/03/2012 (1st round):</p> <p>A procedure to avoid double counting for CPAs is part of the CME Manual submitted to the audit team (procedure 07).</p>	<p>19/03/2012 (1st round):</p> <p>Ok, the validation team has reviewed the following relevant documents provided by the PP:</p> <ul style="list-style-type: none"> - Procedure #07 of the CME Operation Manual (version 01) - CME - Sworn declaration - carbon mechanism (doc template) - Tepeu Report (xls) <p>The procedures and supporting documents provided ensure that provisions to avoid double counting can be deemed adequate.</p> <p>Hence, PoA-CL 7 is closed.</p>	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
<p>PoA-CL 8 (16/01/2012) Clarification is requested on the use of total risk premium versus country risk premium. Mr. Damodaran states that the country risk premium for Nicaragua (as obtained from Moody's rating agency) is 9% while the total risk premium used in determining the compounded benchmark rate is 14%. While the Tool for the demonstration and assessment of additionality indicates that benchmarks can be derived from 'Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data', the PP hasn't sufficiently justified that the use of a total risk premium as determined by Mr. Damodaran for Nicaragua is more conservative than the country risk premium.</p>	<p>09/03/2012 (1st round):</p> <p>The Tool for the demonstration and assessment of additionality indicates that benchmarks can be derived from "government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data". It does not establish a specific methodology to follow for the calculation of the "suitable risk premium" as in finance this can be calculated through different perspectives and considering different suitable portions of risk within the total risk premium that is needed. It does mention, however, the need for a <u>suitable</u> risk premium, therefore the suitability of the premium would precede the conservativeness of the calculations.</p> <p>The methodology followed for the Nicaraguan benchmark calculation considers a risk premium that encompasses what are three basic risk components: country risk, equity risk, and sector risk. Other components of overall risk could have been considered (i.e. industry size, market liquidity, etc.) however for simplicity, data availability, and conservativeness, they were excluded.</p> <p>Therefore, the objective is to calculate the benchmark through the following methodology:</p>	<p>19/03/2012 (1st round):</p> <p>In the context of the Appendix to the Guidelines on the assessment of investment analysis version 05.0 (EB62 Annex05), the PP is requested to provide further evidence and analysis of the suitability of using a "total risk premium", as defined by Mr. Damodaran, for the basis of the benchmark rate to be utilized in the additionality demonstration.</p> <p>Hence, PoA-CL 8 is still open</p>	OK

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	<p>Benchmark = risk free government bond rate + suitable risk premium for Nicaragua</p> <p>The procedure or components of the suitable risk premium will depend both on the methodology followed and on the concepts or inputs available for use. For our benchmark calculation, the main part of the suitable risk premium was obtained from NYU's professor Aswath Damodaran's publicly available figures. Prof. Damodaran is a Professor of Finance at the Stern School of Business in New York University, where he teaches corporate finance and equity valuation. He is best known as author of several widely used academic and practitioner texts on Valuation, Corporate Finance and Investment Management, and is widely quoted on the subject of valuation. Damodaran calculates total risk premium and country risk premium, and in the context of his calculations, country risk refers to government risk, while total risk also includes equity risk, or the risk of investing in a business sector and not in the government directly. As the project is from a specific industry, then total risk is the most suitable and applicable premium.</p> <p>Following Damodaran's methodology, the total risk premium for Nicaragua is obtained from the country rating (obtained from the rating agency Moody's – evidence "Nicaragua, Government of Credit Rating - Moody's.pdf"), whereas a default spread for that rating is</p>		

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	<p>calculated over the risk free rate (US Treasuries), and then this spread is added to the expected premium of investing in US equity (as a proxy for a diversified market). The use of country risk only would miss the “suitable risk premium that reflects private investments” as reflected in the Guidelines, as it would stay short of other components that need to be added to make the risk premium a suitable one (such as equity risk and the specific sector risk at least, though others could also be added). Damodaran’s total risk premium already includes equity risk, hence this is the input taken from his publicly available figures.</p> <p>A revision of the benchmark calculation has led to the following being the correct application:</p> <p>Benchmark = risk free government bond rate of 20 years + total risk premium for Nicaragua + electricity sector risk premium for Nicaragua</p> <p>For the risk free government bond rate of 20 years the US Treasury Curve is used. As there is no paper with this maturity, a simple linear interpolation was previously undertaken for simplicity and conservativeness, due to the tendency of the treasury rate curve. However, as per CL 9, this has been adjusted to reflect a more technical method (a regression) and the resulting rate has been slightly modified.</p>		

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	<p>Therefore:</p> <p>Benchmark = $3.0362\%^{(1)} + 15\%^{(2)} + 3\%^{(3)}$ Benchmark = 21.0362%</p> <p>The calculation has been updated in the PoA-DD.</p> <p>⁽¹⁾ Estimated using the polynomial regression of the US government bond rate curve in order to obtain the estimate for a 20 year government bond rate. Data from 20/12/2011 (document "Regressions.xls").</p> <p>⁽²⁾ Obtained from Damodaran's published figures in January 2012 for Nicaragua Total Risk Premium (http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html) (document "Country Default Spreads and Risk Premiums.pdf").</p> <p>⁽³⁾ Obtained from the Renewable Energy Market Analysis for Nicaragua undertaken by the ARECA project for the Central American Bank of Economic Integration, the United Nations Development Program, and the Global Environmental Fund. Page 35 (document "Ref Doc 21 - Renewable Energy Market Analysis for Nicaragua.pdf").</p> <p>As reference or comparison, the calculated benchmark can be compared to two other similar and recent calculations:</p> <p>A) Amayo Phase II Wind Power Project (http://cdm.unfccc.int/Projects/DB/DNV-</p>		

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	<p>CUK1317368497.17/view) registered on 30/09/11. A similar methodology is followed for the benchmark calculation of Nicaragua. This project calculates the benchmark through a relevant risk premium based on US equity, size of industry premium, and the Nicaraguan bond yield premium (in other words, country premium) added to the government bond rate. The resulting benchmark is 20%.</p> <p>B) The ARECA project published in 2010 an expected return rate over equity in the power industry in Nicaragua. The ARECA project is a joint effort on behalf of the United Nations Development Programme (UNDP), the Central American Bank for Economic Integration (BCIE) and the Global Environmental Facility (GEF). The rate calculated by this project is 23.5%</p>		
	<p>20/04/2012 (2nd round):</p> <p>The Fiftieth Meeting Report, Annex 8, "Information Note: Default values for equity return for CDM projects" states that <i>"investors either from the public sector or the private sector companies while investing in projects expect to earn returns which are higher than what they can expect to get by investing in risk free government bonds. Thus the expected return for any project can be expressed as risk free return plus an extra premium for the risk taken"</i></p>	<p>10/05/2012 (2nd round):</p> <p>The GLC validation team has reviewed the response provided by the PP regarding the utilization of a "total risk premium", as defined by Mr. Damodaran, for the basis of the benchmark rate for the host country of Nicaragua. The justification and comparison of the calculation methods used by the PP in contrast with EB 62 Annex 5 for the estimation of a benchmark rate specific for electricity generation projects in Nicaragua is deemed reasonable and valid.</p>	

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	<p><i>to invest in the project.”</i> For this, it goes on to explain that there are basically two different ways of handling this issue: (i) use a general model like CAPM or some modified version of it; or (ii) developing a table of default values. The Report uses the second option for proposed default values that project developers may use as benchmark return on equity. Hence, for its calculation of the default equity returns, it states that the equity return for <i>“any group of industry is equal to real rate of return on US treasury long term bonds + equity risk premium + discount/premium for the group of industry + additional risk of investing in an emerging economy”</i>.</p> <p>The EB 62 Report, Annex 5, “Guidelines on the assessment of investment analysis” includes an Appendix with default values for the expected return on equity of different industries within different countries, calculated based on the Fiftieth Meeting Report.</p> <p>The method used for calculating Nicaragua’s benchmark follows the same structure as the one calculated by the guidelines, only with different parameters as different time periods are used. A comparison of the EB 62 Appendix default values and the calculation of Nicaragua’s guidelines in the Poa-DD is detailed below:</p> <table><tr><th>Parameter s (as defined in EB 62</th><th>EB 62 Report Appendix</th><th>PoA-DD Nicaragua Benchmark</th></tr><tr><td></td><td></td><td></td></tr></table>	Parameter s (as defined in EB 62	EB 62 Report Appendix	PoA-DD Nicaragua Benchmark				Hence, PoA-CL 8 is closed.	
Parameter s (as defined in EB 62	EB 62 Report Appendix	PoA-DD Nicaragua Benchmark							

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	Report)				
	Risk free rate of return	3.0% Based on long-term average returns of US treasury bonds.	3.0362% Estimated using the polynomial regression of the US government bond rate curve in order to obtain the estimate for a 20 year government bond rate. Data from 20/12/2011 (document "Regressions.xls").		
	Equity risk premium	6.5% Based on long-term historical returns on equity in the US market relative to the return of bonds.	6.0% Based on Prof. Aswath Damodaran's "country default spreads and risk premiums" data published in January 2012 (http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctrypre_m.html) (document "Country Default Spreads and Risk Premiums.pdf"). Damodaran uses a risk premium of 6% for mature markets obtained from the US Standard and Poor's 500 index (historical risk premium for a mature equity market).		
	Risk	6.0%	9.0%		

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	premium for the host country	Based on Moody's rating for Nicaragua (Caa1). ⁽¹⁾	Based on Moody's rating for Nicaragua (B3) a default spread for that rating (based upon traded country bonds) is estimated over the default free government bond rate. ⁽¹⁾		
	Adjustment factor to reflect risk of projects in different sectoral scopes	None The Fiftieth Meeting Report, Annex 8, considers that for Group 1 industries there is no premium or discount applied to the average historical returns. Group 1 includes all the utility sector industry of any country in average.	3.0% This adjustment factor refers to the project risk premium which is calculated based on the risk premium of investing in a hydropower project in Nicaragua. The data was obtained from the Renewable Energy Market Analysis for Nicaragua undertaken by the ARECA project for the Central American Bank of Economic Integration, the United Nations Development Program, and the Global Environmental Fund. Page 35 (document "Ref Doc 21 - Renewable Energy Market Analysis for Nicaragua.pdf").		
	Total Calculated Rate	15.5%	21.0362%		

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	<p>(1) The EB 62 Report Annex states a Moody's rating of Nicaragua of Caa1, however at the time the Annex was calculated, Nicaragua's rating by Moody's was already B3 http://www.cbonds.info/eng/news/index.phtml/params/id/462478). Damodaran uses Nicaragua's current rating http://www.moodys.com/research/Moodys-Disclosures-on-Credit-Ratings-of-Nicaragua-Government-of--PR_234439).</p> <p>About Damodaran's parameters: Mr. Damodaran publishes two parameters: "total risk premium" and "country risk premium". As stated in the explanation that precedes his calculated data, his country risk premium calculation is obtained from the country rating (from Moody's), as a default spread based on traded country bonds is calculated over the default free government bond rate (i.e. the US bonds). While he admits that this premium can be used as a rough estimate of <u>country</u> risk premium, it lacks the additional risk of equity markets, which makes the calculated risk premium a step more accurate. To do this, he adds the default spread (country risk premium) to the historical risk premium for a mature equity market (estimated from US historical data as a conservative proxy of a mature equity market) and therefore obtains the total risk premium.</p>		

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	<p>Hence, in Damodaran's calculated figures the total risk premium contains the country (or government) risk premium plus a conservative risk premium of a mature equity market. Adding the equity market premium takes the calculation a step further because it not only calculates the risk at the level of investing in the country (such as purchasing the country bonds for example) but it calculates the risk at the level of investing in equity or in the business level, which is riskier and therefore the premium is higher. This is the same approach taken for the EB 62 Report's Appendix calculations.</p> <p>Therefore: Total risk premium = Country Risk Premium + Risk Premium of Mature Equity Market</p> <p>About the adjustment factor (or project risk premium) parameter: The project risk premium is obtained from the ARECA report (Renewable energy market analysis for Nicaragua) which is both country and industry specific. The method followed in this report to calculate the discount rate for the return on equity (which they obtain is 23.5%) is the CAPM model, which as mentioned before and as mentioned in the Fiftieth Meeting Report, Annex 8, is another valid alternative. Though the methodology is not exactly the same, the parameters are similar. The ARECA Report's CAPM model uses the following parameters:</p>		

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	<ul style="list-style-type: none"> • K_L (risk free rate): Obtained from the average rate of the US 10-year treasury bonds. This is also used by the EB 62 approach and the PoA-DD approach, however the time horizons chosen and the maturity of bonds chosen are different. • B_d (systematic risk or volatility measure): It measures the tendency of an equity's return to respond to swings in the market. Damodaran considers a conservative average based on a mature equity market to include volatility in his risk calculations. • $K_M - K_L$ (risk premium): Calculated based on the US Standard and Poor's 500 index (historical risk premium for a mature equity market). This is also used by the EB 62 approach and the PoA-DD approach, however the time horizons chosen are different. • R_p (country risk): Calculated based on the spread of US and Nicaragua published credit rankings. This is also used by the EB 62 approach and the PoA-DD approach, however the source of the ratings are different. <p>R_{Proy} (project risk): This is the risk of investing in a project specifically in Nicaragua's renewable energy sector, and uses the profitability of a hydropower project as the basis of the calculation. This is not used in the EB 62 approach as it calculates a standard for the an industry group that includes energy and that applies to</p>		

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	<p>different countries, therefore the approach is more macro and not as specific. As all the previous parameters are comparable to the parameters used in the PoA-DD benchmark calculation for Nicaragua, the addition of this last parameter is not causing a danger of double counting, as it is an additional risk measure at a more detailed and specific scope.</p> <p>Finally, the Nicaraguan benchmark procedure and results for the first CPA (applicative demonstration of the procedure) are still described in the PoA-DD, but now is clearly mentioned that the benchmark will be updated for every CPA if applicable (e.g. there is updated information at the time of the CPA starting date).</p> <p>The application of the benchmark procedure is now clearly described in the CPA-DD of the first CPA.</p>		
<p>PoA-CL 9 (16/01/2012) Clarification is requested on the procedure applied to calculate the country risk premium from the difference between the 7-year maturity bonds.</p> <p>Also, the PP is required to demonstrate that the linear interpolation used to estimate the Nicaraguan interest rate for a 20-year maturity bond is a valid</p>	<p>09/03/2012 (1st round):</p> <p>Due to a correction of the methodology, the country risk premium from the difference between the 7-year maturity bonds is no longer necessary.</p> <p>Regarding the linear interpolation used to estimate the interest rate for a 20-year maturity bond, this is used to estimate the US Treasury rate for an equivalent bond of 20 years. The linear interpolation that was undertaken was a direct interpolation for simplicity, however this has</p>	<p>19/03/2012 (1st round):</p> <p>Ok, the previous calculation of the country risk premium from the difference between the 7-year maturity bonds is not longer applied in revised PoA-DD version 02.</p> <p>The explanation and corrections provided by the PP on estimating the Nicaraguan interest rate for a 20-year maturity bond from an interpolation of the US Government bond was found adequate. The validation team check the relevant references including the results</p>	OK

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and conservative approach. PP is required to provide relevant all references and documentation related to this calculation.	been modified in order to make it more technical and accurate. Therefore, the US treasury curve was plotted and regressions were undertaken in MS Excel to observe what type of equation better explained the curve's tendency. The two types of regressions that had the highest explanatory power (R^2) were the linear regression (R^2 of 0.87759) and the polynomic regression (R^2 of 0.99192). As the latter one has the highest explanatory power, this was used to calculate the expected rate of a 20-year US Treasury bond. The resulting rate is 3.0362% (document "Regressions.xls"). The calculation has been updated in the PoA-DD.	of a regression analysis that shows how polynomial regression of the data fits more suitably over linear, exponential or logarithmic regressions. The result of the polynomial regression gives an estimated interest rate for a US Government bond on 20-year maturity of 3.0362%. Hence, PoA-CL 9 is closed.	

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
<p>PoA-CL 10 (16/01/2012) Section E.6.2 in PoA-DD states that the grid emission factor will be provided only for Nicaragua and Peru, while the PP has stated that other Latin American countries might be included in the PoA at a later stage.</p> <p>It is unclear if the choice of emission factor calculation method (option a) will be defined ex-ante and applied to all countries included in the PoA in the future.</p>	<p>09/03/2012 (1st round):</p> <p>Option (a) will be applied for every CPA in the existing and future countries in the boundary of the PoA. This condition has been clarified in section E.6.2.</p>	<p>19/03/2012 (1st round):</p> <p>Ok, Section E.6.2 in PoA-DD version 02 has been revised accordingly.</p> <p>Hence, PoA-CL 10 is closed.</p>	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
<p>PoA-CL 11 (16/01/2012) PP has not substantiated electricity generation by NIS and provided relevant references.</p> <p>PP has not substantiated electricity generation by NIS and provided relevant references to information provided in Figure 5, including the calculation of the share of low-cost/must-run power plants.</p>	<p>09/03/2012 (1st round):</p> <p>The specific INE statistics are the same used in the grid EF calculation (stated in the excel spreadsheet). The direct link of the energy sources is:</p> <ul style="list-style-type: none"> - Net energy generation: http://www.ine.gob.ni/DGE/estadisticas/serieHistorica/Generacion_Neta.pdf - Fuel type: http://www.ine.gob.ni/DGE/estadisticas/serieHistorica/Insumo_Produccion.pdf <p>The table is based in the analysis of all the Nicaraguan power plants operative in the system.</p> <p>In addition the specific calculation of the data in Figure 5 has been included in the Grid Emission Factor spreadsheet (<Net Energy Production>).</p>	<p>19/03/2012 (1st round):</p> <p>Ok, references on electricity generation have been checked through accessing the information available via the links provided by the PP.</p> <p>Calculation of low-cost must-run values reported in Figure 5 was confirmed and it is now included in the Grid Emission Factor Spreadsheet.</p> <p>Hence, PoA-CL 11 is closed.</p>	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
<p>PoA-CL 12 (16/01/2012)</p> <p>The PoA-DD states that the data vintage chosen for the estimation of the simple OM is the ex-ante option. However, the PP has clarified that the CME plans to update the OM emission factor every year during the PoA crediting period and that CPAs will use the applicable emission factor as a fixed value during their particular crediting period.</p> <p>Thus, the PP/CME has not clarified the procedure for updating the OM emission factor and for assigning such factor to the CPAs included during the PoA crediting period.</p> <p>The PoA-DD states that for the estimation of the build margin (BM) the ex-ante option (Option 1) was chosen.</p> <p>However, as per the PoA-DD, the CME plans to update the BM emission factor every year during the PoA crediting period and that CPAs will use the applicable emission factor as a fixed value during their particular crediting period.</p>	<p>09/03/2012 (1st round):</p> <p>The PoA-DD has some modifications in section E.6.2 in order to clarify that the CPAs in Nicaragua will use the latest grid emission factor available in an ex ante basis (ex ante OM and ex ante BM). Peruvian CPAs will use an ex post emission factor (ex post OM and Ex post BM). The CME will update the grid emission factor every year but each CPA will use the suitable one according to the previous explanation.</p> <p>The CME manual has a grid emission factor calculation procedure #11, detailing how the OM and BM emission factor of each country will be updated.</p>	<p>19/03/2012 (1st round):</p> <p>Ok, the validation team has confirmed the revisions made under Section E.6.2 of PoA-DD version 02 as well as procedure #11 of the CME Operation Manual (version 01). The procedure explains how to access the data sources from INE (Nicaragua) and COES (Peru) and whether each grid factor will be calculated ex-ante or ex-post.</p> <p>The selection options for estimating BM and OM for Nicaragua and Peru have been corrected and are consistent with the selected type of calculation and data availability for each country.</p> <p>Hence, PoA-CL 12 is closed.</p>	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
Thus, the PP/CME has not clarified the procedure for updating the BM emission factor and for assigning such factor to the CPAs included during the PoA crediting period.			
PoA-CL 13 (16/01/2012) As per section E.6.2 of the PoA-DD, the PP has defined the 3-year generation-weighted average for 2008, 2009 and 2010 in calculating the BM. The PP has not clarified the choice of a 'most recent historical period for which power generation data is available (in our case, 2008, 2009, 2010)' when calculating EF _{grid,BM,y}	09/03/2012 (1st round): The new version of the PoA-DD has made the correction in section E.6.2	19/03/2012 (1st round): Ok, corrections made in Section E.6.3 of the revised PoA-DD version 02 clarified the choice of data. The factor BM will use the most recent historical period for which power generation data is available. Hence PoA-CL 13 is closed.	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
PoA-CL 14 (16/01/2012) PP has not substantiated electricity generation by SEIN and provided relevant references.	09/03/2012 (1st round): Data of the SEIN is from COEs as stated in the PoA-DD. COES publish daily weekly and monthly information in the web page (http://www.coes.org.pe/wcoes/coes/estadistica/default.aspx). Also publishes the annual generation, efficiencies and fuel consumption in the Annual Operational Report (http://www.coes.org.pe/wcoes/coes/estadistica/estadanal.aspx). Hourly data, detailed commissioning dates and other data required is sent upon request at any time (due to transparency regulations in the governmental entities). The information sent for 2010 and Peru's grid emission factor calculation is submitted to the audit team. Also the letter of submission of this information is sent to the audit team. Peru EF - BM 2011 V2.2 (XLS) Peru EF - ESTADISTICA DE OPERACIONES 2010 (PDF) Peru EF - Evan 2010 (XLS) Peru EF - Medidores_01_Enero_2010 (XLS) Peru EF - Medidores_02_Febrero_2010 (XLS) Peru EF - Medidores_03_Marzo_2010 (XLS) Peru EF - Medidores_04_Abril_2010 (XLS) Peru EF - Medidores_06_Junio_2010 (XLS) Peru EF - Medidores_07_Julio_2010 (XLS)	19/03/2012 (1st round): Ok, the validation team has reviewed the official references and data from COES (Peru) regarding the dispatch data for the year 2010 (arranged in 12 monthly spreadsheets). Furthermore, the validation team interviewed relevant personnel from COES (Tomás Montesinos and Salome Gonzalez) who confirmed the procedures for data requests as indicated by the PP in the CME Manual. Hence, PoA-CL 14 is closed.	OK
Germanischer Lloyd Certification Code: DC-GHG 015_A, Rev.00 Date: 2012-02-24; MN, Cyf, Junw	Peru EF - Medidores_08_Agosto_2010 (XLS) Peru EF - Medidores_09_Septiembre_2010 (XLS) Peru EF - Medidores_10_Octubre_2010 (XLS) Peru EF - Medidores_11_Noviembre_2010 (XLS) Peru EF - Medidores_12_Diciembre_2010 (XLS)		Page 161

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
<p>PoA-CL 15 (16/01/2012) As per Annex 1 of the 'Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM)', the PP has not utilized the symbols and standard variables following the "Tool to calculate the Emission Factor for an electricity system" [grid power units n ($EF_{EL,n,y}$)].</p> <p>PP has not clarified the procedures and information sources for dispatch data gathering for estimating the OM-DD for typical CPAs located in Peru over the PoA crediting period.</p>	<p>09/03/2012 (1st round):</p> <p>Parameter $EF_{EL,n,y}$ and $EF_{EL,m,y}$ have been checked in order to be according to the Tool to calculate the Emission Factor for an electricity system.</p> <p>The information to calculate the dispatch OM emission factor is the one submitted by COES and listed in CL 14.</p> <p>The procedure for grid emission factor calculation, part of the CME manual, considers how this data will be obtained.</p>	<p>19/03/2012 (1st round):</p> <p>Ok, the parameters have been checked accordingly in PoA-DD version 02.</p> <p>The validation team interviewed relevant personnel from COES (Tomás Montesinos and Salome Gonzalez) who confirmed the procedures for data requests as indicated by the PP in the CME Manual. Aside from making monthly summary reports available online, the COES will supply dispatch data for the period requested in a CD to any interested party that formally submits a letter. A sample letter of information request was also provided by the PP as supporting evidence.</p> <p>Hence, PoA-CL 15 is closed.</p>	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
PoA-CL 16 (16/01/2012) The PP/CME has not clarified how the ex-ante BM will be applied to CPAs located in Peru during the PoA crediting period.	09/03/2012 (1st round): The new version of the PoA-DD has been modified in order to have an ex post BM for Peruvian CPAs in section E.6.2.	19/03/2012 (1st round): Ok, Section E.6.2 in revised PoA-DD version 02 has been corrected accordingly. Hence PoA-CL 16 is closed.	OK
PoA-CL 17 (16/01/2012) The PP has not clarified how the choice of option 1 in Step 5 is consistent with the following statement in Step 6 <i>'Notice that the emission factor will be use the ex post option for CPAs in Peru'</i> .	09/03/2012 (1st round): The new version of the PoA-DD has been modified in order to have an ex post BM for Peruvian CPAs in section E.6.2. Now step 5 statements are consistent with the option chosen (option 2).	19/03/2012 (1st round): Ok, Section E.6.2 in revised PoA-DD version 02 has been corrected accordingly. Hence PoA-CL 17 is closed.	OK
PoA-CL 18 (05/09/2012) Changes were found from the generic CPA-DD and PoA-DD versions published for GSC to the final generic CPA-DD and PoA-DD versions which were not triggered by a request from the validation team.	05/09/2012 (3rd round): The PP implemented minor additional changes in the project PoA-Dd and Generic CPA-DD: - The PP has updated the methodology version from 12.2.0 to 12.3.0 approved in the EB meeting # 66. The PoA DD, the Generic CPA and also the Specific CPA have been updated accordingly (version number and update of new wording as per version 12.3.0).	05/09/2012 (3rd round): Ok. GLC can confirm that PP has undertaken the changes mentioned in the response provided, which were not directly triggered by findings. These changes were reviewed and deemed not to impact on the project design. Any other editing or revision has been addressed and tracked by a finding. Hence, PoA-CL 18 is closed out.	OK

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Description of Finding (CAR, CL, FAR)	Project Participants Response	GLC Assessment	Final Concl.
	<ul style="list-style-type: none">- Table 3 of the PoA DD in order to add the residual value parameter, only assessed in the CPAs if applicable.- Change of Spinning Reserve by Rolling Reserve in the Generic CPA Table of sub-step 3c, section B.3.		

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ANNEX B: CERTIFICATES OF COMPETENCE

Validation Report

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Certificate



Name : Mr. José Emilio Moreno (Dipl.-Ing.)
Certificate No. : 016

This document certifies that Mr. José Emilio Moreno, citizen of Spain, is assigned as CDM assessment team leader, validator/verifier and expert by Germanischer Lloyd Certification GmbH.

Mr. José Emilio Moreno fulfils GLC's competence requirements to validate and verify CDM projects within the following sectoral scopes and technical areas.

CDM Sectoral Scope (SS) and Technical Area (TA)	Validity date:
SS 1: Energy Industries (renewable / non-renewable sources)	
TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar	2010-09-25
TA 1.2: Energy generation from renewable energy sources	2010-10-22
SS 2: Energy Distribution	
TA 2.1: Electricity distribution	
TA 2.2: Heat distribution	
SS 3: Energy Demand	
TA 3.1: Energy demand	2011-03-20
SS 7: Transport	
TA 7.1: Transport	
SS 10: Fugitive Emissions from Fuels	
TA 10.1: Mining and mineral processes (excluding those included in TA 10.2)	
TA 10.2: Oil and gas industry, coal mine methane recovery and use	
SS 13: Waste Handling and Disposal	
TA 13.1: Waste handling and disposal	
TA 13.2: Animal waste management	

Hamburg 2011-03-20
Date


GLC Management

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Date: 2011-04-27; Tris

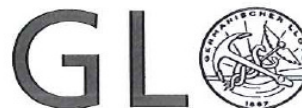
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Validation Report

GLC Report No. 228, Rev. 14



Certificate



Name : Mrs Jun Wang
Certificate No. : 51

This document certifies that Mrs Jun Wang citizen of China with experience in the region China and Germany, is assigned as CDM assessment team leader, validator/verifier and expert by Germanischer Lloyd Certification GmbH.

Mrs Jun Wang fulfils GLC's competence requirements to validate and verify CDM projects within the following sectoral scopes and technical areas.

CDM Sectoral Scope (SS) and Technical Area (TA)	Validity date:
SS 1: Energy Industries (renewable / non-renewable sources)	
TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar	
TA 1.2: Energy generation from renewable energy sources	2012-03-09
SS 2: Energy Distribution	
TA 2.1: Electricity distribution	
TA 2.2: Heat distribution	
SS 3: Energy Demand	
TA 3.1: Energy demand	
SS 7: Transport	
TA 7.1: Transport	
SS 10: Fugitive Emissions from Fuels	
TA 10.1: Mining and mineral processes (excluding those included in TA 10.2)	
TA 10.2: Oil and gas industry, coal mine methane recovery and use	
SS 13: Waste Handling and Disposal	
TA 13.1: Waste handling and disposal	
TA 13.2: Animal waste management	

Hamburg

2012-03-12

Date


GLC Management

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Code: DC-GHG 009_E, Rev. 03
Date: 2011-04-27; Tris

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Validation Report

GLC Report No. 228, Rev. 14



Certificate



Name : Mr. Markus Weber (Dipl.)
Certificate No. : 001

This document certifies that Mr. Markus Weber, citizen of Germany, is assigned as CDM assessment team leader, validator/verifier and expert by Germanischer Lloyd Certification GmbH.

Mr. Markus Weber fulfils GLC's competence requirements to validate and verify CDM projects within the following sectoral scopes and technical areas.

CDM Sectoral Scope (SS) and Technical Area (TA)		Validity date:
SS 1: Energy Industries (renewable / non-renewable sources)		
TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
TA 1.2: Energy generation from renewable energy sources		2011-09-09
SS 2: Energy Distribution		
TA 2.1: Electricity distribution		
TA 2.2: Heat distribution		
SS 3: Energy Demand		
TA 3.1: Energy demand		
SS 7: Transport		
TA 7.1: Transport		
SS 10: Fugitive Emissions from Fuels		
TA 10.1: Mining and mineral processes (excluding those included in TA 10.2)		
TA 10.2: Oil and gas industry, coal mine methane recovery and use		
SS 13: Waste Handling and Disposal		
TA 13.1: Waste handling and disposal		2008-12-15
TA 13.2: Animal waste management		

Hamburg

2011-09-09

Date


GLC Management

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Date: 2011-04-27; Tris

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Date: 2012-02-24; MN, Cyf, Junw

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